

**Conceptual Master Plan  
North Markham Future Urban Area  
Planning for Healthy and Resilient  
Communities**

**Welcome to Public Open House #2**

**November 3, 2016**

## **Purpose of the Open House**

- **Markham is planning new community and employment areas in north Markham. The need for these new areas are identified in Markham's Official Plan 2014, which refers to the lands as the Future Urban Area.**
- **A draft Preliminary Community Structure Plan has now been developed, providing a high level land use concept for the entire FUA lands.**
- **This Open House provides an opportunity to learn about and provide input on both the Plan, and the ongoing subwatershed, transportation, water and wastewater studies which inform the Plan.**

## Organization of Information Panels

The information panels are organized according to the following broad topics:

**Background:** Description of the planning process for the Future Urban Area and more specifically, the Conceptual Master Plan.

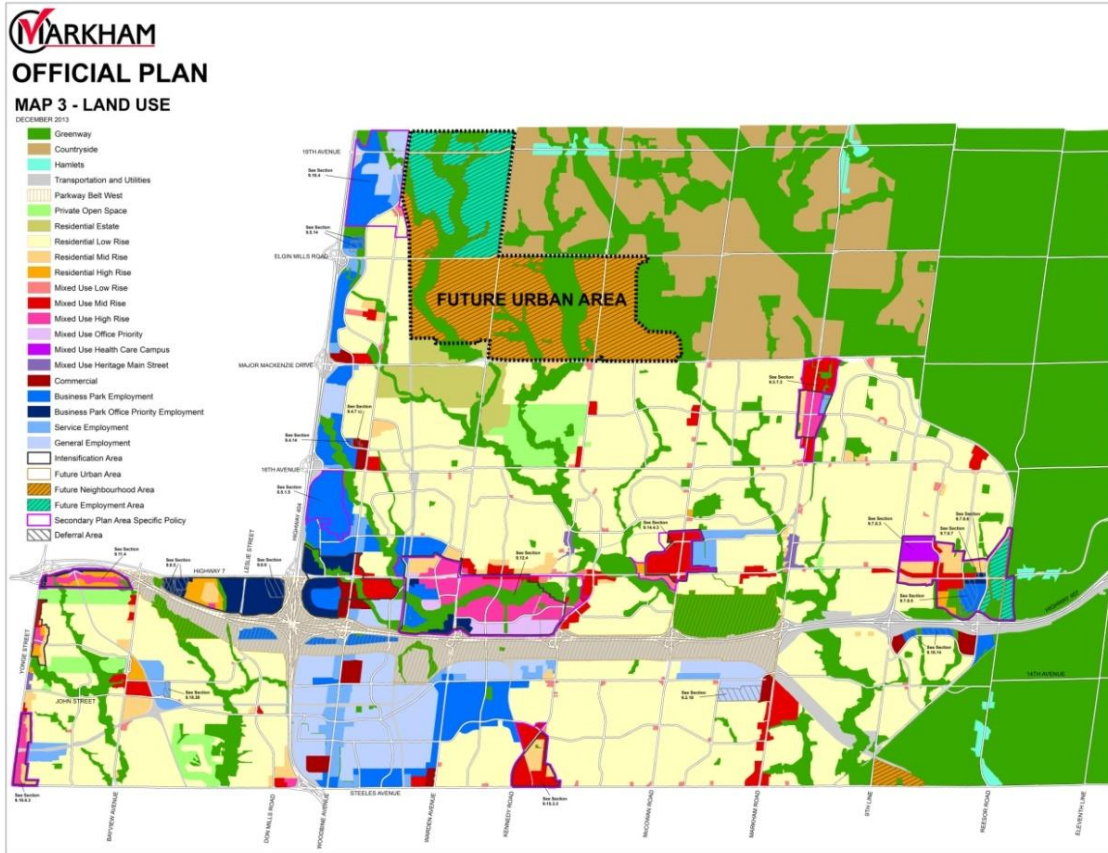
**Conceptual Master Plan:** vision and work to date including a draft Preliminary Community Structure Plan.

**Findings to date of concurrent studies:** Information is provided on the work to date on the Subwatershed, Transportation, Water Servicing and Wastewater Servicing Studies.

**Next Steps:** What happens after this Open House?

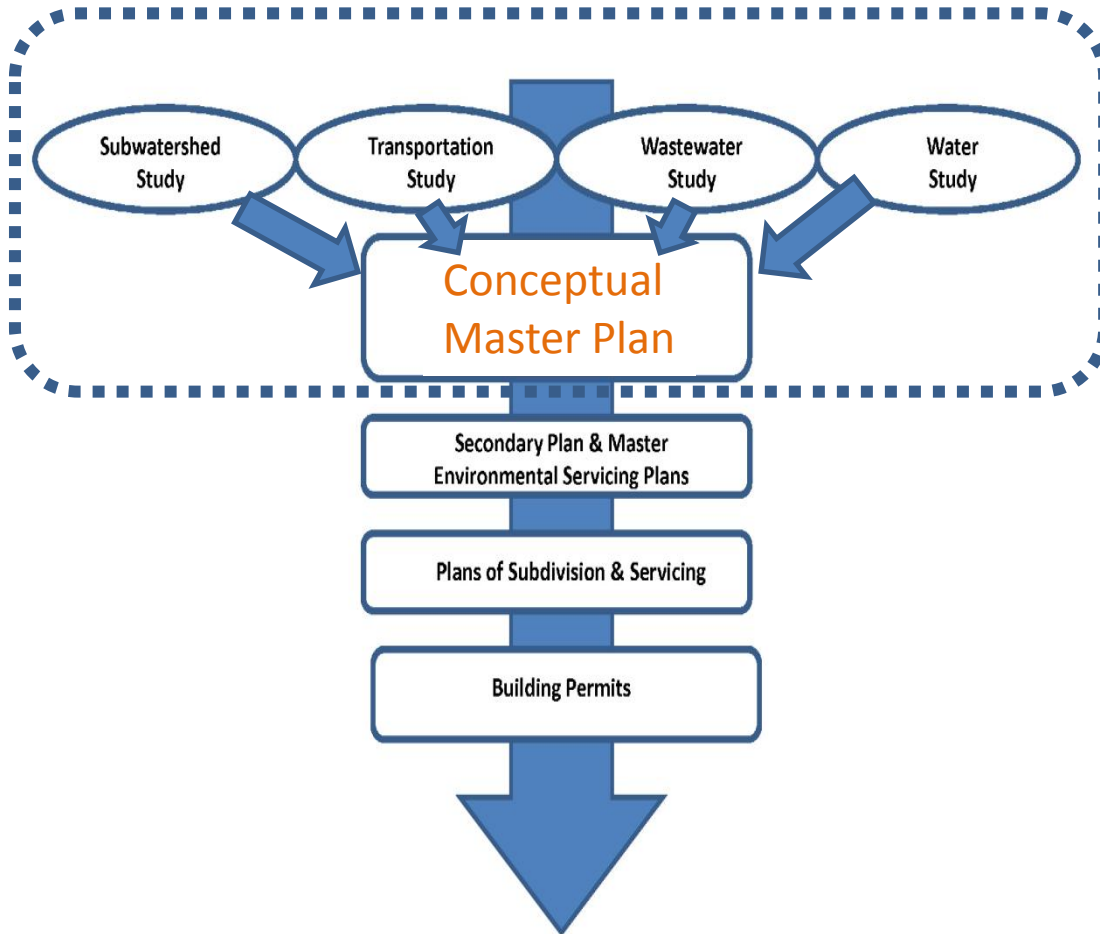
Markham Planning and Engineering staff and our consultants are available to answer your questions and to hear your comments.

# Future Urban Area – Official Plan Direction



- The Future Urban Area (FUA) is located north of Major Mackenzie Drive, east of Woodbine Avenue.
- The lands shaded orange within the FUA – generally between Major Mackenzie Drive and Elgin Mills Road – will be developed with new neighbourhoods.
- The lands shaded turquoise – generally between Elgin Mills Road and the northerly City limits – will be developed with employment uses.
- The lands shaded green are part of the protected Greenway System and will not be developed.

# Conceptual Master Plan Process



The Official Plan identifies a comprehensive planning process for the Future Urban Area, including the development of a Conceptual Master Plan.

The Conceptual Master Plan (CMP) will consist of:

- a high level Community Structure Plan; and
- associated policy direction for future secondary plans and development applications.

The concurrent subwatershed, transportation, water and wastewater studies are each following a similar 3-phase process:

**Phase 1:** data collection/ characterization/ model development.

**Phase 2:** testing of preliminary land use concepts to arrive at a Preferred Community Structure Plan (currently underway).

**Phase 3:** recommendations and implementation strategies.

*The Conceptual Master Plan will satisfy the Master Plans component of the Municipal Class Environmental Assessment (EA) process.*

## Consultation



- The Conceptual Master Plan is being undertaken through a multi-disciplinary City staff and consulting team, in close consultation with York Region, Toronto Region Conservation Authority, Ministry of Natural Resources and Forestry, school boards and participating land owners.
- Input is also being sought from other stakeholders through meetings, workshops, Public Open Houses, and meetings of Council. The first Public Open House was held in January 2015.



## What is the Conceptual Master Plan expected to achieve?

### FUA Statistics

- Developable lands:  
approx. 975 ha
- Population:  
approx. 40,000 people
- Dwelling units:  
approx. 13,000
- Jobs:  
16,000-19,000

- The new communities in the Future Urban Area lands are intended to accommodate approximately 40,000 people, in approximately 13,000 dwelling units. The majority of the housing is expected to be in a low-rise (detached, semi-detached, townhouse) form.
- The lands are also intended to accommodate 16,000-19,000 jobs in total (including jobs in both the employment areas and in the neighbourhood areas).
- The Conceptual Master Plan will identify high level land use categories to demonstrate how and where the population and jobs will be accommodated, and also where the necessary shopping areas, schools, parks and open spaces and other community facilities will be located to serve residents and businesses.
- It will also identify the transportation, stormwater, water and wastewater systems necessary to support this new community.

