Langstaff Gateway
Land Use & Built Form Master Plan:
DSC Presentation

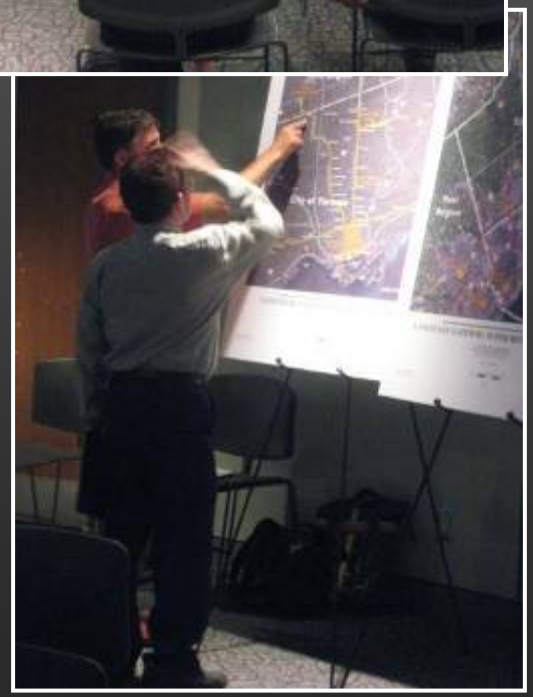
May 19, 2009

Ferris + Associates Inc.
Landscape Architecture and Urban Design

CALTHORPEASSOCIATES
URBAN DESIGNERS. PLANNERS. ARCHITECTS

Master Plan Process:

- **Kick-Off**
  - June, 2008
- **Vision Workshop**
  - July, 2008
- **Design Workshop 1**
  - November, 2008
- **Design Workshop 2**
  - February, 2009
- **Presentation to Stakeholder Agencies**
  - April, 2009
- **Presentation to Development Services Committee**
  - May 19, 2009



Public Process: Agency Feedback

- To be Summarized in the “Workshop Results Report”

- . . .Some representative concerns and comments:
  - Yonge & Langstaff intersection
  - Macro analysis needed of area to coordinate development.
  - Interface of various transit systems needs to be seamless.
  - How to insure development is transit oriented from day one?
  - Density in appropriate location?
  - . . . and more

Public Process: Community Feedback

- Also to be included in the “Workshop Results Report”

- The feedback from the community on the plan included issues with:
  - Adjacency to the cemetery
  - Pedestrian & cycling access to new & existing transit stations
  - Stormwater design & reducing the impact on the neighborhood
  - Future of Heritage buildings & other community amenities
  - . . . and more

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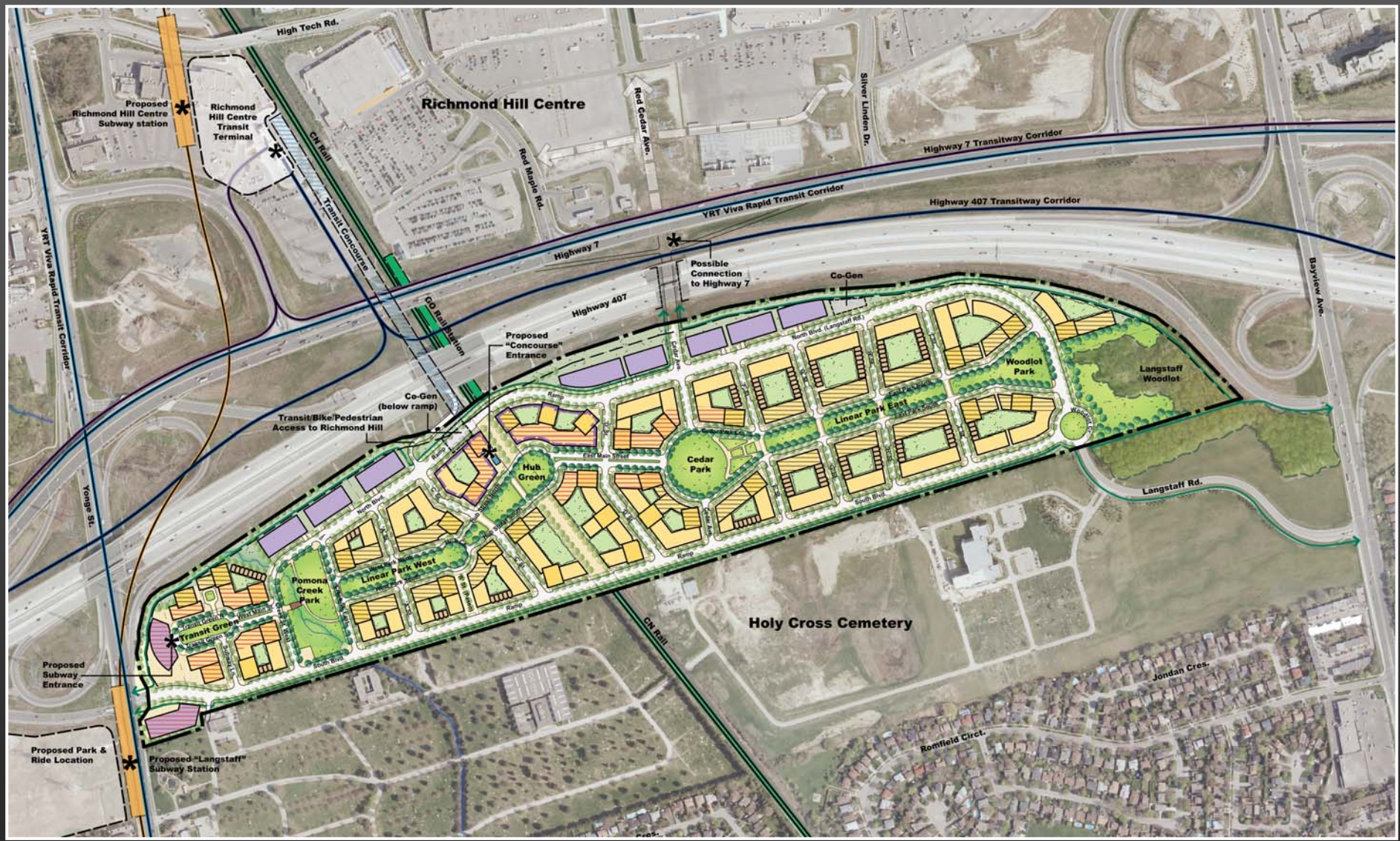
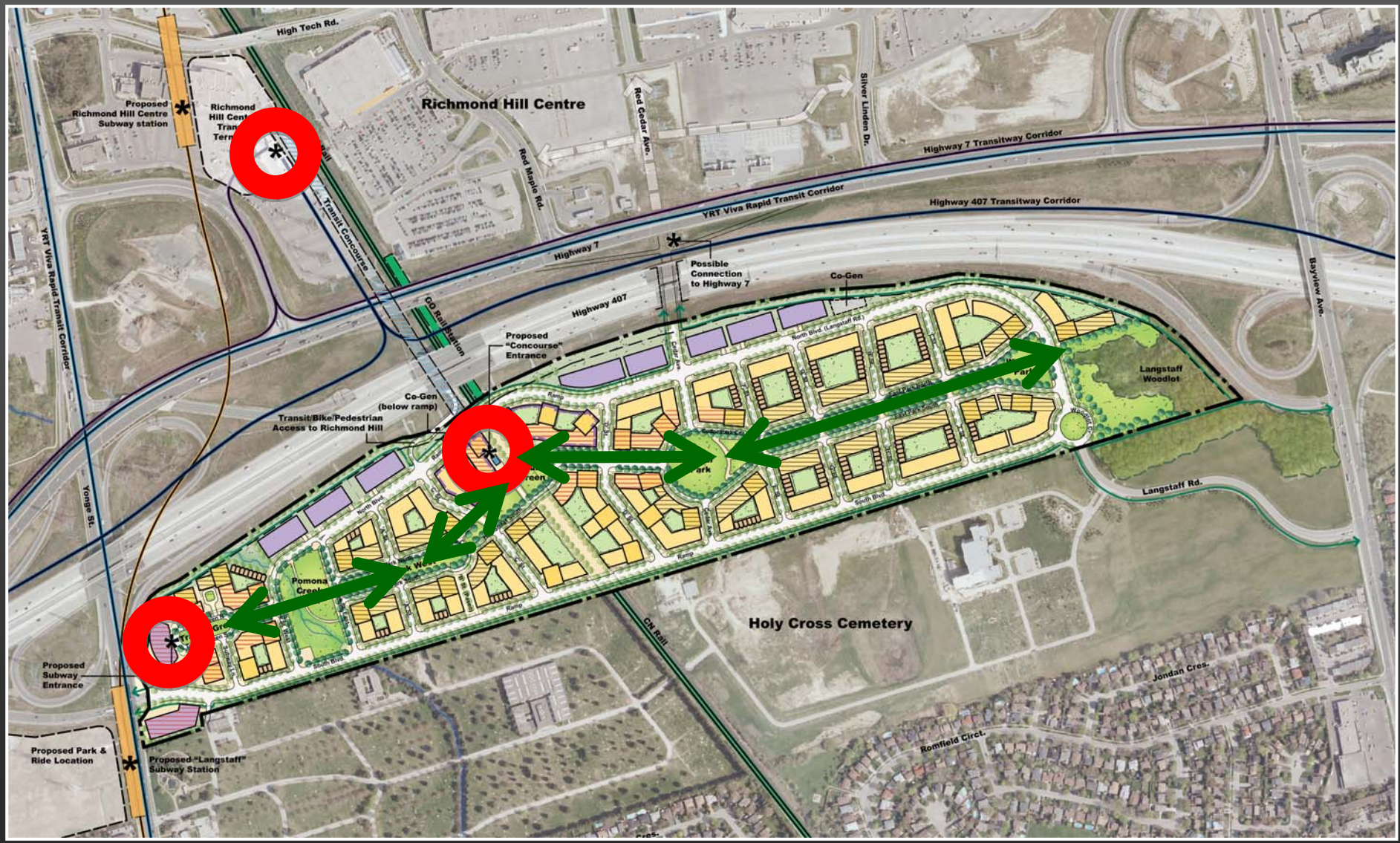
OVERVIEW OF THE PREFERRED CONCEPT PLAN

Preferred Concept Plan:



Connectivity:

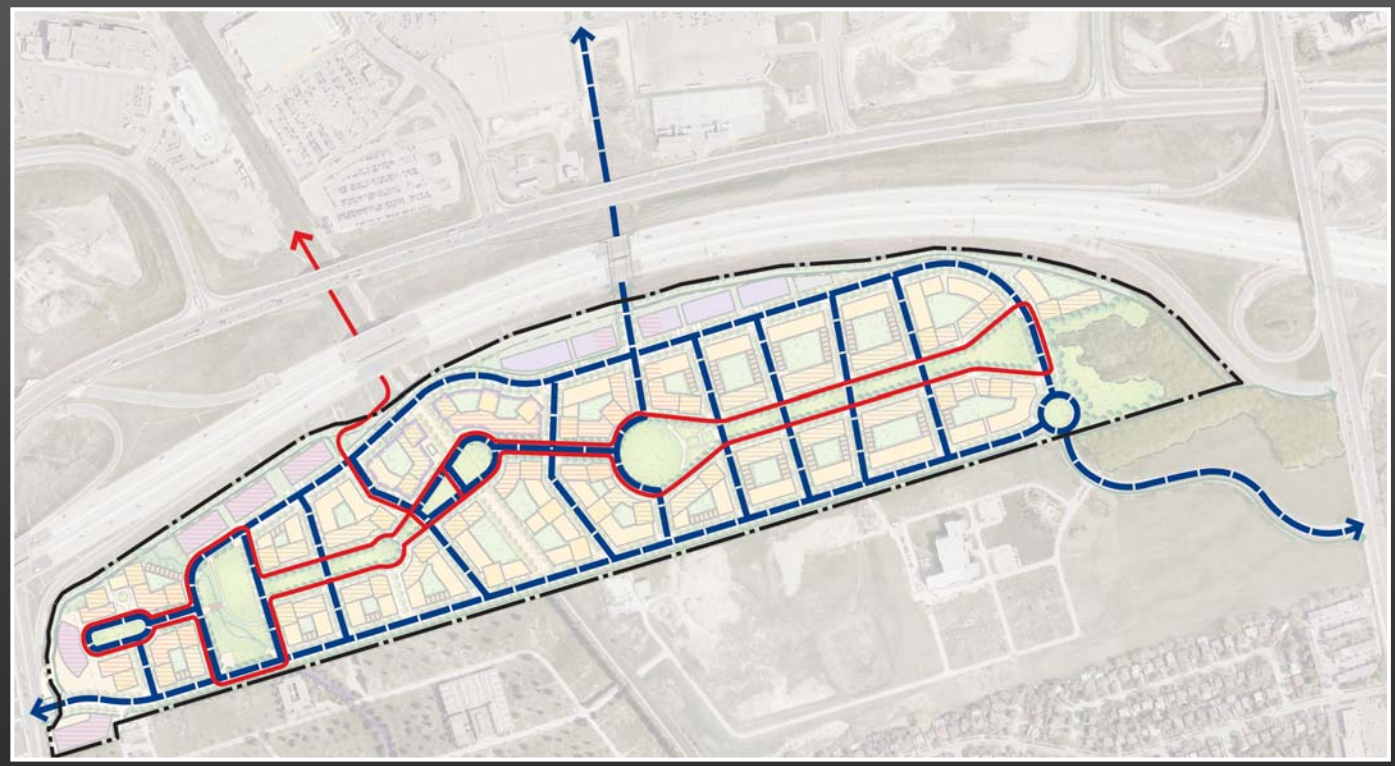


Livability & Urbanism:
The Jane Jacobs Principles

- Emphasize Public Realm
- A Vibrant Mix of Uses
- Small blocks
- Streets for People
- Varied Architecture & Building Massing
- Healthy Mix of Public and Private

Livability & Urbanism: Interconnected Street Grid

- Network of streets is framework for good urbanism
- Some streets are ped only, others for people and cars
- More street connections makes walking easier



Livability & Urbanism: Small Blocks

- Small, varied blocks create good pedestrian environment
- Size varies, but typical dimension is 70m by 85m (0.6 ha)
- Compare with Portland, OR: typical Portland block is 60m x 60m.

Livability & Urbanism:
Streets for People

- No building taller than 6 stories on local street
- Corner sidewalk “bulbouts” favor pedestrians
- Plentiful street trees
- Varied building setbacks

Livability & Urbanism:
Shadows

Livability & Urbanism:
A Vibrant Mixed-Use Public Realm

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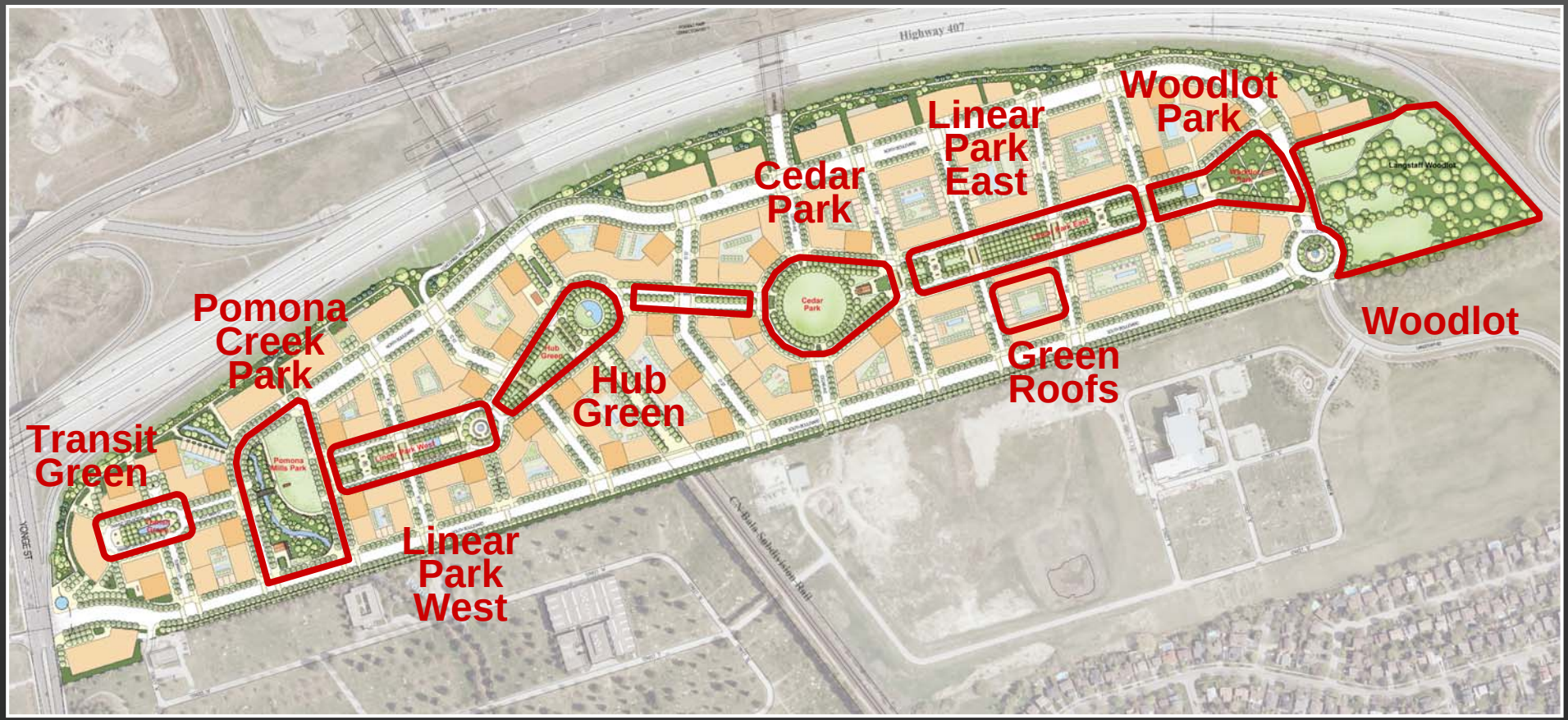
OPEN SPACE: DESIGN & CHARACTER

Livability & Urbanism:
Plentiful Open Space

Preferred Concept Plan
Open Space Network

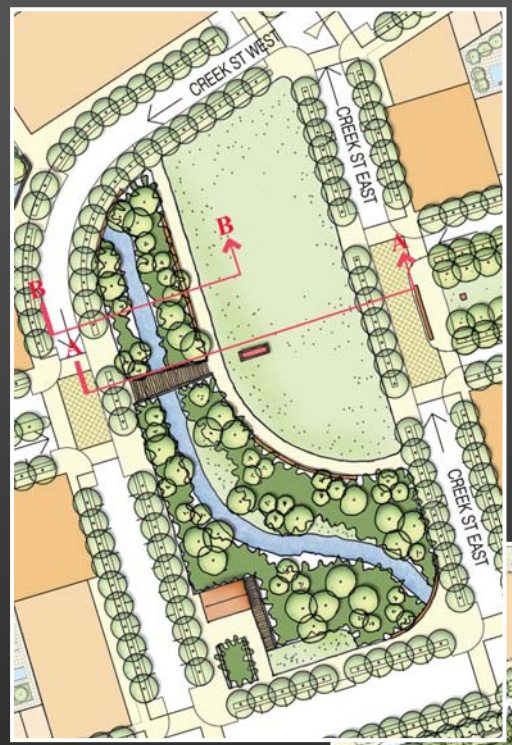
Open Space Concept:
A Sequence of Parks and Plazas



Open Space: Landscape Concept Plan

- Continuous open space link from east to west
- 15% of site is usable public park land ('table' land); almost 25% of whole site is public open space.
- More than 5 ha. of internal courtyard space (10% of gross site area.

Pomona Mills Creek Park

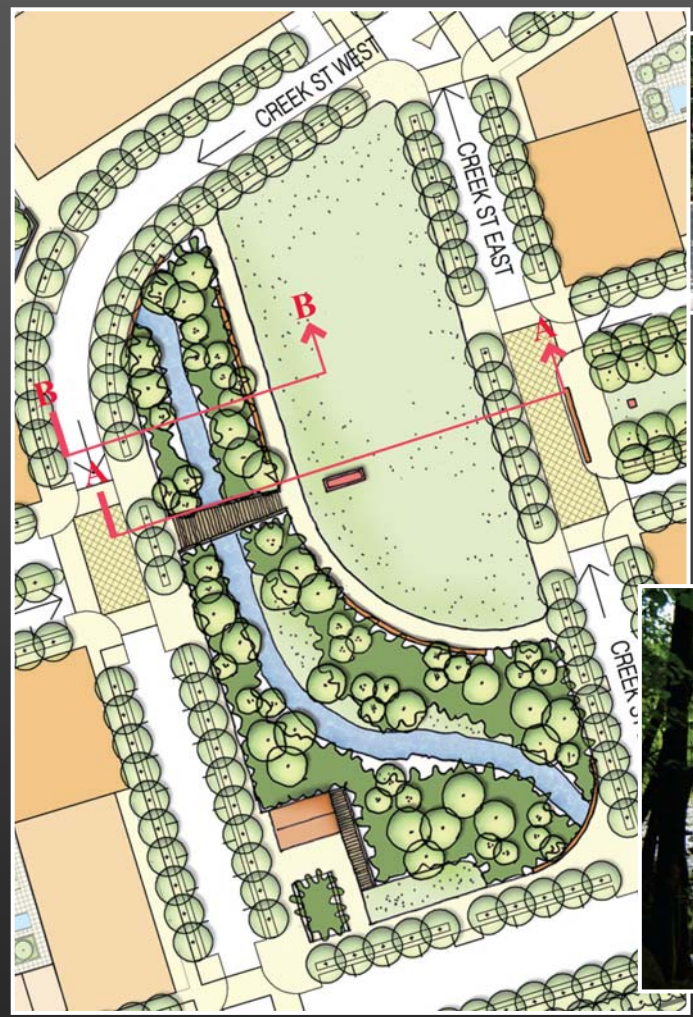


Hub Green

Linear Park

Open Space Design: Pomona Mills Creek Park

- Restored creek is centerpiece of Park
- Active and passive park areas
- Design allows park users to interact with water
- A ‘Central Park’ for West side
- Mixed-use faces park