## Vision

Markham's Official Plan outlines a vision for sustainable growth leading to a vibrant, liveable city.

The vision is based on the inter-related themes of protection of the natural environment, building complete communities, increasing travel options, and maintaining a vibrant and competitive economy.

Consistent with this vision, the proposed vision for the new communities in the Future Urban Area is as follows:

“New neighbourhood and employment lands in the north Markham Future Urban Area will be designed as healthy, compact and complete communities.

These communities will reflect the City's leadership in sustainable development with resilience and innovation being cornerstones of community design.”





## Planning Healthy Communities

- A healthy community is one in which residents are physically active and socially engaged.
- A number of built environment elements are associated with active living, including:
  - ❖ Availability of a range of housing types and densities meeting the needs of a diverse population;
  - ❖ Proximity to a variety of land uses meeting the needs of daily living, including jobs, which are accessible by cycling, walking or transit;
  - ❖ An interconnected street network that supports a variety of travel options;
  - ❖ Human scale streetscapes that encourage walking and cycling; and
  - ❖ Accessible public open spaces offering active and passive activities.



## Planning Resilient Communities

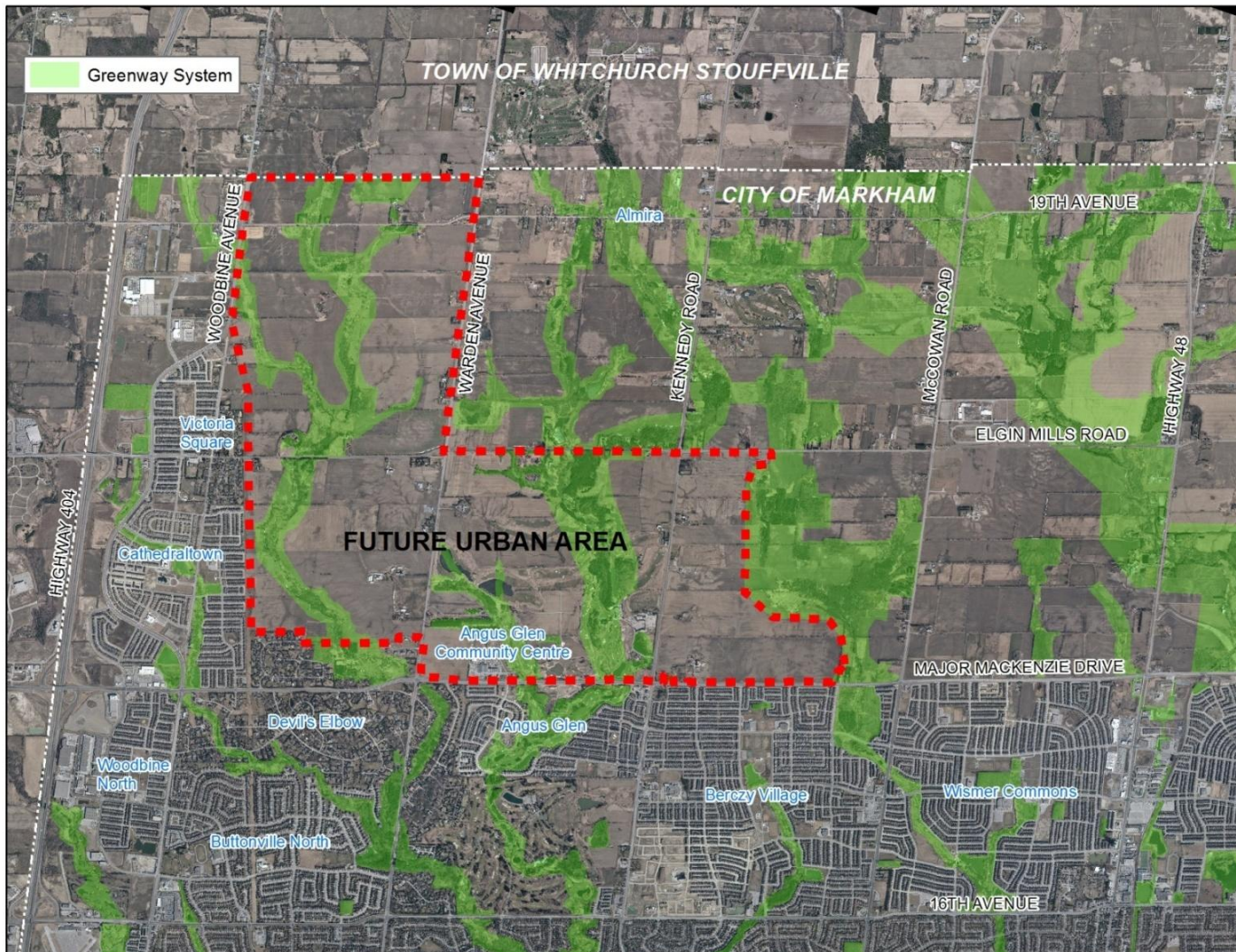
Community design should anticipate climate change impacts and minimize the risk of disruption to communities resulting from gradual increases in temperature of extreme weather events.

The adoption of 'green' practices at the community, infrastructure, and building levels help to increase resiliency through measures such as:

- Water conservation;
- Energy conservation, and the use of green energy or alternative community energy systems;
- Waste diversion and reduction; and
- Planning for adaptable infrastructure systems, including sustainable stormwater management practices.



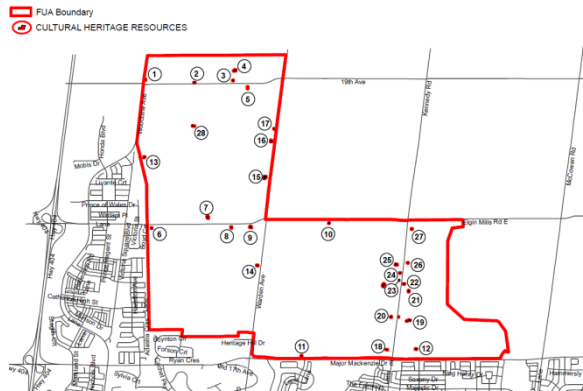
# Future Urban Area



## Existing and Surrounding Land Use



Natural Heritage Resources

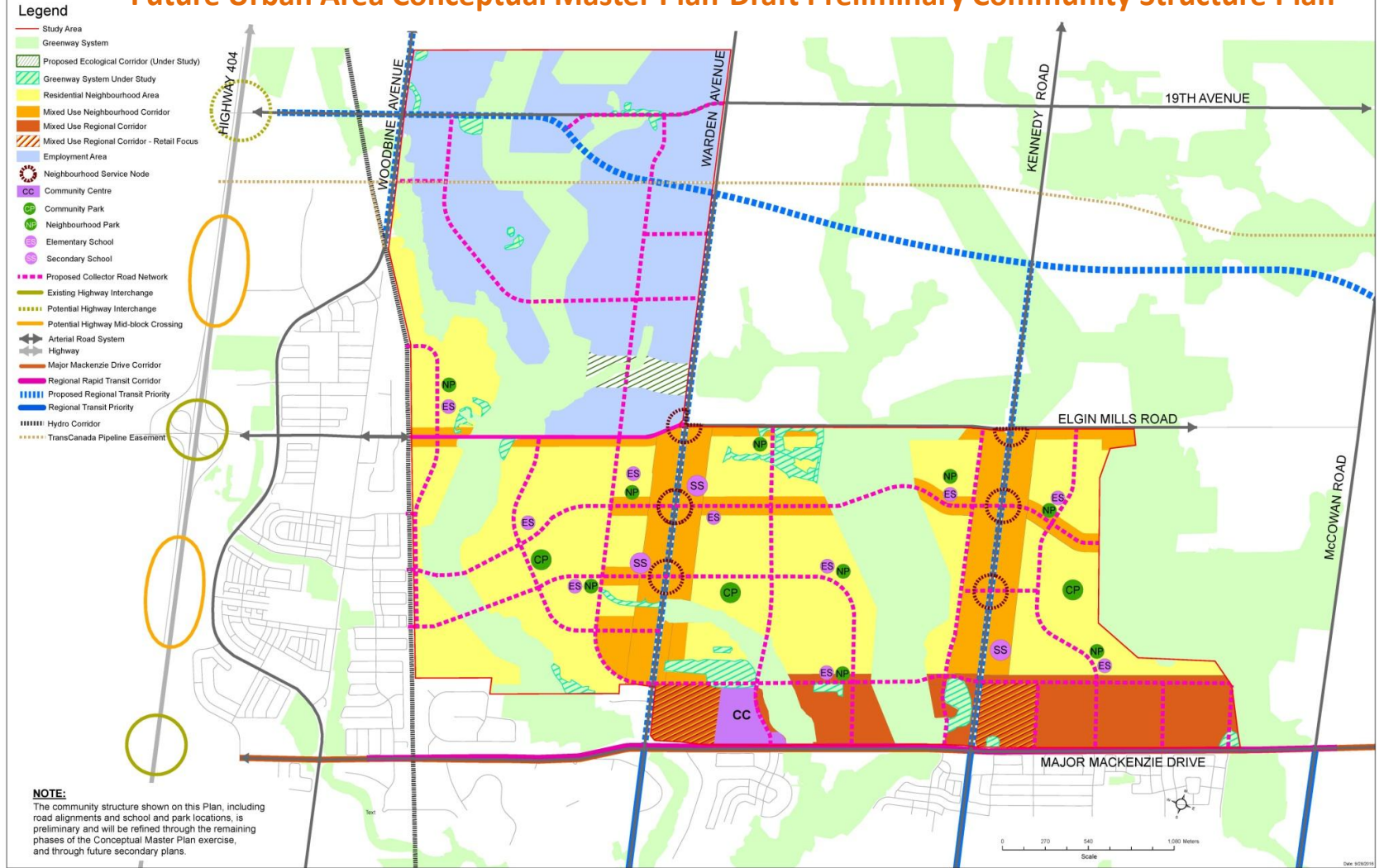


Cultural Heritage Resources

- Existing land uses within the FUA are primarily agricultural, rural residential and open space uses. The lands also contain natural heritage and cultural heritage resources.
- The Angus Glen Golf Course (between Warden Avenue and Kennedy Road) is anticipated to be reconfigured to a smaller course, with development of surplus tablelands for community uses.
- The Angus Glen Community Centre will be integrated into the new community.
- Regard is being had for appropriate interface/transition conditions with existing communities south of Major Mackenzie Drive and west of the Hydro Corridor, as well as with the Countryside lands north of Elgin Mills Road.