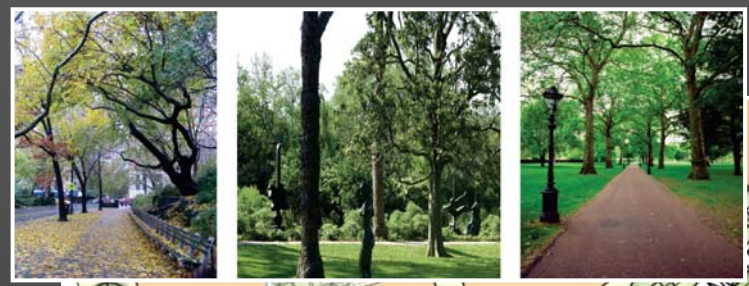


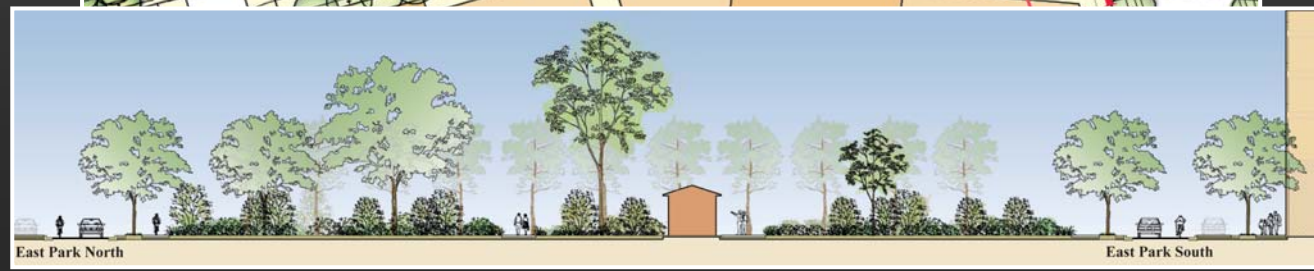
Open Space Design: Linear Park West

- Linear park blocks have varied open space amenities.
- Mixed active and passive rec areas.
- Public ground floor uses in adj. bldgs activate park space at all hours.
- Continuous street trees create intimate park environment

Open Space Design: Woodlot Park

- Linear park links Cedar Park with the Woodlot
- Connected string of varied high quality park spaces
- Parks will be mix of grassy areas & plaza areas, all enhanced by planting and trees





Open Space Design: North & South Greenway

- Greenways provided along northern & southern edges
- Landscaping & multi-use trail
- Few street crossings
- Strong link between East & West Sides of site

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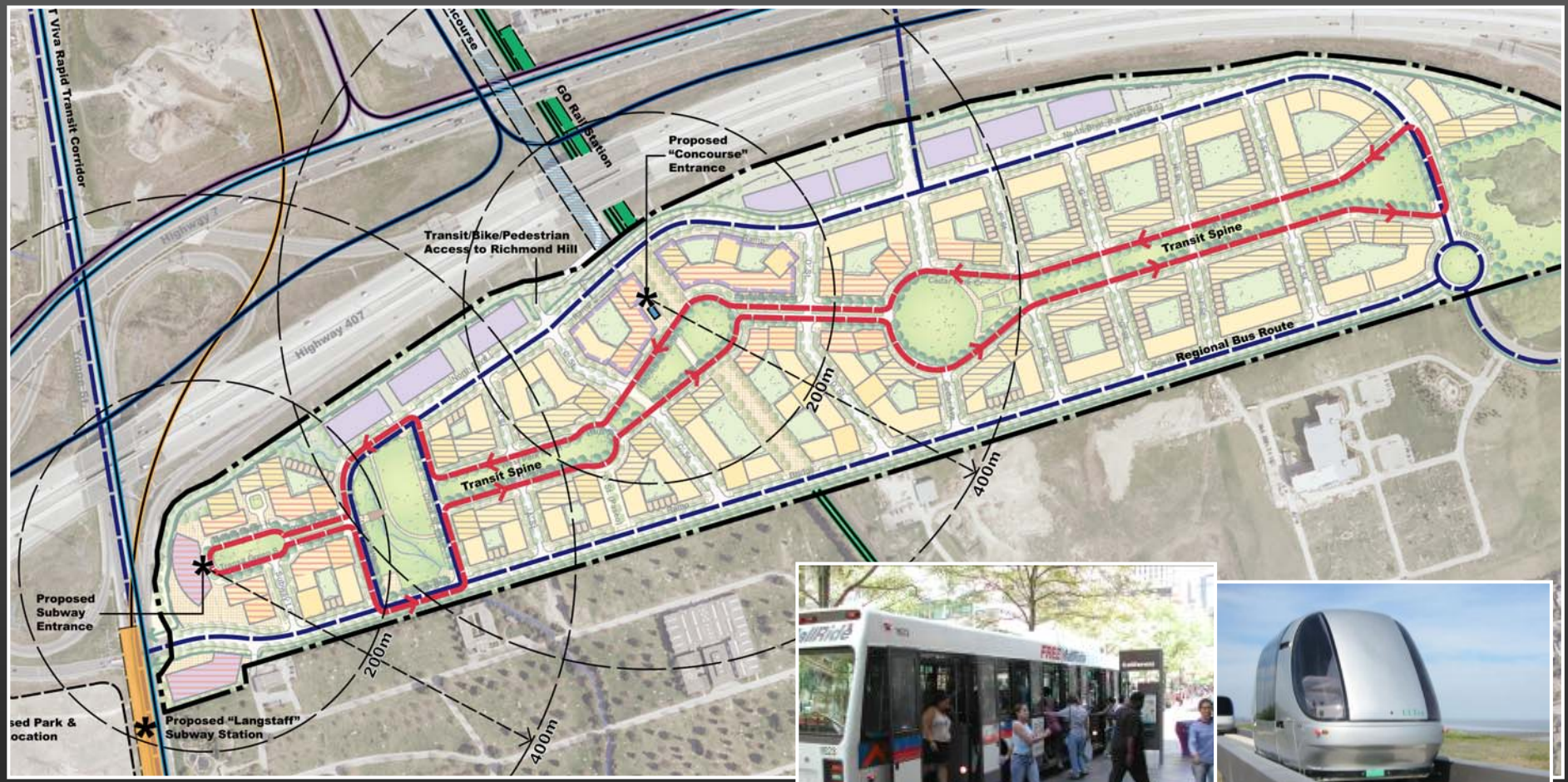
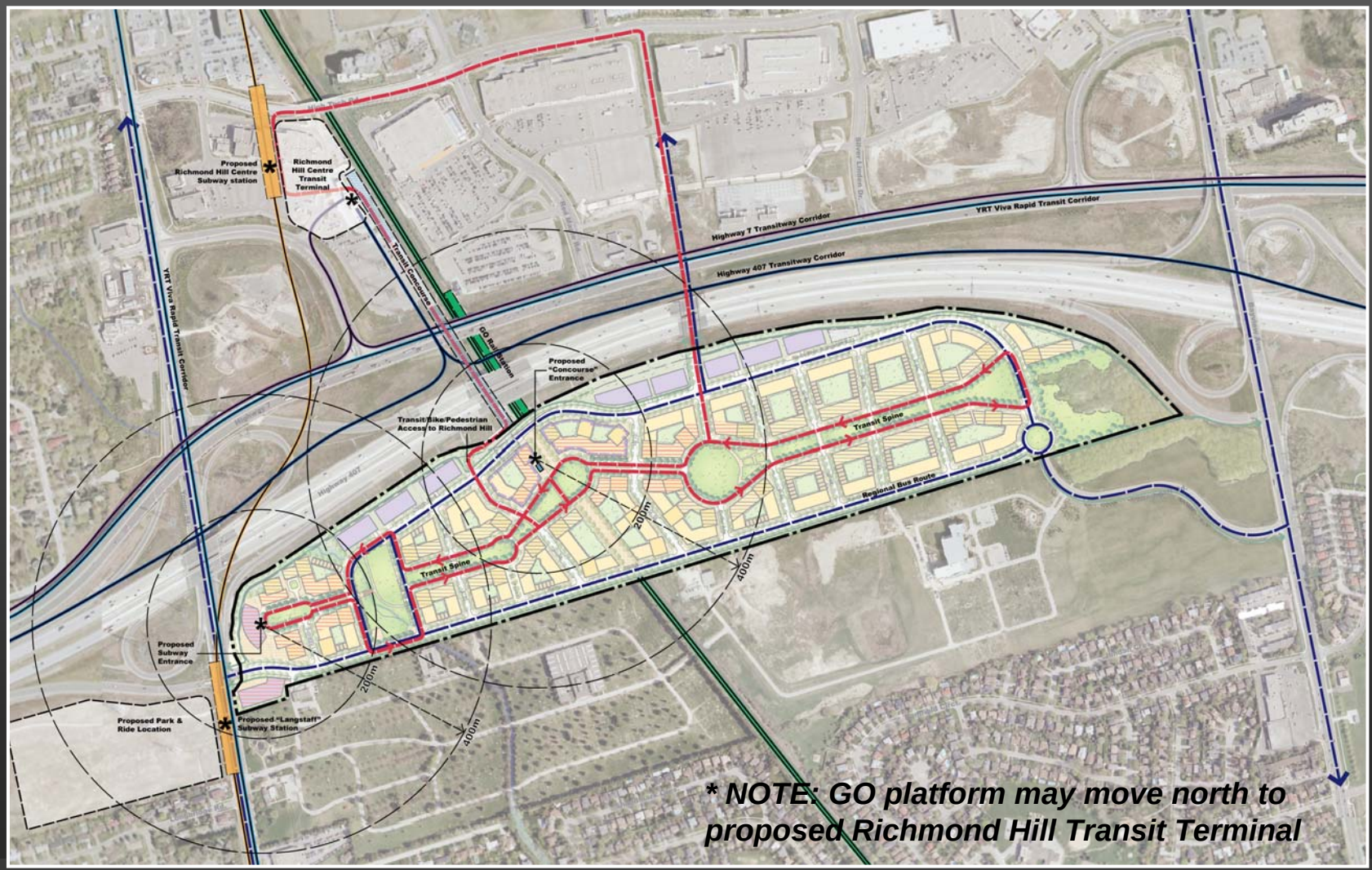
TRANSIT ACCESSIBILITY. . .