## Future Urban Area Conceptual Master Plan-Draft Preliminary Community Structure Plan



The draft Preliminary Community Structure Plan will accommodate approximately 40,000 residents and 16,000-19,000 jobs, achieving the minimum densities identified in the Official Plan for compact communities (20 units per hectare, and 70 residents and jobs per hectare).

# Draft Preliminary Community Structure Plan

The Community Structure Plan is intended to identify neighbourhood areas, mixed use community cores, a high level road and transit network, and an integrated open space network. The Plan shown is 'preliminary' recognizing that further analysis is still to be undertaken as part of the remainder of Phase 2 and Phase 3.

The components of the draft Preliminary Community Structure Plan are as follows:



**Greenway System** - based generally on the 'Greenway System' in the Official Plan 2014, with refinements arising from the Subwatershed Study; areas shown as 'Greenway System Under Study' require further analysis.



**Transportation Network** - an arterial and collector road network which provides the basic network on which transit services and pedestrian/cycling connections will be developed.



**Integrated Parks and Open Space** – the location of schools and parks are intended to provide linkages with the Greenway System to provide an integrated open space system that is easily accessible within neighbourhoods and between neighbourhoods.



**Employment Area** – the majority of the lands are intended for manufacturing and warehousing uses.



**Residential Neighbourhood Area and Mixed Use Neighbourhood Corridor** – the Residential Neighbourhood Area is intended to be developed primarily with ground-oriented housing, and community facilities such as schools and parks. The Mixed Use Neighbourhood Corridor is intended to accommodate higher density housing forms to support the north-south transit corridors, and also some retail/service uses.



**Mixed Use Regional Corridor** – is intended to be developed at the highest densities in the FUA, in support of the future rapid transit corridor anticipated along Major Mackenzie Drive. A mix of high density residential and commercial uses are anticipated, with retail/service uses being focussed at the two major intersections.

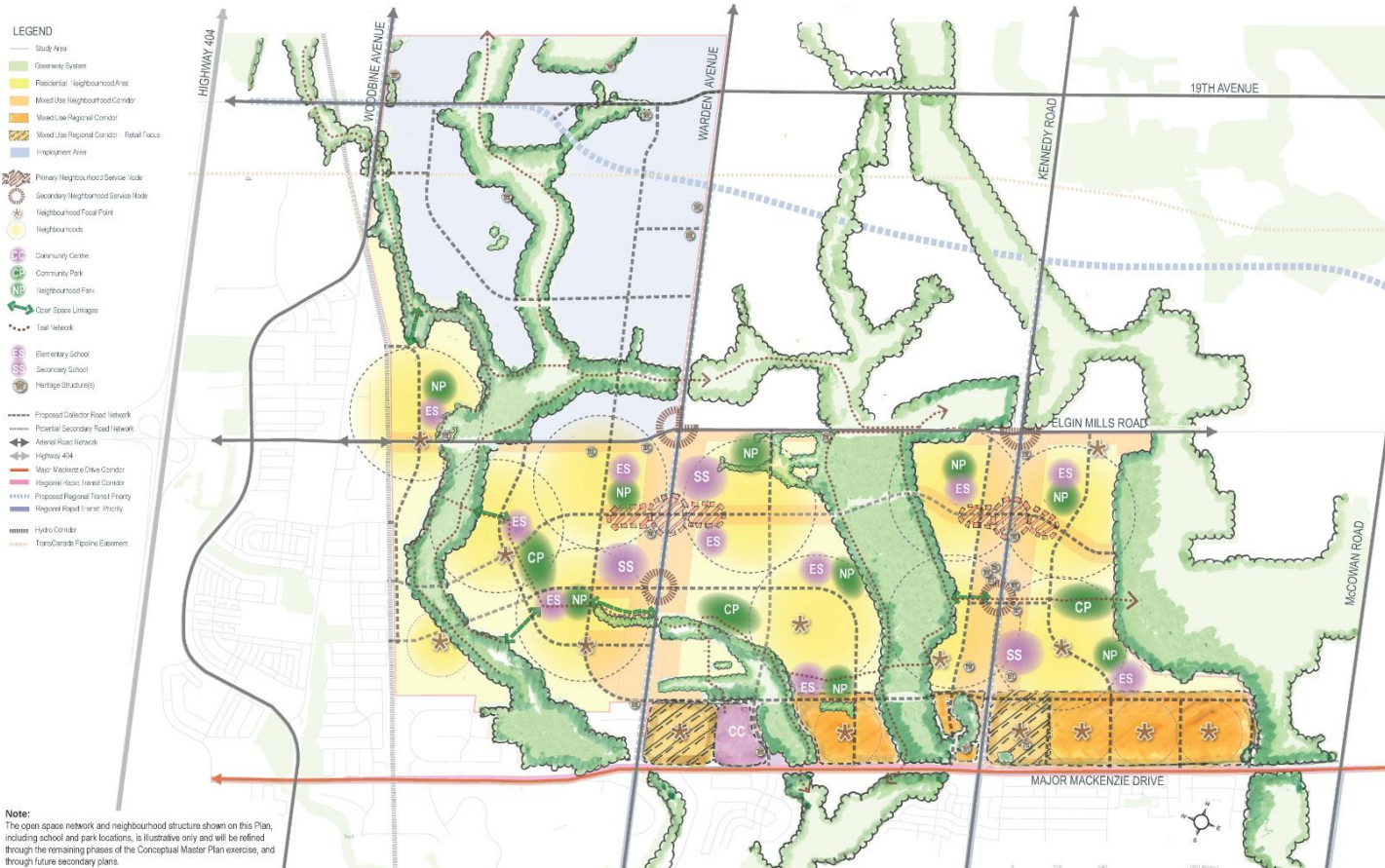
# Draft Preliminary Open Space Network and Neighbourhood Structure

This Plan illustrates the principles of school/park campuses as focal points and principle organizing elements for neighbourhoods, within reasonable walking distance of residents.

Parks are distributed generally as follows:

- Community Parks should be within a 10 minute walking distance (800m) of users.
- Neighbourhood Parks should be within a 5 minute walking distance (400m) of users
- Neighbourhood Parks and elementary schools should be co-located where possible.

The Plan also illustrates how parks and school sites can provide linkages with the Greenway System.



**Note:**  
The open space network and neighbourhood structure shown on this Plan, including school and park locations, is illustrative only and will be refined through the remaining phases of the Conceptual Master Plan exercise, and through future secondary plans.

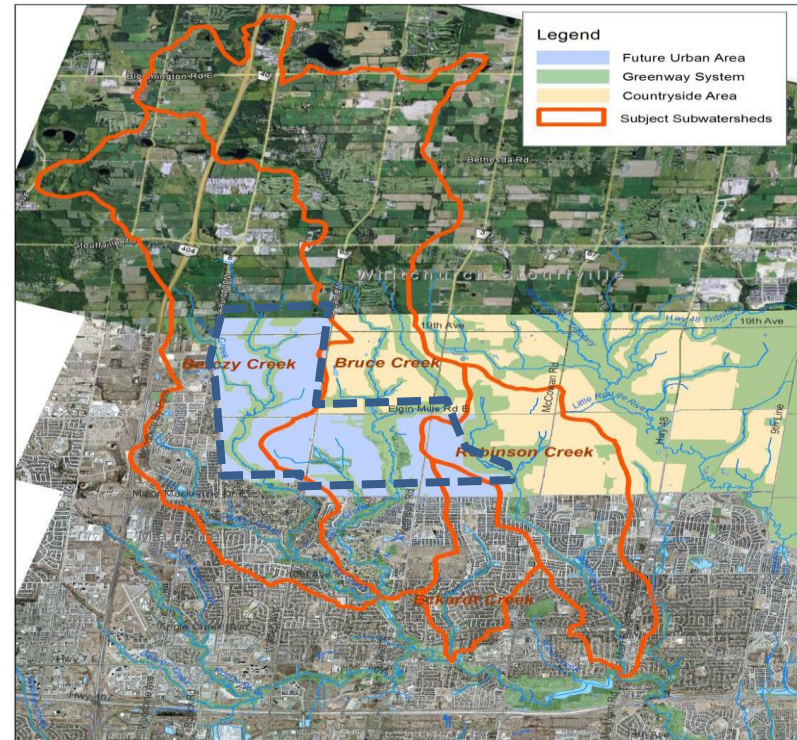
## Subwatershed Study

The Future Urban Area lies within four subwatersheds:

- Berczy
- Bruce
- Eckardt
- Robinson

For each subwatershed, the Study will:

- Characterize the existing natural resources and functions (Phase 1).
- Assess the potential impacts of urbanization (Phase 2).
- Establish fully integrated management strategies to preserve and enhance ecological features and functions and meet regulatory requirements (Phase 3).