THE ‘CONCOURSE’

Transit & Transportation: "Transit Mall" (+ Peds & Bikes)



Transit & Transportation: Integration with Richmond Hill



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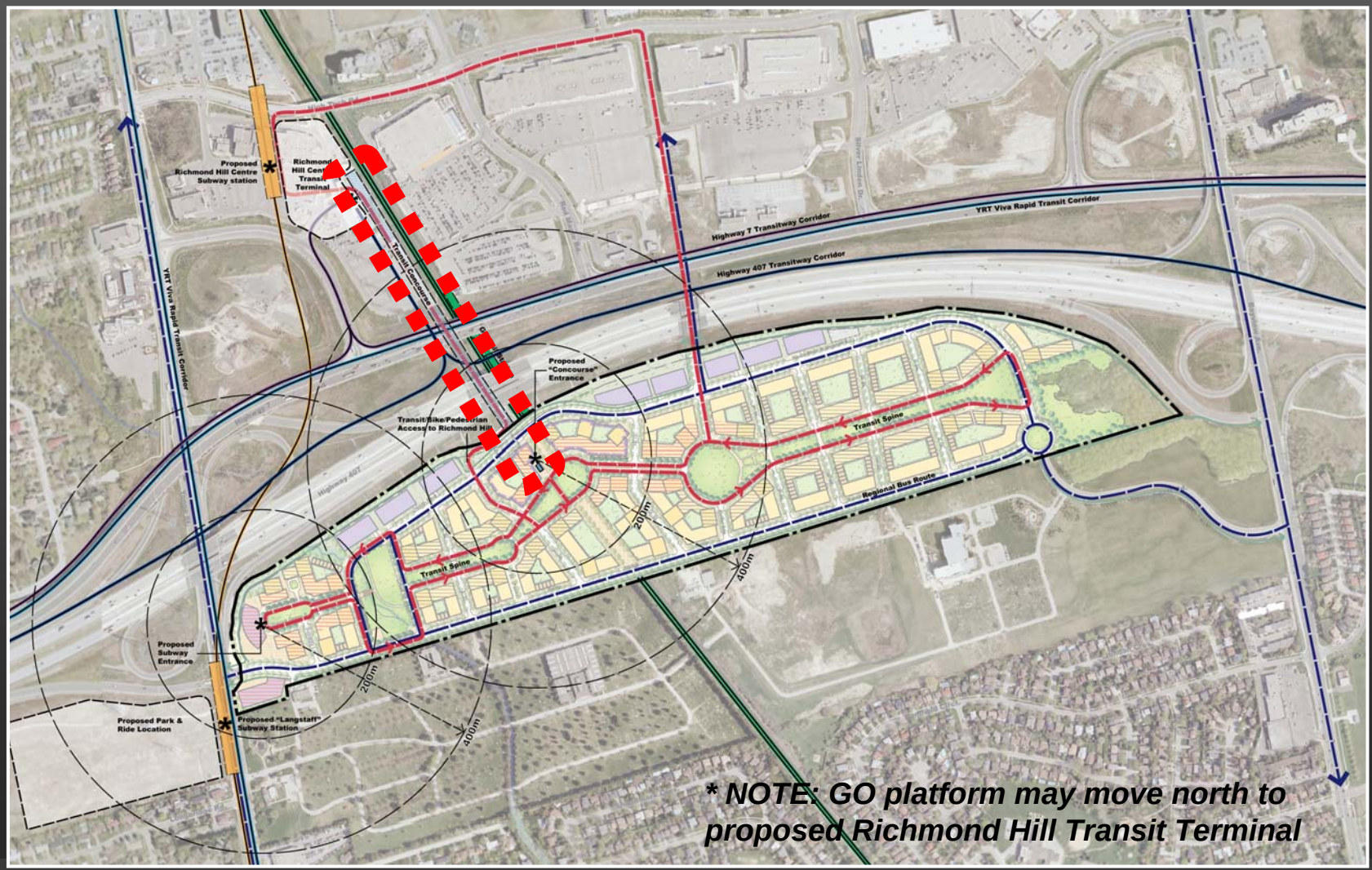
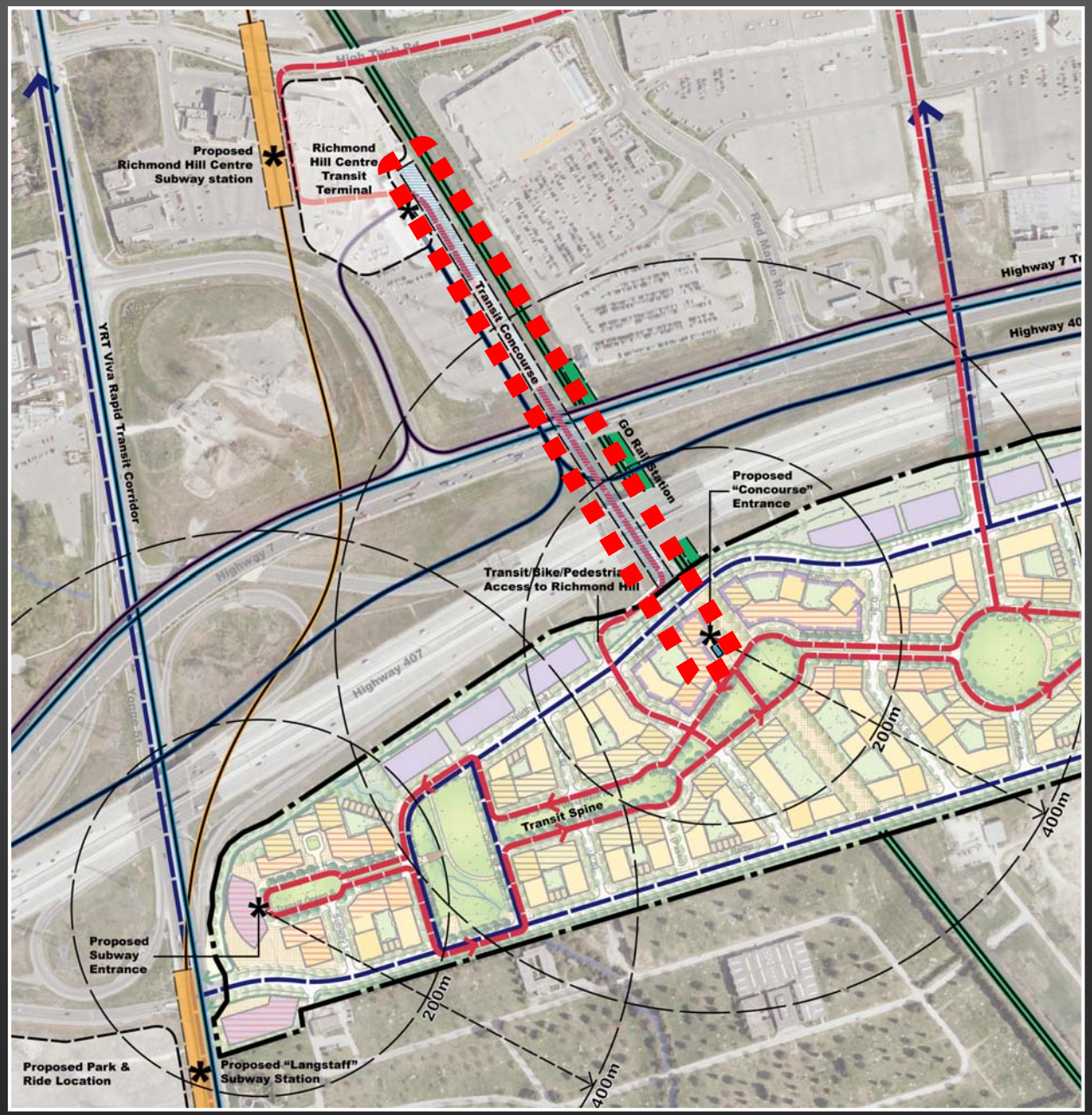


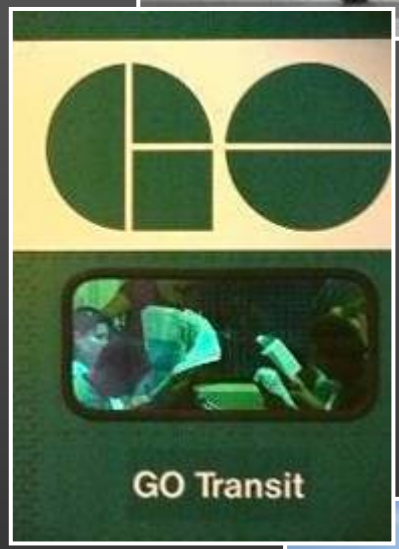
Transit Access: The Concourse

- A linear "Transit Hall"
- Connects both sides of Mobility Hub
- Links Langstaff Project to 407 & 7 Transitways & to Richmond Hill