# Characterization and Phase 2 Impact Assessment

## Surface Water (Hydrology)

- Existing surface water is of high quality. Due to high rates of infiltration and limited urbanization major valleys convey high flows, hence regulatory floodplains are typically confined to the valleys.
- Urbanization without any stormwater management would significantly increase runoff resulting in increased downstream flooding and erosion as well as a downgrade in water quality. Careful application of stormwater management best practices including end-of-pipe stormwater management facilities, Low Impact Development (LID) practices and storage within open spaces will provide the required quantity and quality mitigation measures.





## Characterization and Phase 2 Impact Assessment

### Groundwater (Hydrogeology)

- The existing conditions exhibit highly permeable surficial soils that allow for infiltration and groundwater recharge.
- Testing has shown that the existing groundwater flow system which is supporting a healthy natural heritage system would be impacted by proposed urbanization without proper mitigation. Mitigation measures include LID best practices and area specific infiltration; these approaches need to be further evaluated to better address impact and mitigation measures at the local scale.

# Characterization and Phase 2 Impact Assessment

## Stream Stability and Erosion

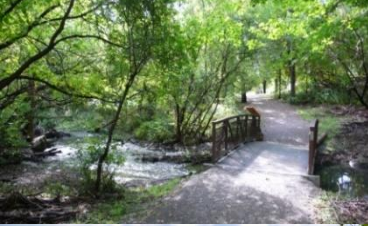
- Most of the streams in the FUA are of high quality and reasonably stable. The Berczy Creek has a comparatively high erosion susceptibility.
- Planned urbanization has the potential to impact stream stability in on-site and downstream water courses without proper stormwater management. These potential impacts will be mitigated through appropriate management practices.



# Characterization and Phase 2 Impact Assessment

## Terrestrial

- The terrestrial resources across the FUA study area are generally of high quality with mature forested valleys along the main creek corridors and a number of wetland areas adjacent or within the valleys and the tableland. Wildlife in the area while disturbed by historical agricultural practices is nonetheless diverse and healthy; the tablelands also exhibit areas for open country birds.
- Impacts to terrestrial features will be mitigated and compensated.





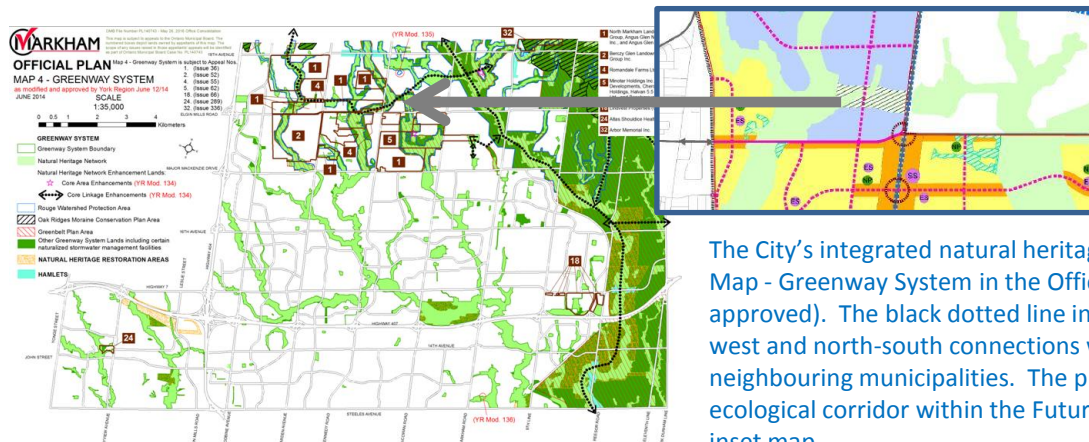
## Characterization and Phase 2 Impact Assessment

### Aquatics:

- The Berczy, Bruce and Robinson Creeks support diverse fish communities, many of which rely on the cold water which is derived from groundwater discharge. Redside Dace, a Provincial Species at Risk, is present in area watercourses.
- Urbanization could have a direct impact on the aquatic system (e.g., when a stream is channelized or road crossings over watercourses with fish habitat) and indirect (change in the landscape) within the receiving watercourses due to a change in the amount, frequency and quality of surface/ground water.
- Any impacts resulting from urbanization will be mitigated and compensated through the necessary permitting processes. The protection of Redside Dace habitat will address the requirements of the other target species.

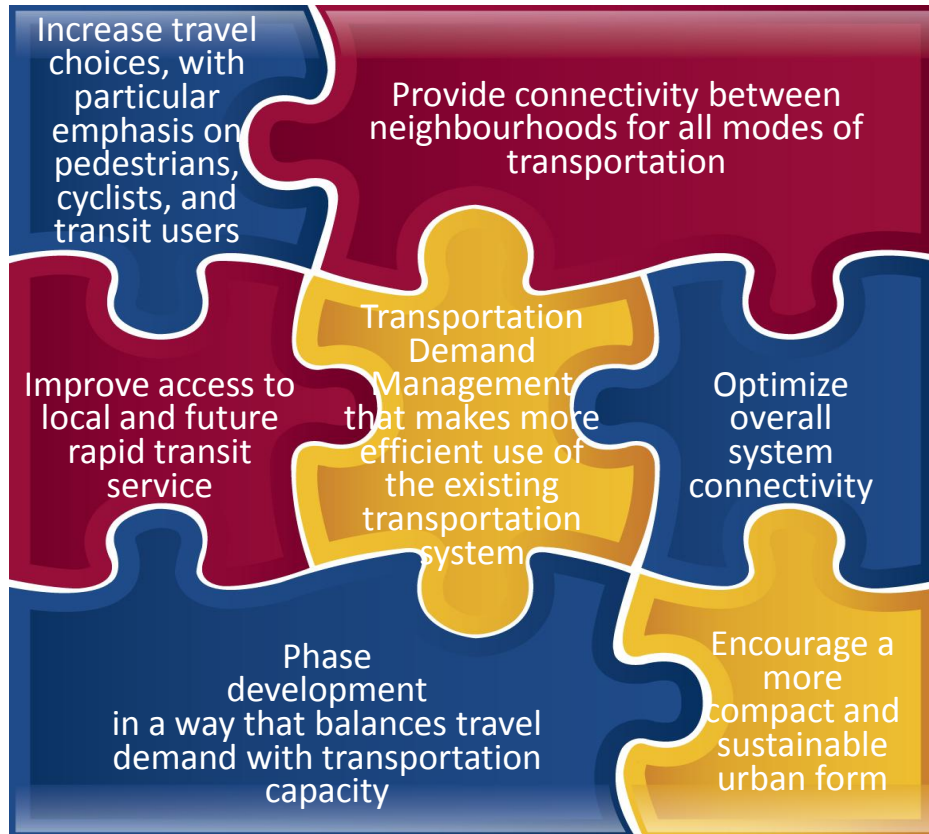
# Proposed Ecological Corridor

- The City has been planning a linked natural heritage system including east-west wildlife/ecological corridor connections since 1993. The City's Environmental Policy Review and Consolidation Study (2009) recommended an east-west ecological corridor between the Berczy and Bruce Creek systems north of Elgin Mills Road within the Future Urban Area, which is reflected in Markham's Official Plan 2014.
- The location, size and function of this ecological corridor is being confirmed through the Subwatershed Study. In addition to allowing wildlife movement between the two valleyland corridors, it is expected the corridor will also play a role in mitigating other impacts associated with urbanization and provide for possible pedestrian and cycling opportunities.



The City's integrated natural heritage system is illustrated in Map - Greenway System in the Official Plan 2014 (partially approved). The black dotted line indicates the conceptual east-west and north-south connections within Markham as well as to neighbouring municipalities. The proposed delineation of the ecological corridor within the Future Urban Area is shown in the inset map.