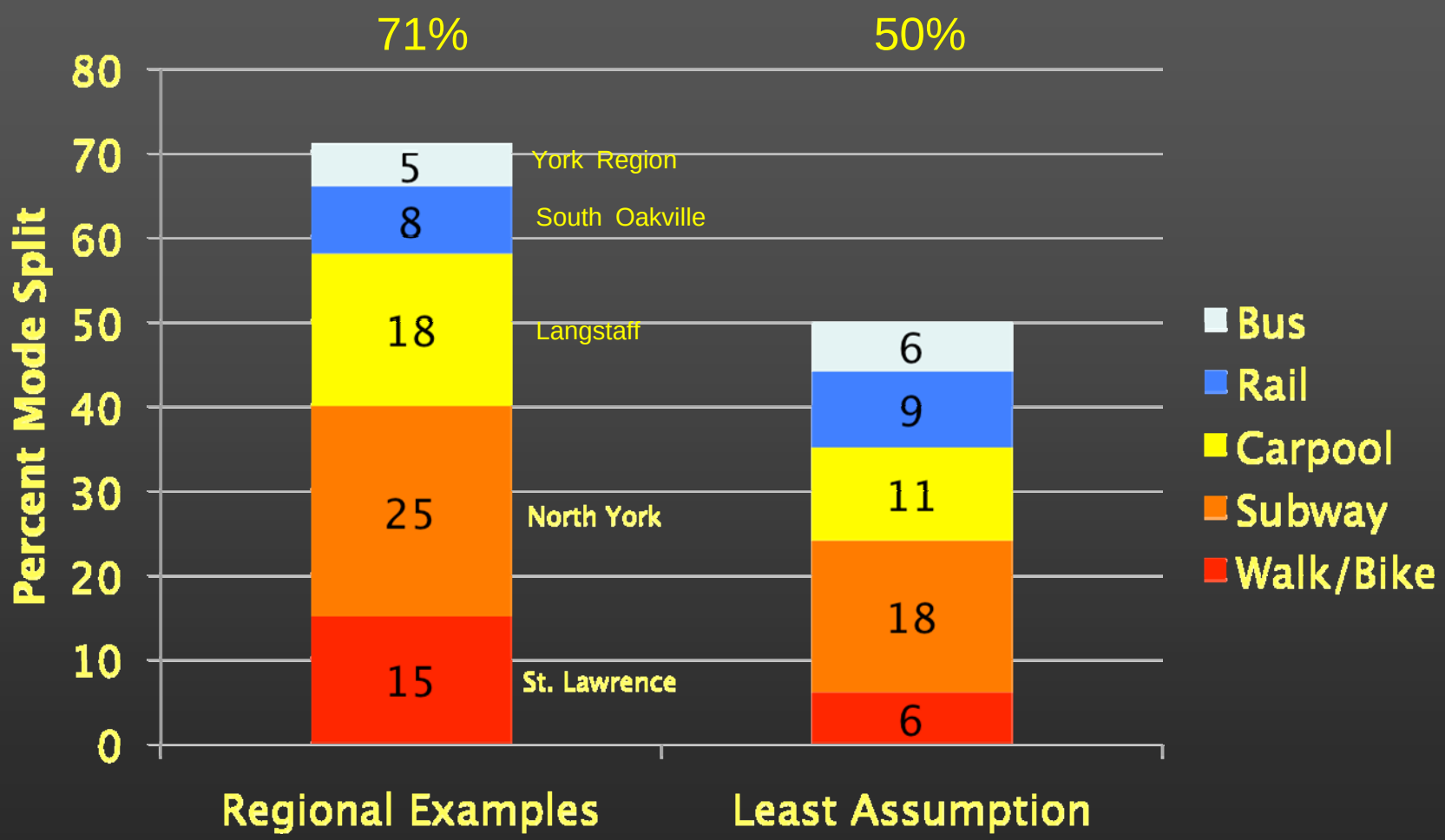


Transit Plan: Modes

- GO Transit
- Bus (VIVA, YRT)
- Subway
- 407 Transitway
- Highway 7 Transitway
- Dedicated Internal Transit System (e.g., PRT)



Non Auto Mode Split



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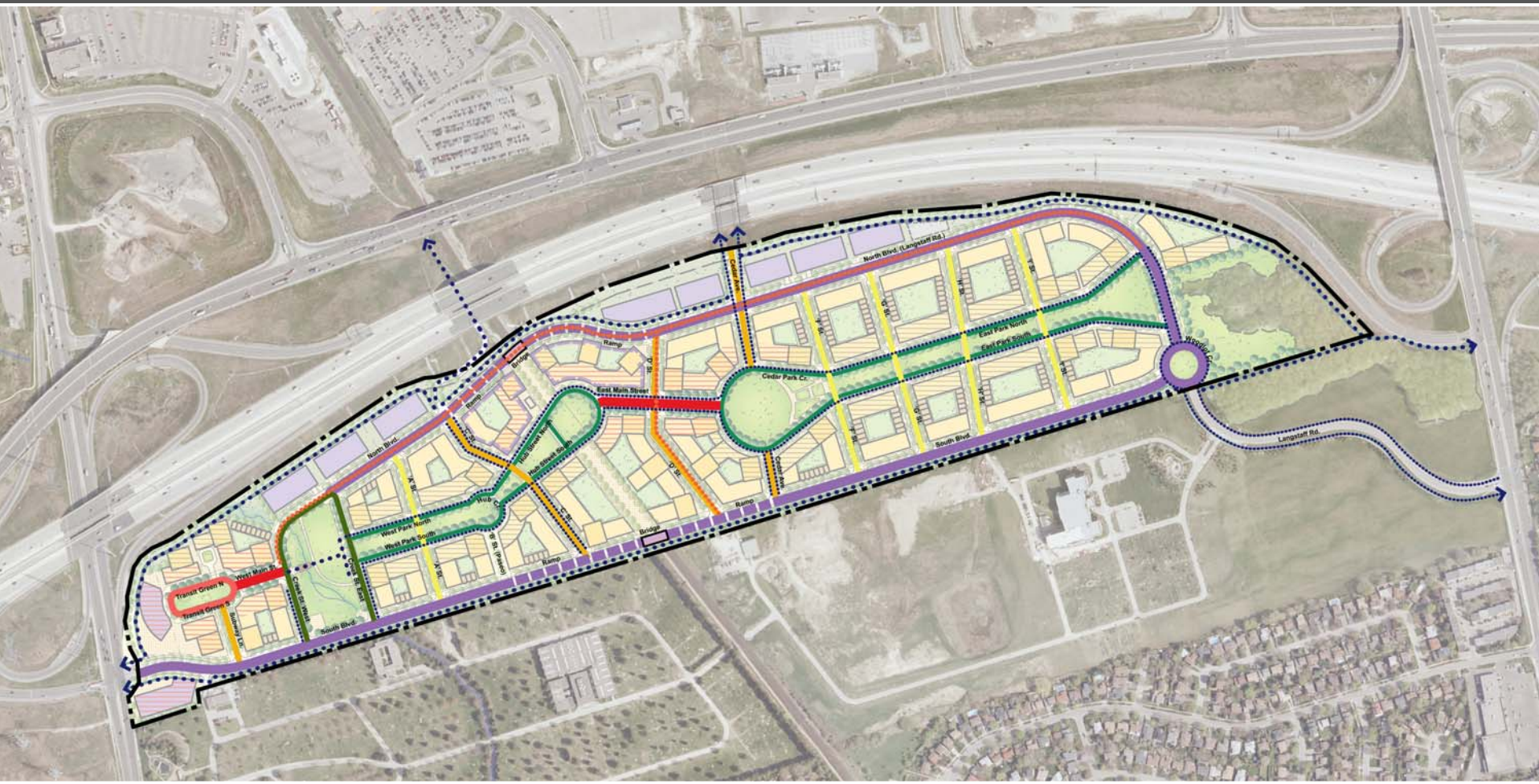
STREET SECTIONS

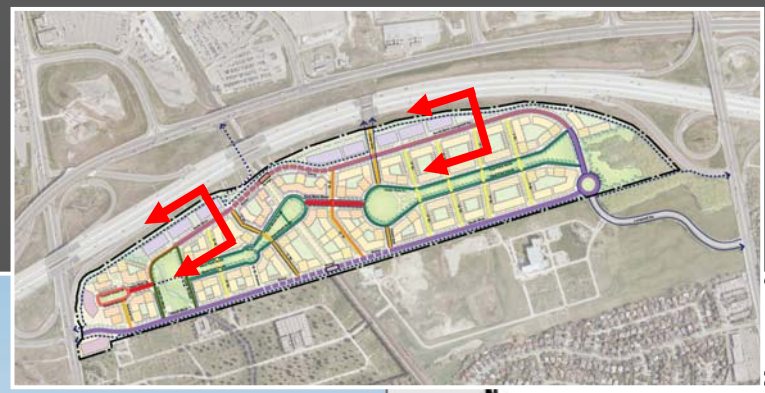
Traffic and Circulation:
Project Street Network

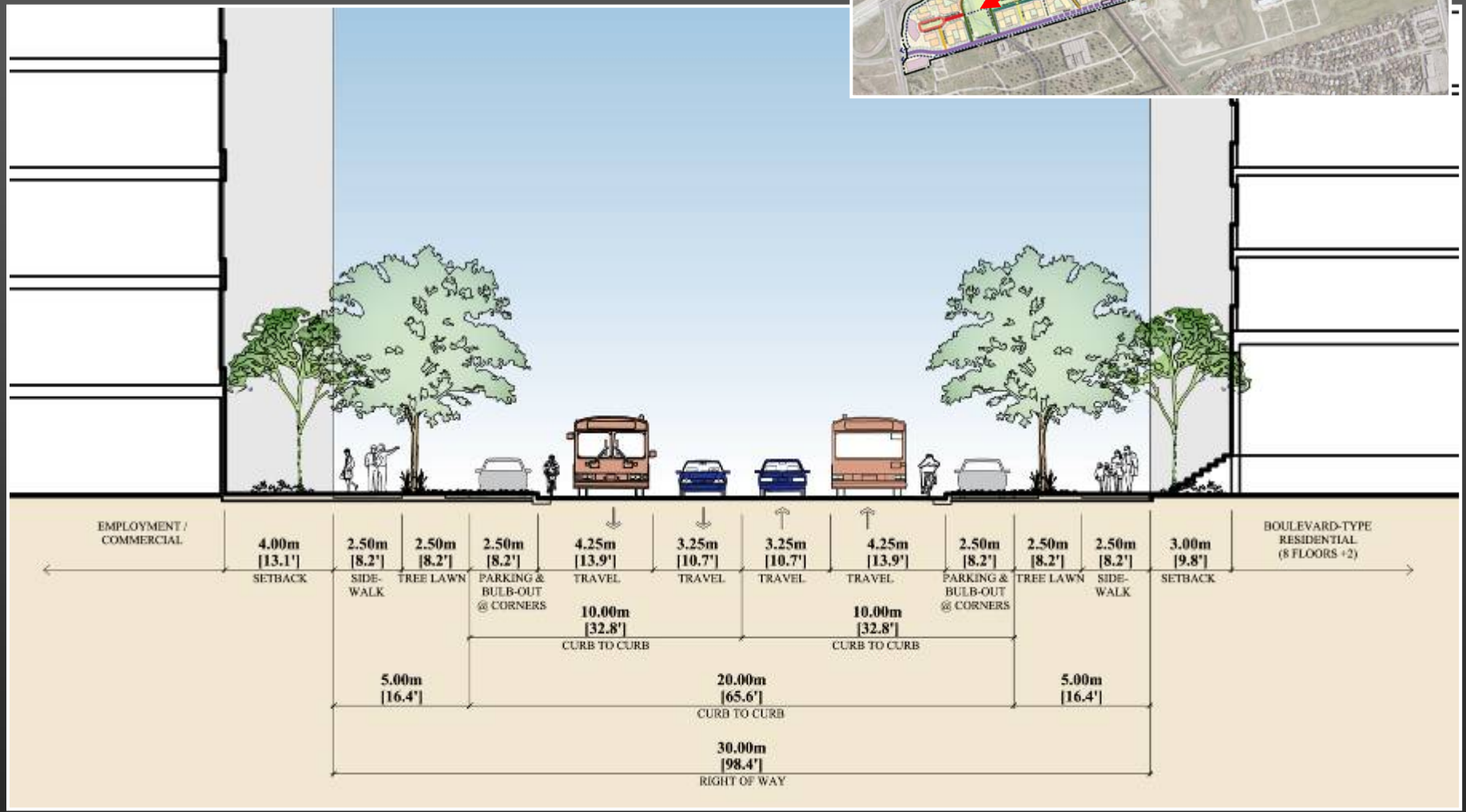


Street Types: Boulevard

- Boulevards are at the perimeter of site: center is largely car-free
- Sidewalk bulb-outs at corners
- These streets are shared by pedestrians & cars
- Framed by bldgs

Street Types:
North Boulevard

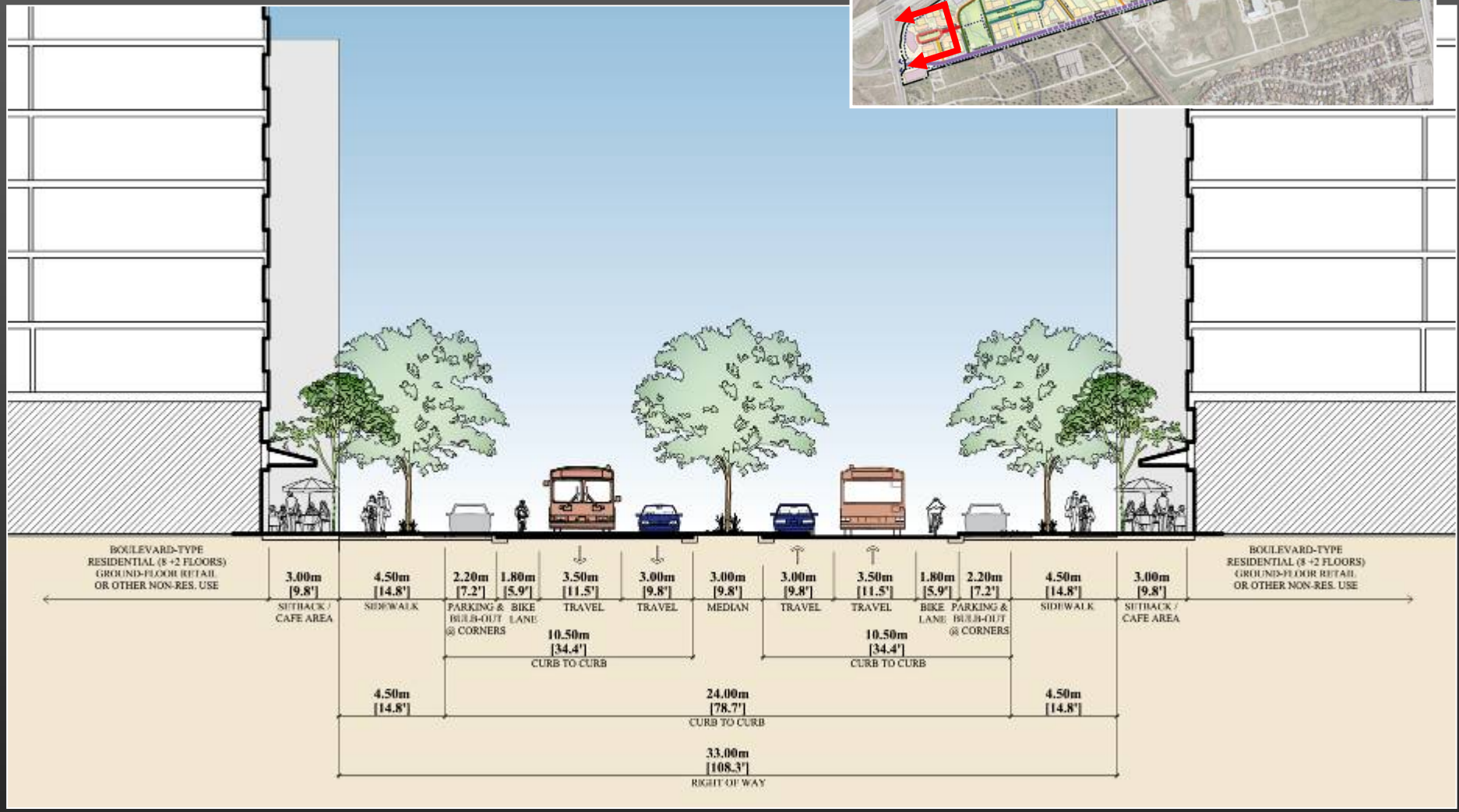




Street Types:
Main Streets

- Generous sidewalks for pedestrians and building setbacks for café seating.
- Location: major shopping streets
- Parking: both sides
- Sidewalks: both sides, bulb-outs at corner

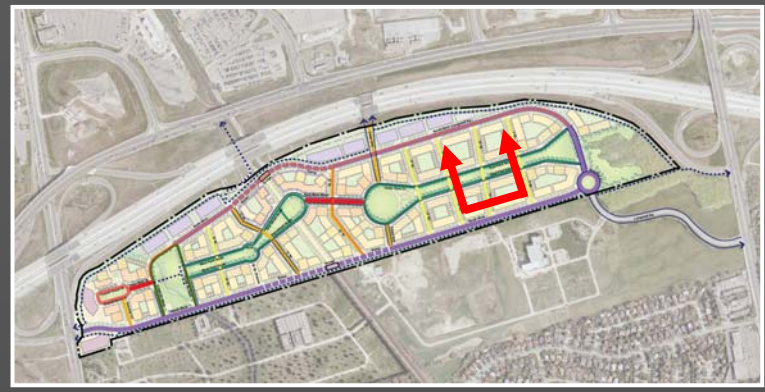
Street Types:
Main Street

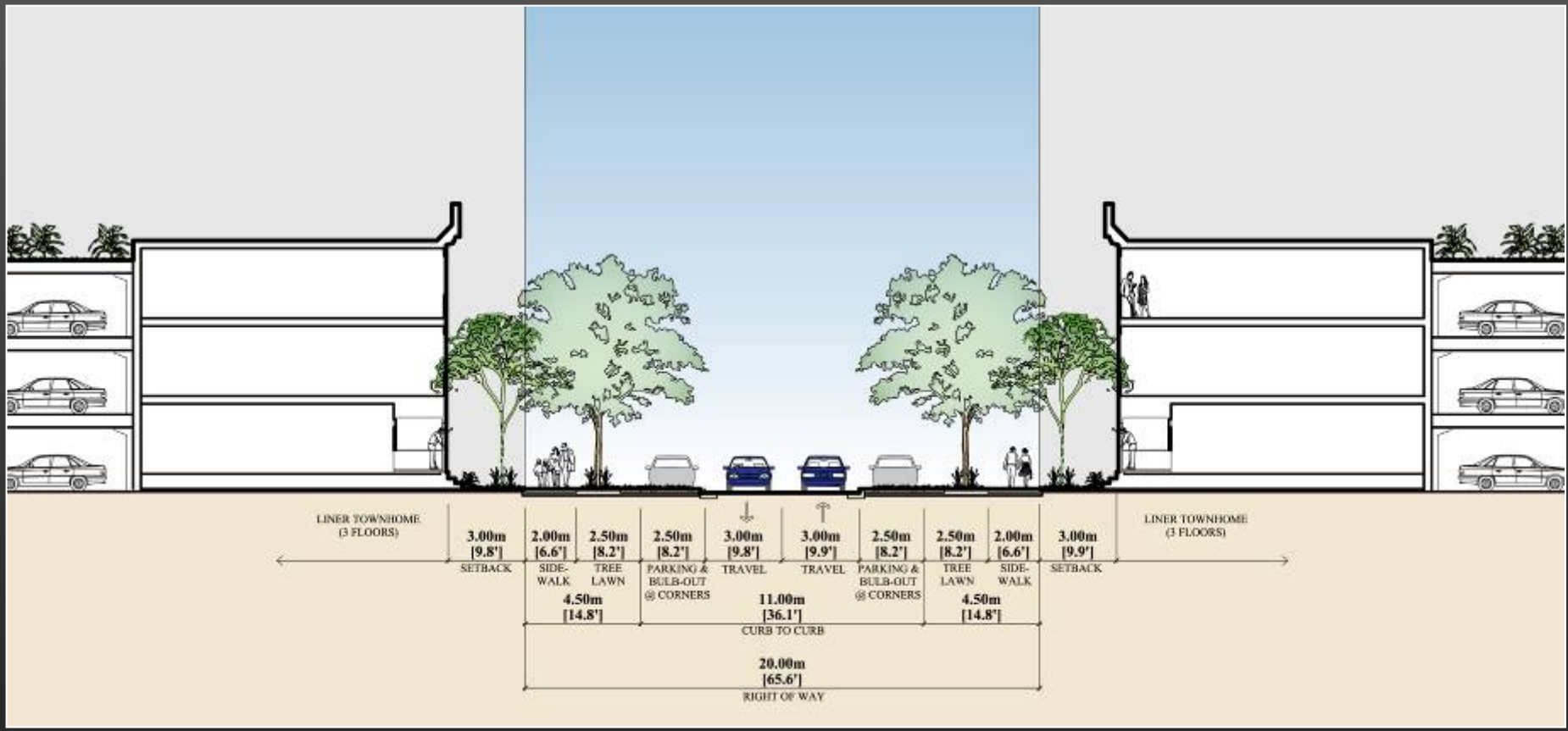


Street Types:
Local Streets

- Narrow, two way street
- Location: Throughout the project
- Parking: Two sides
- Sidewalks: both sides, bulb-outs at corner

Street Types:
Local Street
(3 Story Buildings)





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DESIGN GUIDELINES

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Design Guidelines: Allowable Uses

- **Types of Use: Permitted, Conditional, Accessory, Ground Floor, & Uses Not Allowed**
- **Use Categories**
- **Conditional Use, Accessory Use or Structure, Temporary Use**

Table - Permitted Land Uses per Building Type	HIGH-RISE RESIDENTIAL (15-50 stories)	MID-RISE RESIDENTIAL TYPE 1 (8-10 stories)	MID-RISE RESIDENTIAL TYPE 2 (4-6 stories)	LOW-RISE RESIDENTIAL (3 stories)	EMPLOYMENT (8-10 stories)
					
Residential					
Townhome	-	-	-	P	-
Apartment	P	P	P	P	-
Home Office	P	P	P	P	-
Recreational Facilities	PG	PG	PG	-	P
Institutional					
Place of Worship	PG	PG	PG	-	P
Library/Cultural Center	PG	PG	PG	-	P
Hospital	PG	PG	PG	-	P
Medical Office, Clinics	PG	PG	PG	-	P
Day-care/Nursery	PG	PG	PG	-	P
Municipality Services	PG	PG	PG	-	P
Post Office	PG	PG	PG	-	P
Carpark Structure	P*	P*	P*	P*	P*
Commercial					
Office, General	C	C	C	-	P
Retail					
Indoor Restaurant	PG	PG	PG	-	P
Outdoor Cafe'	PG	PG	PG	-	P
General Sales	PG	PG	PG	-	PG
Personal Services	PG	PG	PG	P	PG
Auto Repair Service	-	-	-	-	-
Other Repair Services	-	-	-	-	C
Hotel	C	C	C	-	C

Design Guidelines:
Design Controls by Parcel

- Development maximums & minimums will be controlled by Parcel
- Max residential density per parcel
- Max parking per parcel
- Max dev totals per parcel

Design Guidelines: Building Type Control Diagram

- Development maximums & minimums will be controlled by Parcel
- Max residential density per parcel
- Max parking per parcel
- Max dev totals per parcel

Design Guidelines:
Building Height Control Diagram

- Height controlled by stories, not feet, to allow for variation in floor-to-floor
- Max and Min set for bldg heights to allow for flexibility

Design Guidelines:
Ground Floor Uses along Spine

- Ground Floor Retail <u>required</u> in ‘Main Street ‘areas
- Ground Floor Residential <u>prohibited</u> along spine
- Ground Floor Retail or Civic or Employment Uses allowed everywhere.