## Transportation Study



### Transportation Study Objectives

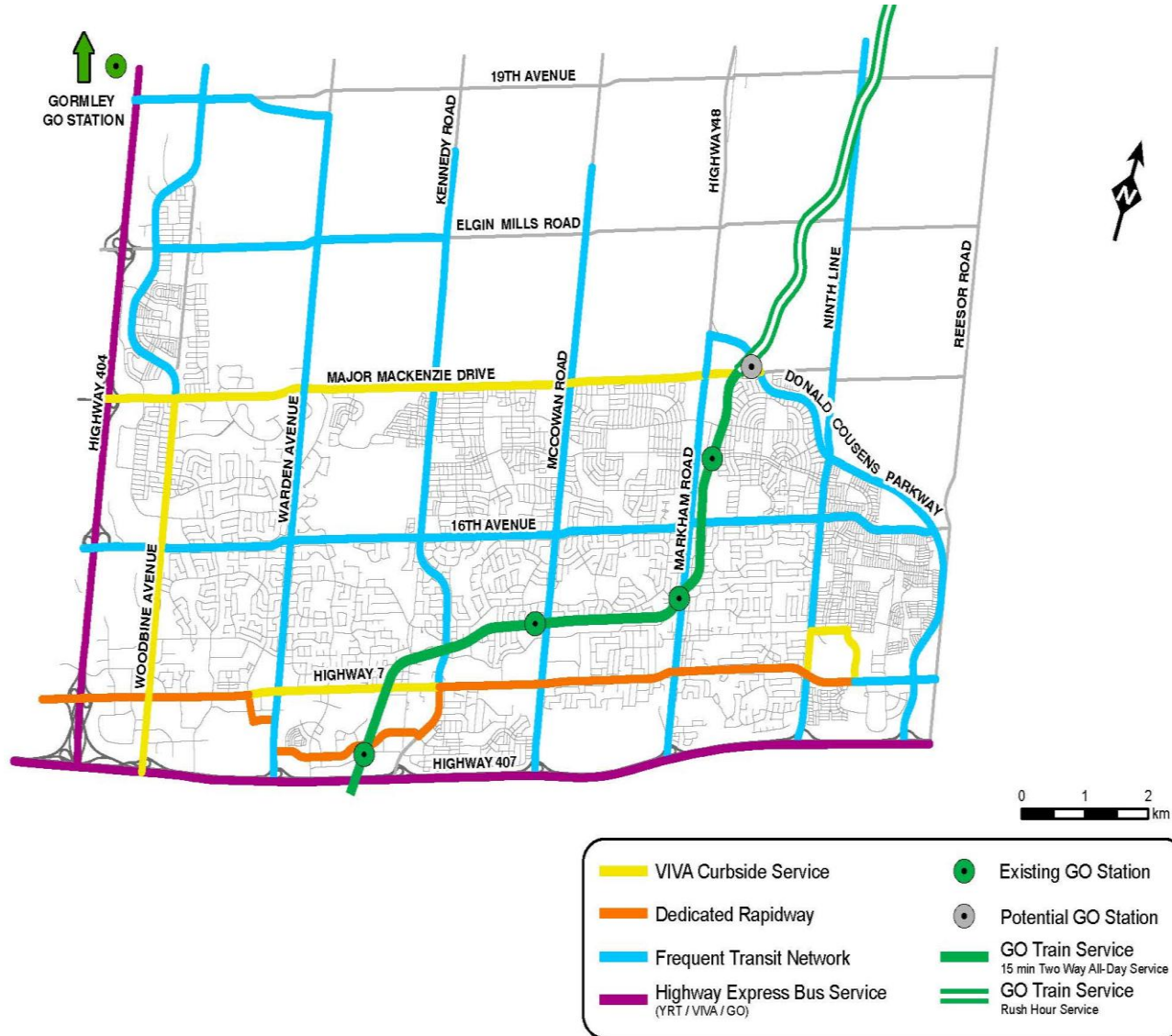
#### Purpose of the Study:

- Identify a transportation system and network to service the new community.
- Develop strategies and design principles to promote more sustainable travel within the new community.
- Inform the phasing strategy to ensure development is phased in a way that balances travel demand with transportation capacity.



## Transit Network to 2031

- The area in and around the FUA will see significant improvement in transit service by 2031.
- Frequent transit service is anticipated on regional roads (Woodbine Avenue, Warden Avenue, Kennedy Road, Elgin Mills Road).
- Longer term transit improvements include rapid transit service on Major Mackenzie Drive, Woodbine Avenue (south of Major Mackenzie Drive), and the Highway 407 Transitway.







## Road Network to 2031

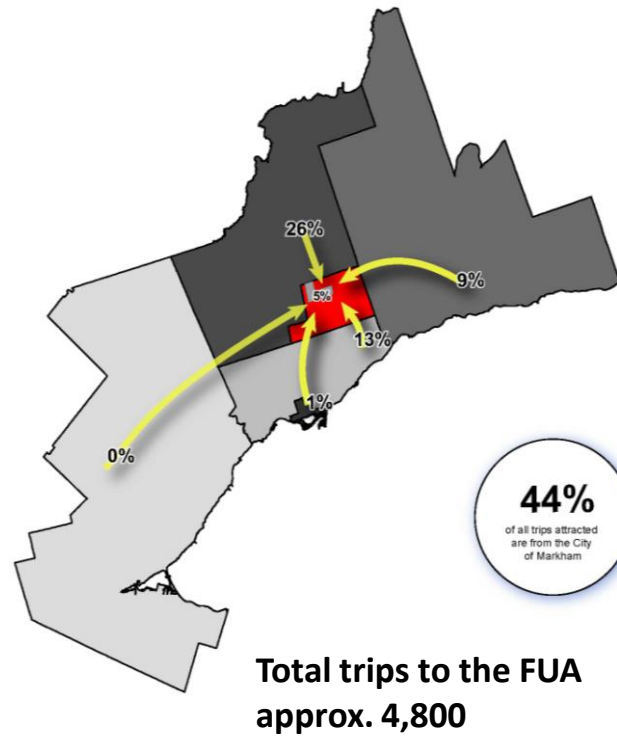
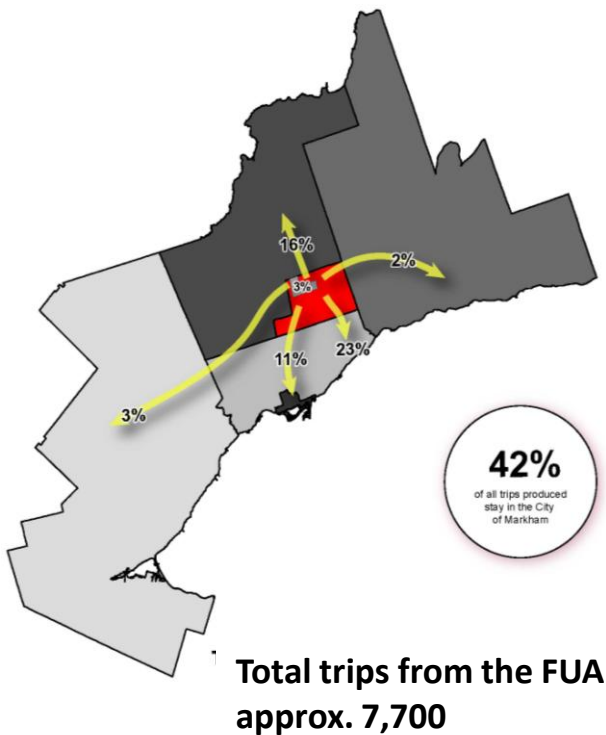
- Improvements are planned on the arterial roads adjacent to the FUA.
- Proposed widenings to six lanes will accommodate High Occupancy Vehicle (HOV) lanes.
- New highway interchange and mid-block crossings across Highway 404 will improve mobility and connectivity in the area.





# Morning Peak Hour Trips to and from FUA

➤ Over 40% of the trips generated by the FUA are expected to stay within the City of Markham.



# Major Destinations in York Region with High Potential for Transit Use from the FUA

## Legend

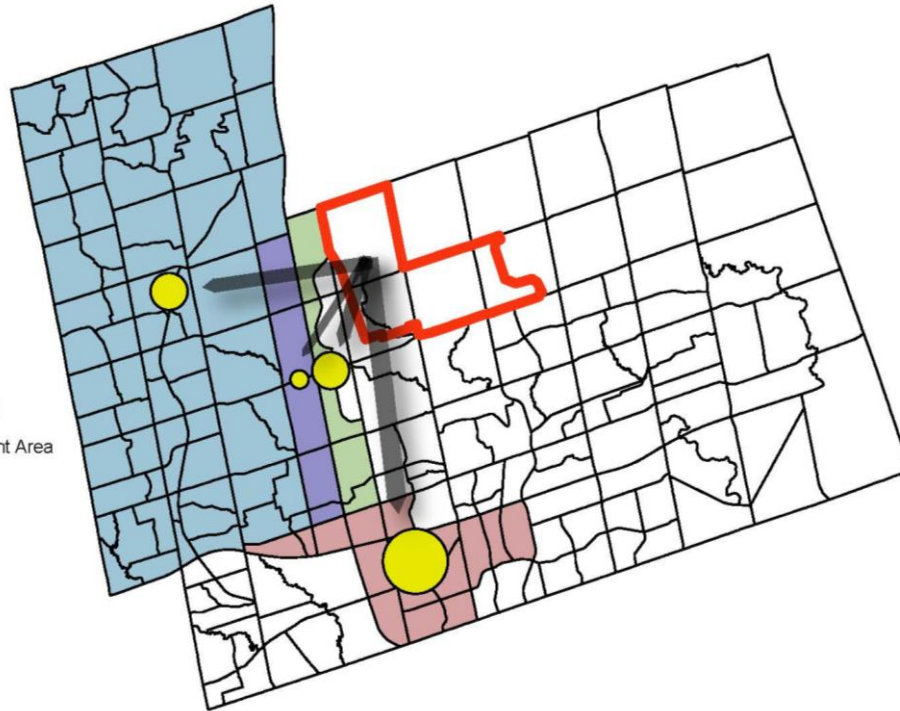
 FUA Zone

### Total Number of Auto Trips

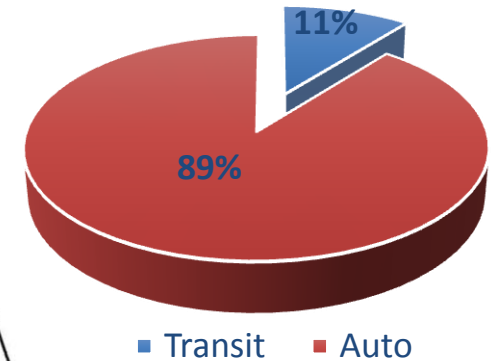
-  Less than 150 Trips
-  150 to 400 Trips
-  Over 400 Trips