Design Guidelines:
Tower Placement & Control

- Tower placement <u>specified</u> in certain locations
- Tower placement <u>suggested</u> in other locations
- Criteria: axial vistas & urban design statements
- Minimum distance between towers is 20 m

Development Matrix:

DESIGN CONTROLS

TABLE 5.07.01 - Urban Design Controls per Parcel (West Side)

PARCEL NUMBER	PARCEL SIZE (SQ. M.)	PRIMARY USE	MAXIMUM DWELLING UNITS (DU)	MAXIMUM EMPLOYMENT ALLOWED (SQ. M.)	RETAIL ALLOWED* (SQ. M.)		NON-RESIDENTIAL ALLOWED** (MIN. 30% CIVIC) (SQ. M.)		MAXIMUM PARKING SPACES
					Max.	Min.	Max.	Min.	
Parcel 'W-01'	4,209	Employment		61,230	2,000	1,185			1,085
Parcel 'W-02'	5,755	Residential	675		2,460	1,770	1200	950	355
Parcel 'W-03'	4,903	Residential	745		4,825	1,690			400
Parcel 'W-04'	4,439	Employment		24,390	2,440	1,500			445
Parcel 'W-05'	5,872	Employment		33,600					590
Parcel 'W-06'	4,049	Residential	285				2,040	1,360	215
Parcel 'W-07'	7,005	Residential	565				2,950	2,080	305
Parcel 'W-08'	4,432	Residential	305				2,040	1,360	230
Parcel 'W-09'	4,314	Residential	395				2,010	1,340	290
Parcel 'W-10'	5,684	Residential	480				2,230	1,415	250
Parcel 'W-11'	7,052	Residential	730				1,755	1,170	380
Parcel 'W-12'	6,789	Residential***	920		5,650	2,900			470
Parcel 'W-13'	4,658	Residential	485		1,725	1,473			250
Parcel 'W-14'	4,233	Residential	470		980	800	900	600	245
Parcel 'W-15'	3,122	Employment		16,800					290

Design Guidelines: Low-Rise Bldg Type

- Height: 3 to 4 stories
- 100% at 3m setback
- Controls on façade articulation, entries

Design Guidelines: Mid-Rise Bldg (Type 1)

- Min height: 8 stories (plus recessed 2-story ‘penthouse’ element). Creates Parisian streetscape, Max height 10 stories

- Entry locations controlled

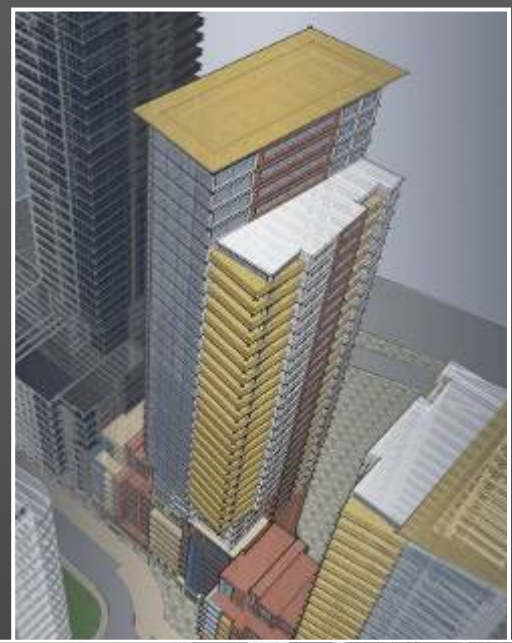
- Parking screened from street

Design Guidelines: Mid-Rise Bldg (Type 2)

- 6 Stories Max height
- 70% of bldg face at 3-5m setback
- Corner entries encouraged
- Min height: 4 stories

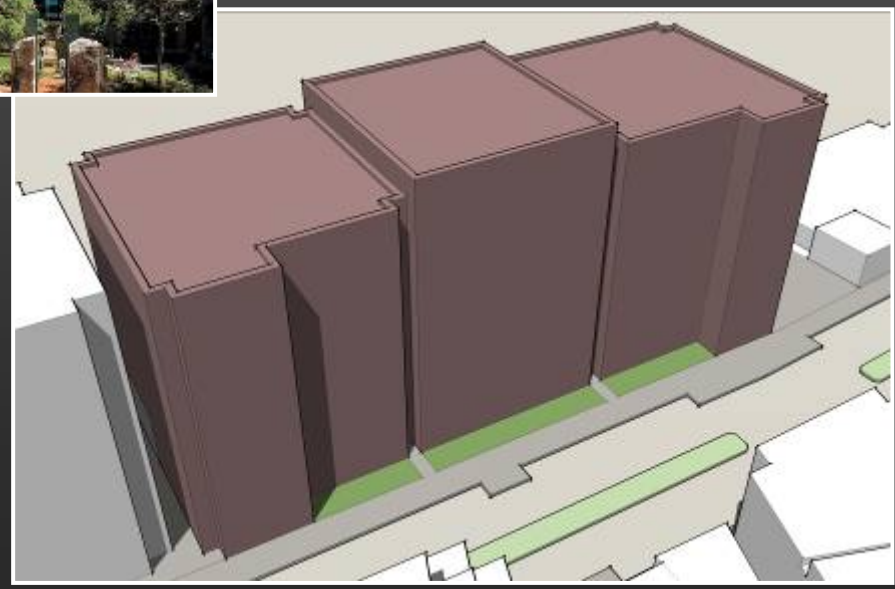
Design Guidelines: High-Rise Bldg Type

- Controls on setback
- Controls on vertical articulation
- Controls on entry locations
- Controls on height



Design Guidelines: Employment Bldg Type

- Bldg height varies
- Corner entries encouraged
- Parking screened from view
- Controls on massing & façade articulation



Design Guidelines: Parking & Loading

- To ensure that adequate and reasonable parking and loading facilities to meet the needs of structures and uses.

- Location of Parking and Shared Parking

- Calculating Space Requirements for various Land Uses

General Parking Requirements	HIGH-RISE RESIDENTIAL (15-50 stories)	MID-RISE RESIDENTIAL TYPE 1 (8-10 stories)	MID-RISE RESIDENTIAL TYPE 2 (4-6 stories)	LOW-RISE RESIDENTIAL (2 stories)	EMPLOYMENT (8-10 stories)
					
Type of Parking					
On Street	P	P	P	P	P
Below Grade Carpark Structure	P	P	P	P	P
Above Grade Carpark Structure	P	P	P	P	P
Added Requirements					
Visibility of Parking Structure	All sides are required to be wrapped with residential or commercial use.*	All sides are required to be wrapped with residential or commercial use.*	All sides are required to be wrapped with residential or commercial use.*	All sides are required to be wrapped with residential or commercial use.*	All sides are required to be wrapped with residential or commercial use.*
Vehicle Access	Refer to Diagram 5.08.04 Parking Access Control Diagram	Refer to Diagram 5.08.04 Parking Access Control Diagram	Refer to Diagram 5.08.04 Parking Access Control Diagram	Refer to Diagram 5.08.04 Parking Access Control Diagram	Refer to Diagram 5.08.04 Parking Access Control Diagram

- Appropriate size, access standards and loading areas

Design Guidelines: Parking & Loading

- Parking Maximums established per block
- Parking must be screened from street
- Parking demand ratios vary by walkability from major transit node , space requirements increase at a 200m, 400m, & other

On-Site Parking Spaces Required at Build Out

Use	Proximity to Transit	Space Requirement
Residential		
	< 200 m radius	0.5 spaces/unit
	< 400 m radius	0.7 spaces/unit
	other	1.0 spaces/unit
Office		
	< 200 m radius	1.75 spaces/100 m²
	< 400 m radius	2.0 spaces/100 m²
	other	4.0 spaces/100 m²
Retail		
	< 200 m radius	.7 spaces/100 m²
	< 400 m radius	1.0 spaces/100 m²
	other	3.0 spaces/100 m²
Civic / Community		
	< 200 m radius	.5 spaces/100 m²
	< 400 m radius	.7 spaces/100 m²
	other	1.5 spaces/100 m²

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PHASING & IMPLEMENTATION:

Phasing & Implementation: Staged Development

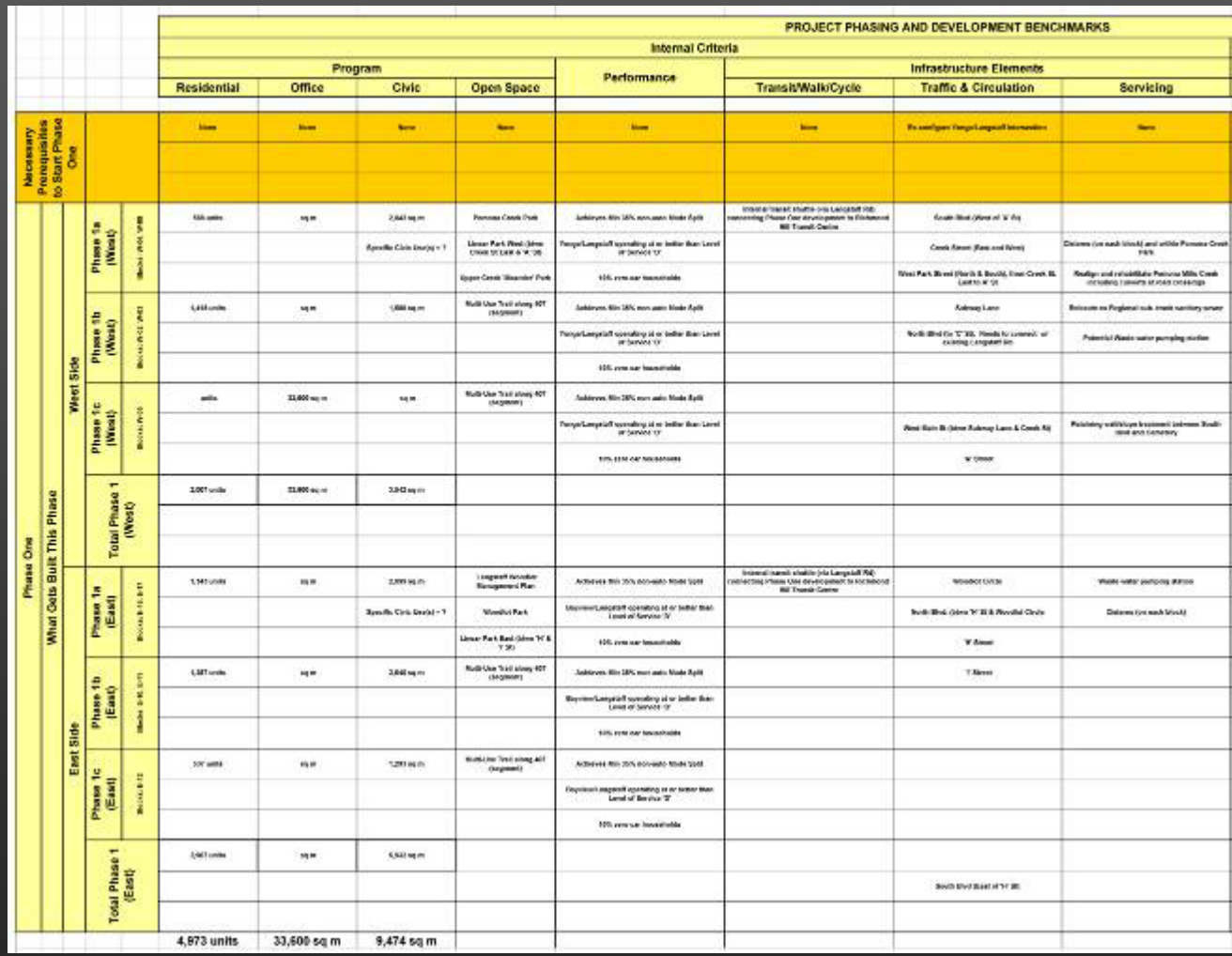
- Development starts at ends of site and works toward middle

- Phasing controlled by:
  - Infrastructure timing
  - Site position
  - Access issues
  - Ownership
  - Investment in Transit
  - Modal splits achieved
  - Provision of civic & community uses

Phasing & Implementation: Development Benchmarks

- Each Phase must meet fixed criteria before next phase is started.