### Major Destination

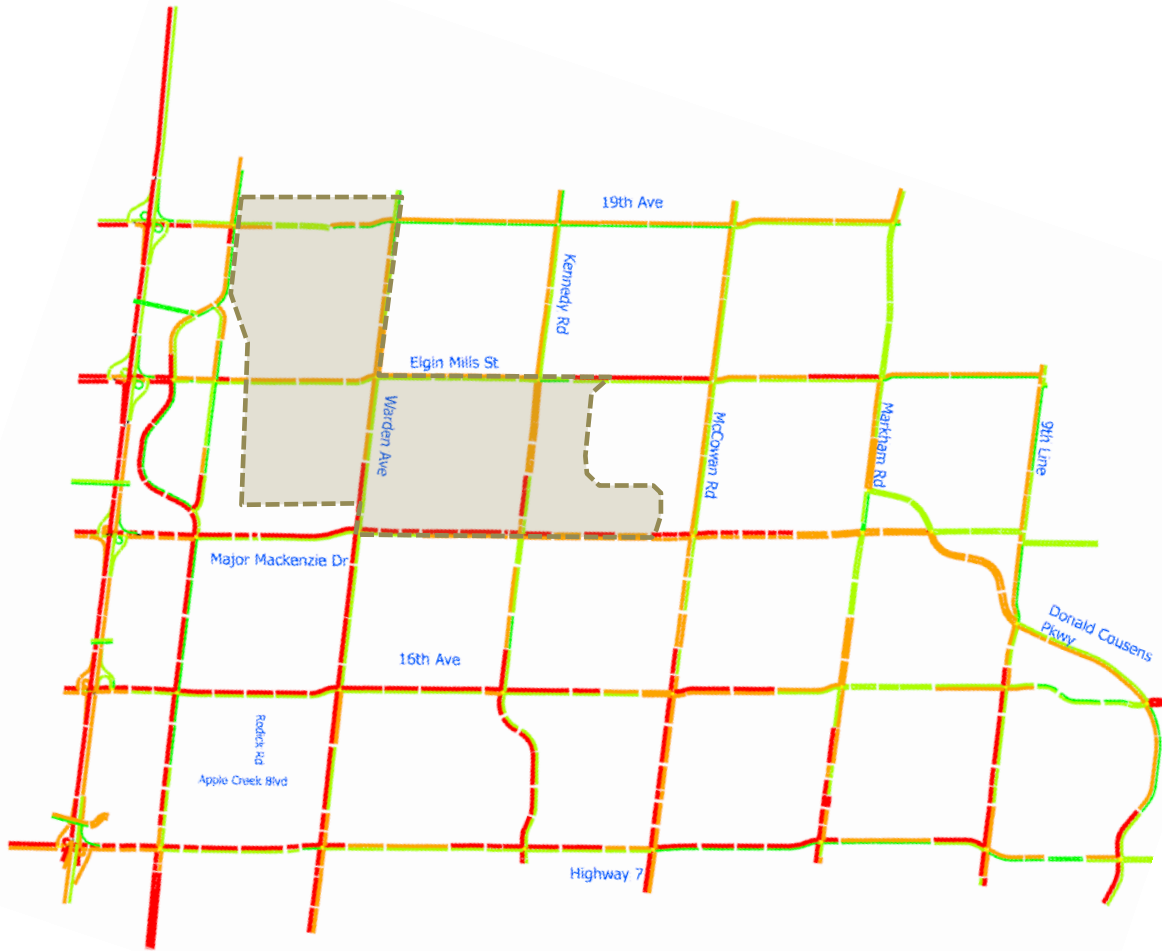
-  Employment Area East of Highway 404
-  Employment Area West of Highway 404
-  Highway 404 / Highway 407 Employment Area
-  Richmond Hill



**11% of FUA trips in the morning peak are expected to be made by transit by 2031**

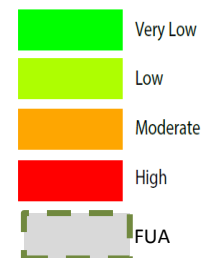


# Morning Peak Hour Levels of Congestion (2031)



- Significant improvements to the transportation system in Markham (including transit, road, cycling and walking facilities) are expected by 2031.
- Yet high levels of congestion are expected on major arterial roads as a result of the general growth in population and employment in the City and York Region.

Congestion Level

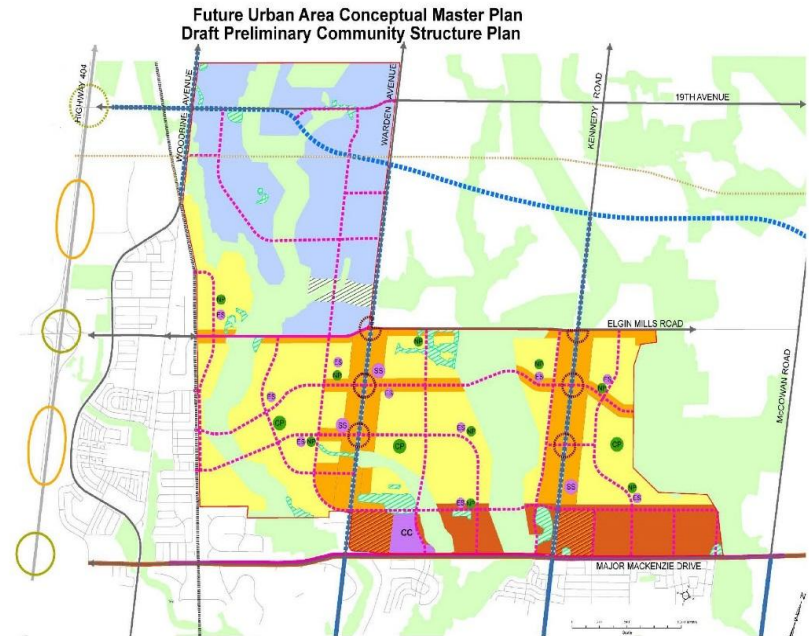




# Draft Preliminary Community Structure Plan Proposed Collector Road Network

The Plan provides a network of continuous collector roads that:

- Provide reasonable levels of connectivity and flexibility.
- Provide attractive transit routes and accommodate active transportation facilities.
- Facilitate short to medium distance trips without the need to rely on major arterial roads.
- Provide sufficient and direct access to the Employment Area north of Elgin Mills Rd.



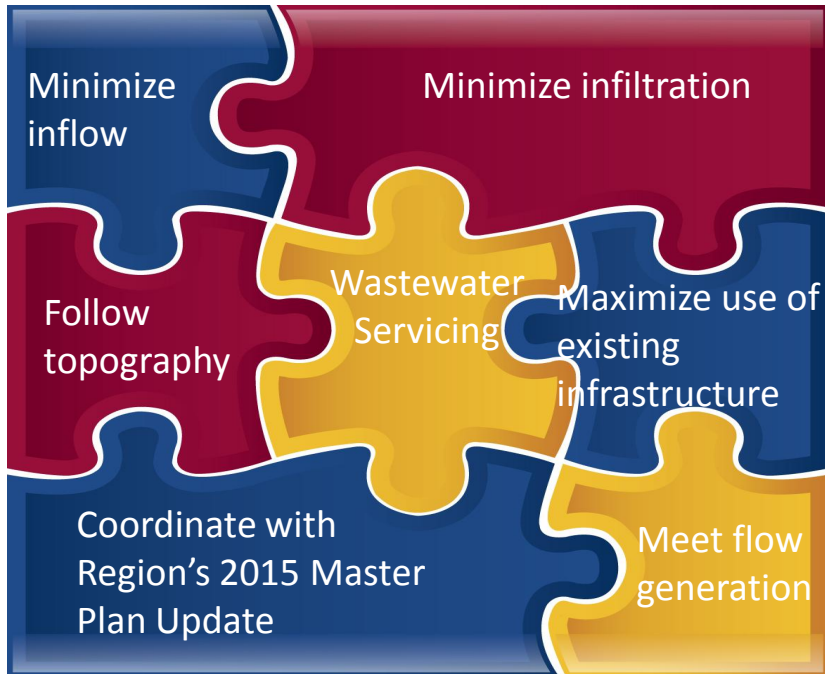
## **Transportation Study - Next Steps**

**The collector road network in the draft Preliminary Community Structure Plan will be further refined through:**

- **Additional analysis to confirm the number of lanes required for collector roads and intersection controls.**
- **Review of Greenway system crossings and locations.**
- **Development of a comprehensive active transportation network that consists of sidewalks and cycling facilities.**
- **Incorporation of transit routes to service the North Markham FUA.**
- **Development of Travel Demand Management (TDM) policies to make the most efficient use of the road network.**



## Wastewater Servicing Study



### Wastewater Servicing Study Objectives

#### Purpose of the Study:

- Identify a preferred servicing strategy that supports the new community.
- Establish long term and cost effective wastewater services.
- Maximize the use of existing water infrastructure.
- Protect the natural environment.



## Water Servicing Study



### Purpose of the Study:

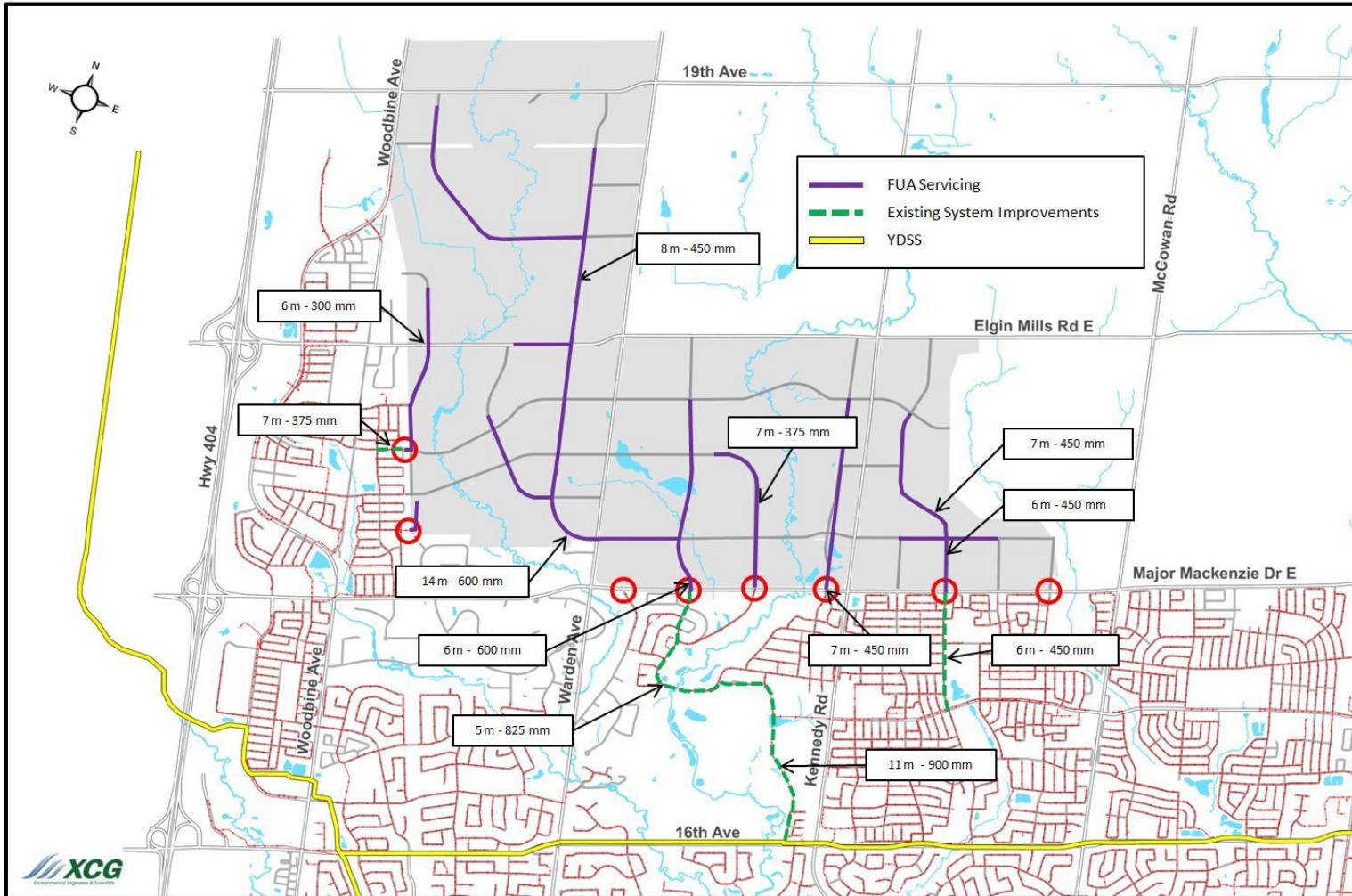
- Identify a preferred servicing strategy that supports the new community.
- Establish long term and cost effective water services.
- Maximize the use of existing water infrastructure.

### Water Servicing Study Objectives



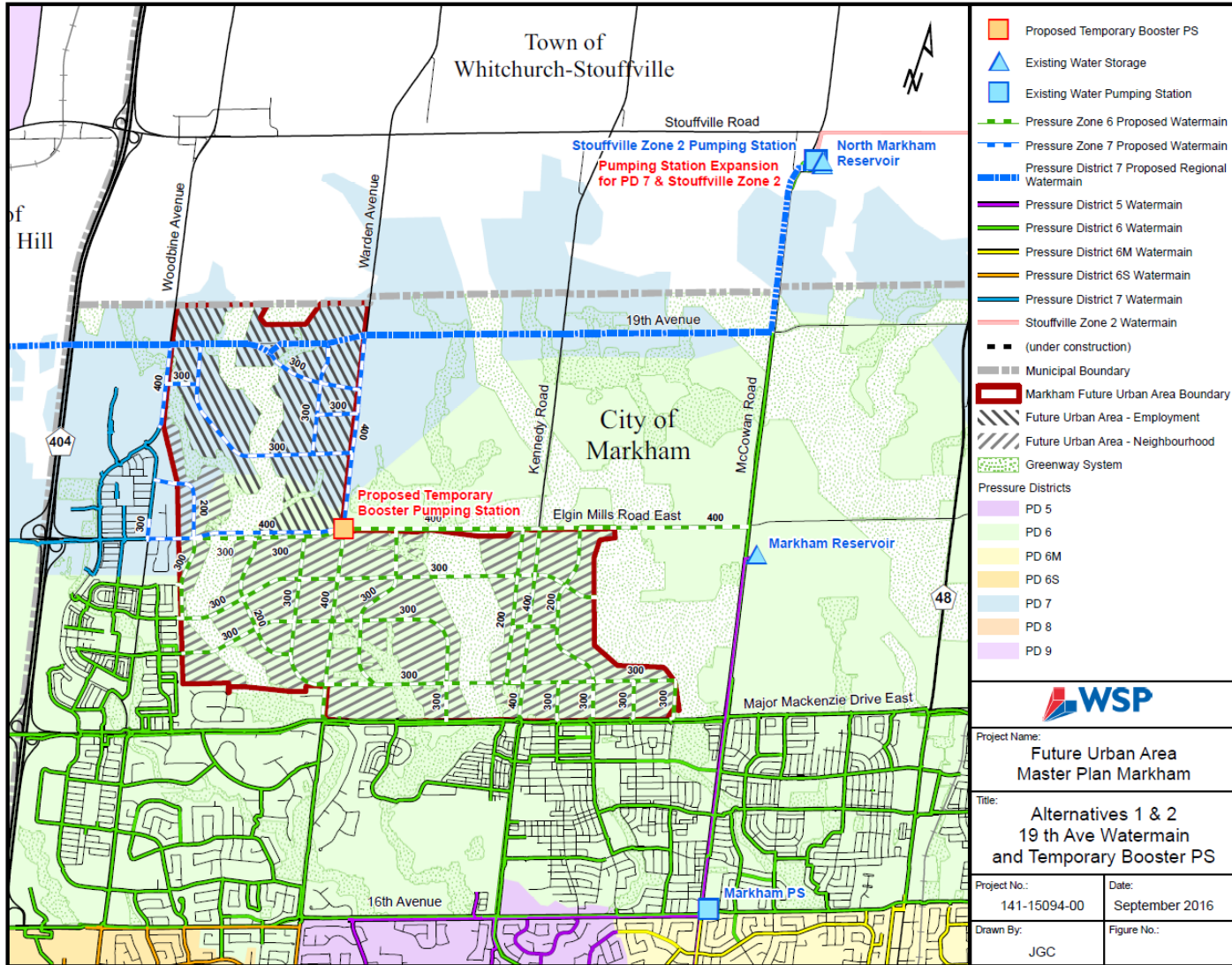


# Wastewater Servicing





# Water Servicing



	Proposed Temporary Booster PS
	Existing Water Storage
	Existing Water Pumping Station
	Pressure Zone 6 Proposed Watermain
	Pressure Zone 7 Proposed Watermain
	Pressure District 7 Proposed Regional Watermain
	Pressure District 5 Watermain
	Pressure District 6 Watermain
	Pressure District 6M Watermain
	Pressure District 6S Watermain
	Pressure District 7 Watermain
	Stouffville Zone 2 Watermain
	(under construction)
	Municipal Boundary
	Markham Future Urban Area Boundary
	Future Urban Area - Employment
	Future Urban Area - Neighbourhood
	Greenway System
<b>Pressure Districts</b>	
	PD 5
	PD 6
	PD 6M
	PD 6S
	PD 7
	PD 8
	PD 9

Project Name:  
**Future Urban Area  
Master Plan Markham**

Title:  
**Alternatives 1 & 2  
19th Ave Watermain  
and Temporary Booster PS**

Project No.: 141-15094-00	Date: September 2016
Drawn By: JGC	Figure No.:

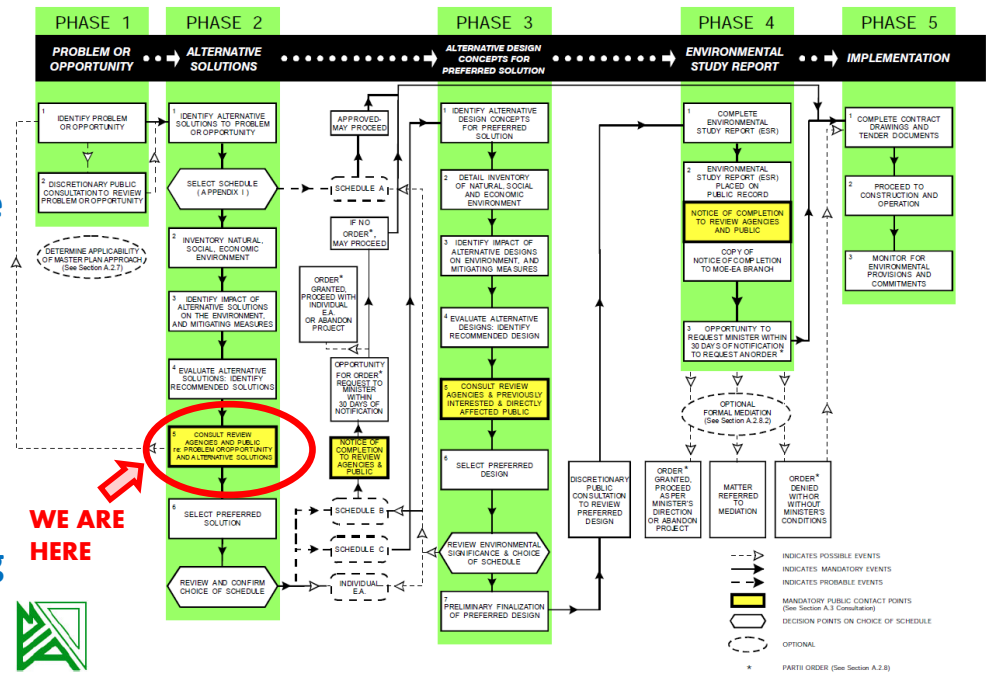
# Class Environmental Assessment (EA) Process

An Environmental Assessment (EA) is a planning and approval process for municipal infrastructure projects:

- The Class EA process method to evaluate the options for municipal servicing and transportation of the new community in the Future Urban Area is the process as approved in the Municipal Class EA (2007, as amended 2015), Section A.2.7 (Approach #1 in Appendix 4)
- The Primary Goal of the north Markham Future Urban Area Class EA Master Planning Process is to select a Preferred Community Structure Option for the north Markham Future Urban Area from which Schedule A, A+, B, and C Class EA projects will be identified.