- Criteria targets include:
  - Land use
  - Performance
  - Non-auto mode split
  - Infrastructure Investment (internal & external)



PROJECT PHASING AND DEVELOPMENT BENCHMARKS

Internal Criteria

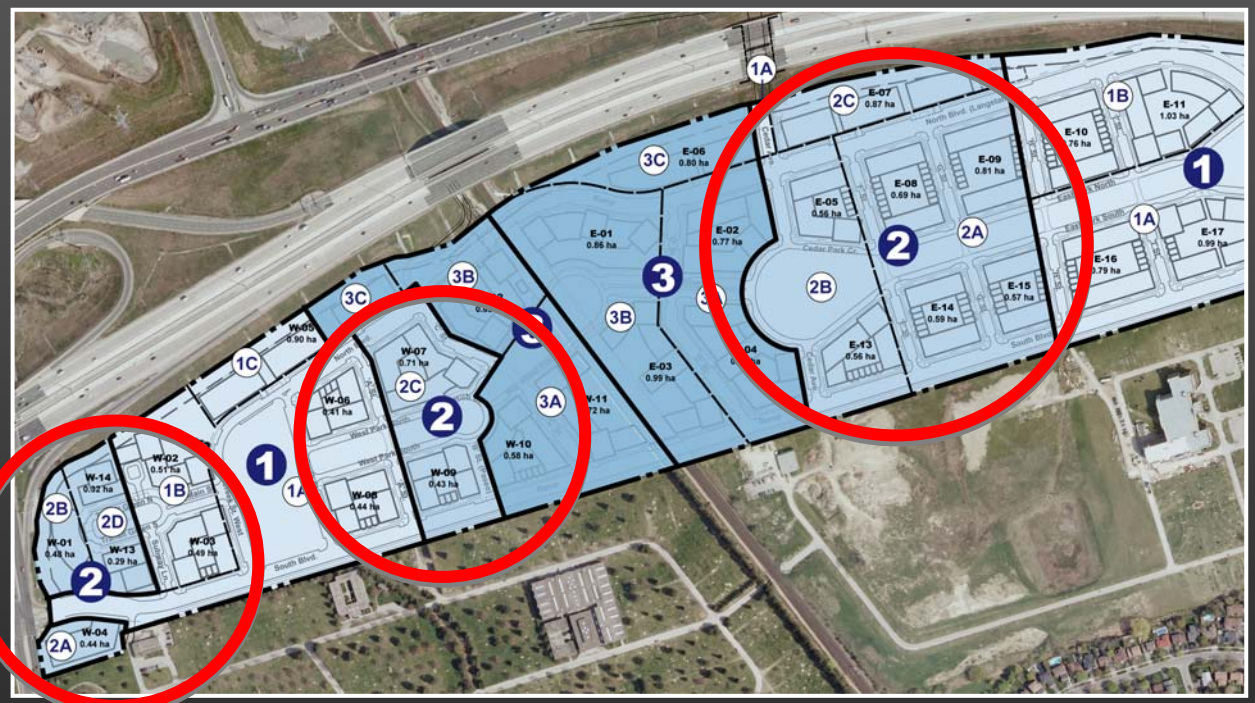
Necessary Prerequisites to Start Phase One	What Gets Built This Phase		Program: Residential	Program: Office	Program: Civic	Program: Open Space	Performance	Infrastructure Elements: Transit/Walk/Cycle	Infrastructure Elements: Traffic & Circulation	Infrastructure Elements: Servicing
	Phase One	West Side: Phase 1a (West)								
		West Side: Phase 1b (West)								
		West Side: Phase 1c (West)								
		West Side: Total Phase 1 (West)								
		East Side: Phase 1a (East)								
		East Side: Phase 1b (East)								
		East Side: Phase 1c (East)								
		East Side: Total Phase 1 (East)	4,973 units	33,600 sq m	9,474 sq m					

Phasing & Implementation:
Phase 1: Benchmarks & Criteria

- **Res =** 4,975 du
- **Office =** 33,600 m2
- **Retail =** 7,285 m2
- **Civic =** 6,150 m2
- **Parks:** Pomona Creek, Woodlot
- **Infrastructure**
  - **Internal:** Transit circulator, Cisterns
  - **External:** Cedar
- **Development 'Performance' Criteria:** 35% Non-Auto Mode Split, Etc.

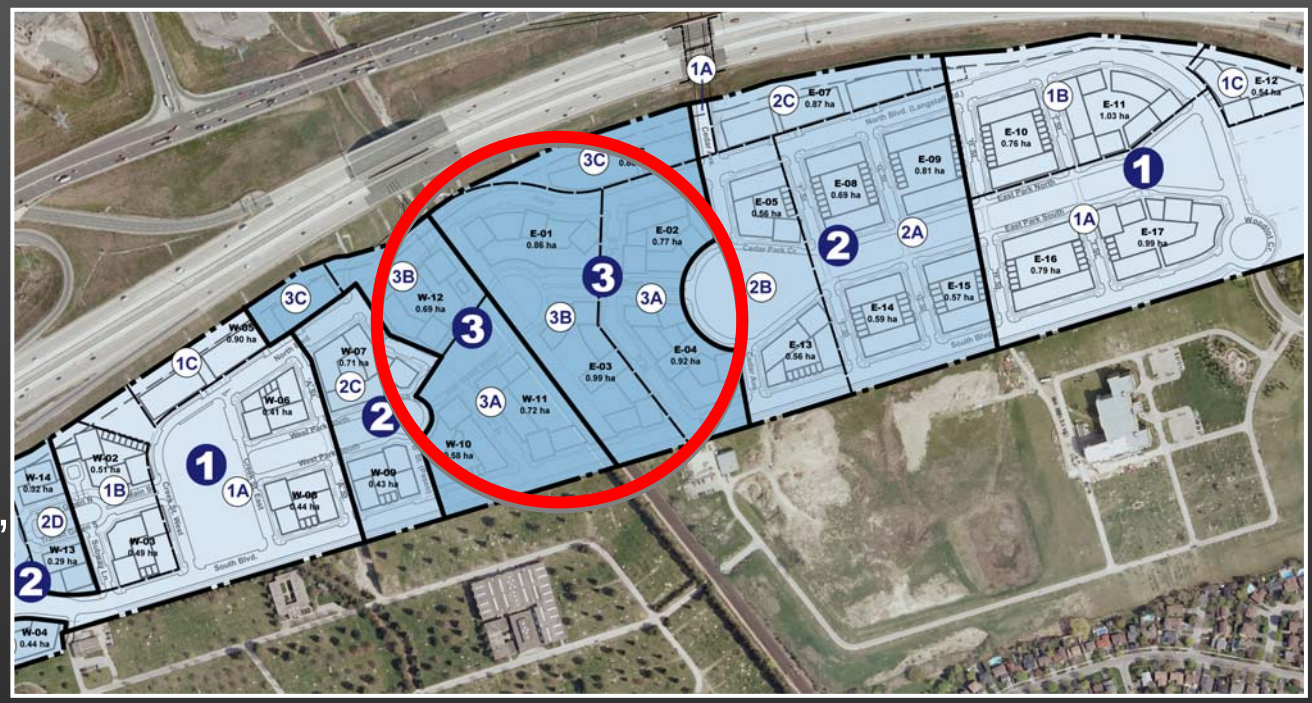
Phasing & Implementation: Phase 2 Benchmarks & Criteria

- **Res =** 3,650 du
- **Office =** 132,700 m2
- **Retail =** 8,100 m2
- **Civic =** 5,350 m2
- **Parks:** Transit Green, Linear Parks, Cedar Park
- **Infrastructure Criteria**
  - **Internal:** Cisterns, etc.
  - **External:** Subway, etc.
- **Development 'Performance' Criteria**



Phasing & Implementation:
Phase 3 Benchmarks & Criteria

- **Res = 6,515 du**
- **Office = 51,550 m2**
- **Retail = 20,250 m2**
- **Civic = 1,775 m2**
- **Parks:** Hub Green, CNR Deck
- **Infrastructure**
  - **Internal:** Ramps, Cisterns
  - **External:** 407 Transitway, Concourse, Etc.
- **Development 'Performance' Criteria**



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OVERALL PROJECT MASSING: SUMMARY

Overall Project Massing:
View from South

Overall Project Massing: Elevation from South

Overall Project Massing: View from South

Overall Project Massing:
View Of West

Overall Project Massing:
View From East

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SUSTAINABILITY

Environmental Sustainability: District & Neighborhood Systems

- Utilize state of the art utilities and servicing
- Cogeneration Plant and District Heating system
- Review feasibility of alternative waste treatment (e.g., anaerobic digesters)
- Integrated Solid Waste Recycling

Sustainability: Envac (Automated Waste Collection)

- Underground network for transportation of municipal and commercial waste.

- Where to install: central courtyards, next to playgrounds, bike sheds, gardens.

Sustainability: Building Systems

- Green Roofs
- On-site waste and water recycling
- Wind and solar capture
- Passive heating and cooling

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. . . Next Steps

- **Calthorpe/Ferris work will be complete on June 1, 2009 the submission of the final study documents**
- **Copies of the Calthorpe/Ferris Master Plan and the transportation and servicing studies will be circulated shortly for comments**
- **Staff will Continue work with Richmond Hill, Vaughan, York Region, Provincial Ministries & agencies to find common approaches to resolve the concerns**
- **Work on Secondary & Official Plan Amendments has begun**
- **Progress report to Markham's Development Services Committee in the Fall of '09 (to include report on co-ordination efforts)**

THINK GLOBALLY

ACT REGIONALLY

Total Energy Consumption Per House (million BTU per year)