## EXHIBIT A.2 MUNICIPAL CLASS EA PLANNING AND DESIGN PROCESS

NOTE: This flow chart is to be read in conjunction with Part A of the Municipal Class EA



**WE ARE  
HERE**



\* PARTS ORDER (See Section A.2.8)

## Opportunity Statement

The City of Markham Official Plan 2014 designates lands for the development of new communities in the north Markham Future Urban Area that will comprise approximately 40,000 residents, 13,000 dwelling units and 16,000 to 19,000 jobs. In order to support the development of the north Markham Future Urban Area, the Conceptual Master Plan and the EA process will address the transportation, water and wastewater infrastructure and policies needed to accommodate residential and employment growth in a responsible and sustainable manner.

## Class EA Process

The Class Environmental Assessment Master Planning process to evaluate the options for the *Transportation Network and Municipal Servicing* of the new community for the Future Urban Area is as follows:

- *Screening assessment* process to evaluate and identify potential reasonable ways (or Alternative Solutions) to address the Opportunity Statement.
- *Detailed evaluation* process that will result in a Preferred Alternative Solution that best addresses the Opportunity Statement.



# Screening Assessment

## ALTERNATE SOLUTIONS

**Alternative 1:  
Do Nothing**

Maintain existing transportation, water and wastewater systems (same as today with no improvement).

**Alternative 2:  
Increase Capacity**

Increase the capacity of the existing transportation, water and wastewater system with no new systems within the Future Urban Area.

**Alternative 3:  
Build New systems**

Build new transportation, water and wastewater systems within the Future Urban Area with no improvements to the existing systems.

**Alternative 4:  
Combination**

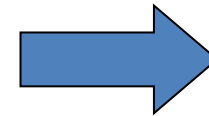
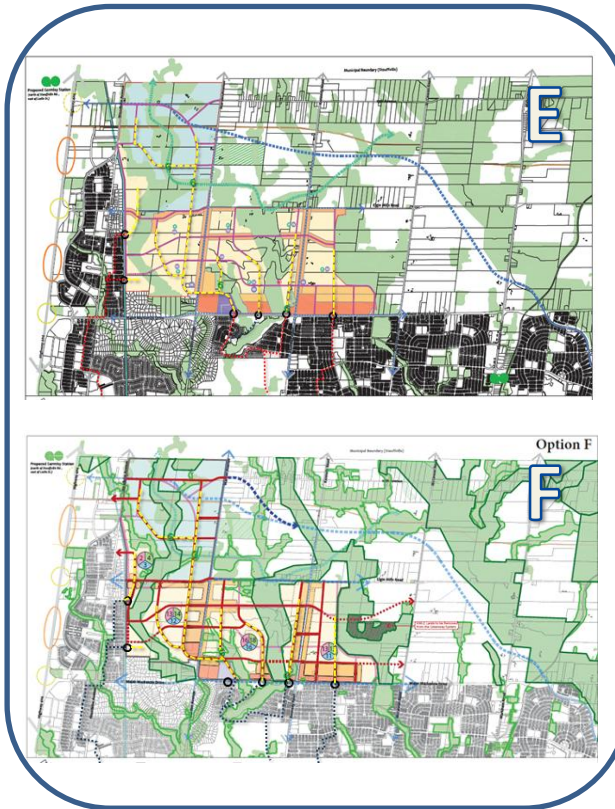
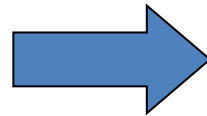
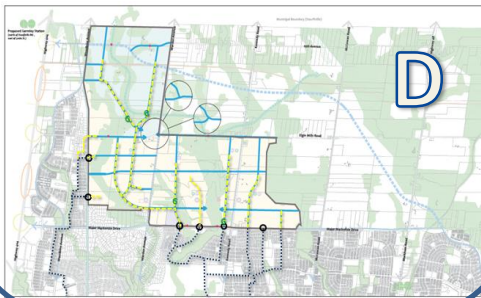
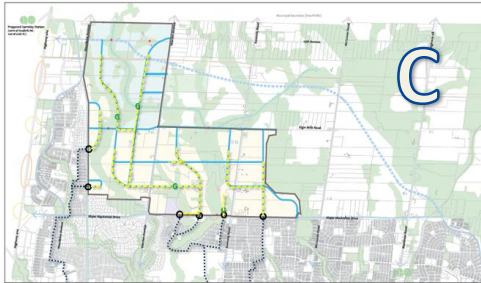
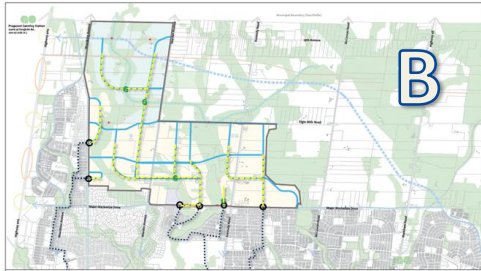
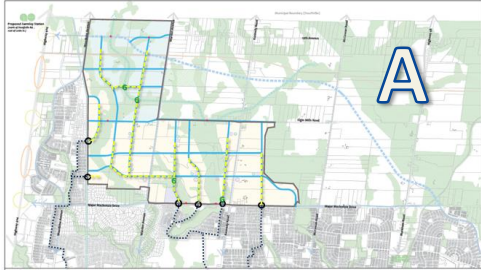
Increase capacity of the existing transportation, water and wastewater system, AND build new systems within the Future Urban Area.

**Alternative 4 is selected for Detailed Evaluation**

It best addresses the needs of projected growth, increased travel demand and servicing . It will best support the development of pedestrian, cycling and local transit network, and adhere to the goals and objectives in the City of Markham Official Plan



# Detailed Evaluation (Options and Process)

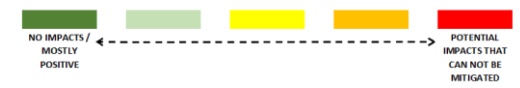


**DRAFT  
PRELIMINARY  
COMMUNITY  
STRUCTURE  
PLAN**

# Detailed Evaluation (Evaluation of Options)

OPTION		A	B	C	D	→	E	F
TRANSPORTATION	THE TRANSPORTATION SYSTEM	Green	Light Green	Yellow	Light Green		Green	Green
	THE NATURAL ENVIRONMENT	Orange	Yellow	Orange	Orange		Orange	Orange
	POLICIES & GOVERNANCE	Green	Yellow	Yellow	Yellow		Green	Yellow
	SOCIAL AND CULTURAL ENVIRONMENT	Light Green	Light Green	Light Green	Light Green		Light Green	Light Green
	RECOMMENDED FOR FURTHER EVALUATION	✓	✗	✗	✗		✓	✓
WASTEWATER	THE NATURAL ENVIRONMENT	Yellow	Orange	Orange	Orange		Yellow	Yellow
	THE SOCIAL ENVIRONMENT	Light Green	Light Green	Light Green	Light Green		Light Green	Light Green
	TECHNICAL CONSIDERATIONS	Light Green	Orange	Yellow	Light Green		Light Green	Light Green
	COST	Green	Light Green	Light Green	Yellow		Green	Green
	RECOMMENDED FOR FURTHER EVALUATION	✓	✗	✗	✗		✓	✓
WATER	THE NATURAL ENVIRONMENT	Light Green	Light Green	Light Green	Light Green		Light Green	Light Green
	THE SOCIAL ENVIRONMENT	Light Green	Light Green	Light Green	Light Green		Light Green	Light Green
	TECHNICAL CONSIDERATIONS	Green	Green	Green	Green		Green	Green
	COST	Light Green	Light Green	Green	Green		Green	Light Green
	RECOMMENDED FOR FURTHER EVALUATION	✓	✓	✓	✓		✓	✓

→  
DRAFT  
PRELIMINARY  
COMMUNITY  
STRUCTURE  
PLAN





## Next Steps

### Following this Open House:

- Additional analysis will be undertaken to complete the Phase 2 impact assessment.
- Phase 3 - Management strategies and recommendations will be developed that will solidify key policy direction for secondary plans. At end of Phase 3, a draft Conceptual Master Plan consisting of a Preferred Community Structure and Key Policy Direction for the development of statutory secondary plans will be presented to Council for endorsement.

### If you would like to stay informed:

- Add your contact information to the sign-in sheet to be notified of updates, including the next Public Open House or Council meeting.
- Fill in a comment sheet.
- Check our website [www.markham.ca](http://www.markham.ca) and local newspapers for updates and notices related to this Study.