

Engineering Department 10 Year Capital Program 2007-2016

General Committee
February 26, 2007

Background

- Concurrence on a 10 year capital construction program is required to enable staff to schedule the necessary steps to implement such (i.e. EA's, property acquisition, design, approvals, agreements, construction).
- The 10 year Capital program includes;
 - roads
 - bridges
 - sidewalks
 - illumination
 - watercourse erosion restoration
 - sanitary and storm sewers
 - watermains
 - special projects (streetscape, bike lane, etc.)
 - studies
 - intersection improvements

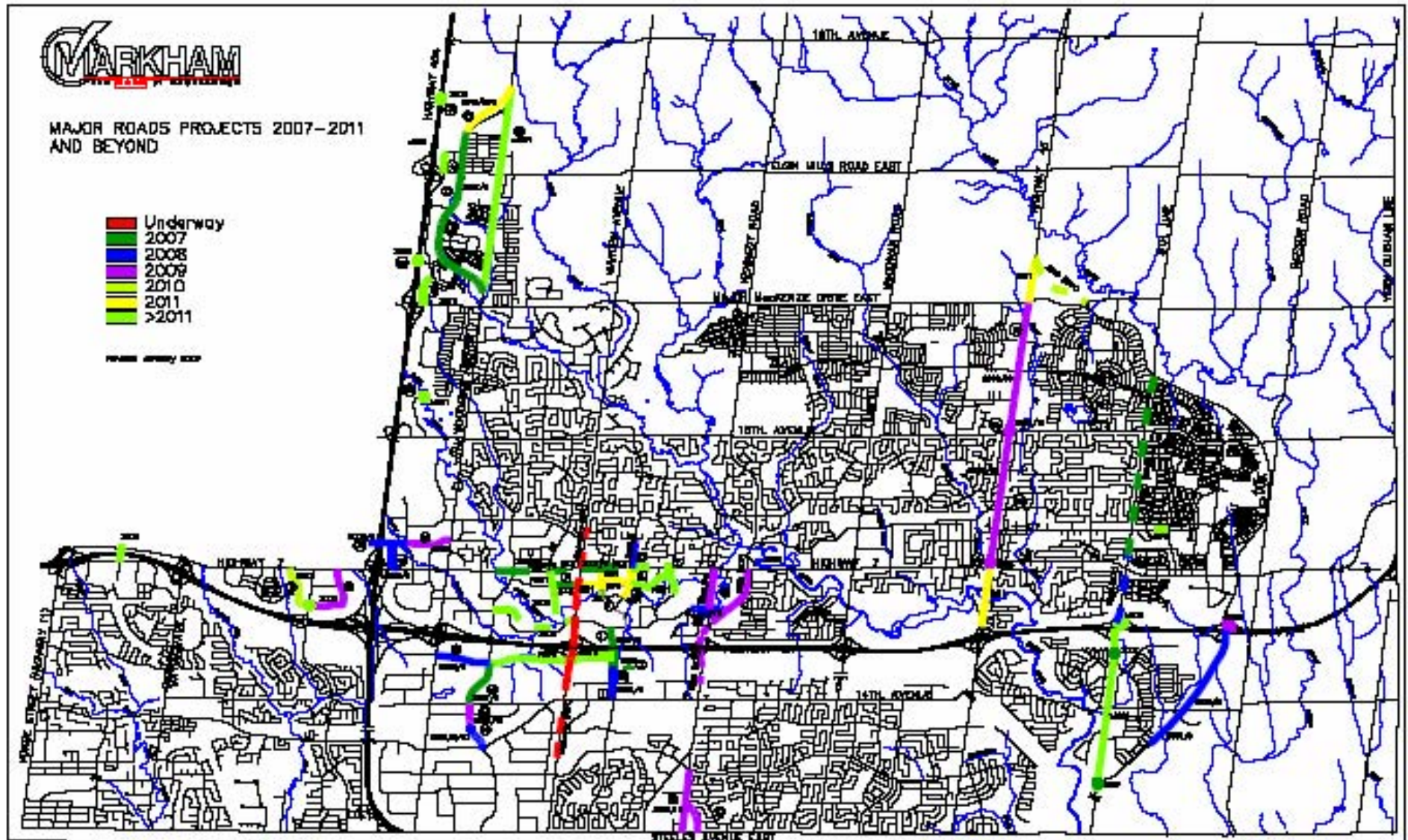
A) Roads/Structures

- The updated road/structure 10 year program (2007 to 2016) has been developed based on:
 - Anticipated development timing and phasing;
 - Anticipated demand for infrastructure (traffic volumes);
 - Approval process timeframes;
 - Property acquisition timeframes;
 - The Region of York's 10 Year Capital Program (2006 and 10 Year);
 - Available staff resources.
- Program to be modified based on Council input and the Region's 2007 & 10 Year Capital Program
- Projects within 5 years (2007 to 2011) have detailed timeframes for construction
- Timeframes for projects beyond 2011 will be finalized in subsequent years based on above criteria and Council's input
- The Town Wide and ASDC bylaw to be updated in 2007 will incorporate new projects (i.e. Hwy 404 crossings) and new cost estimates

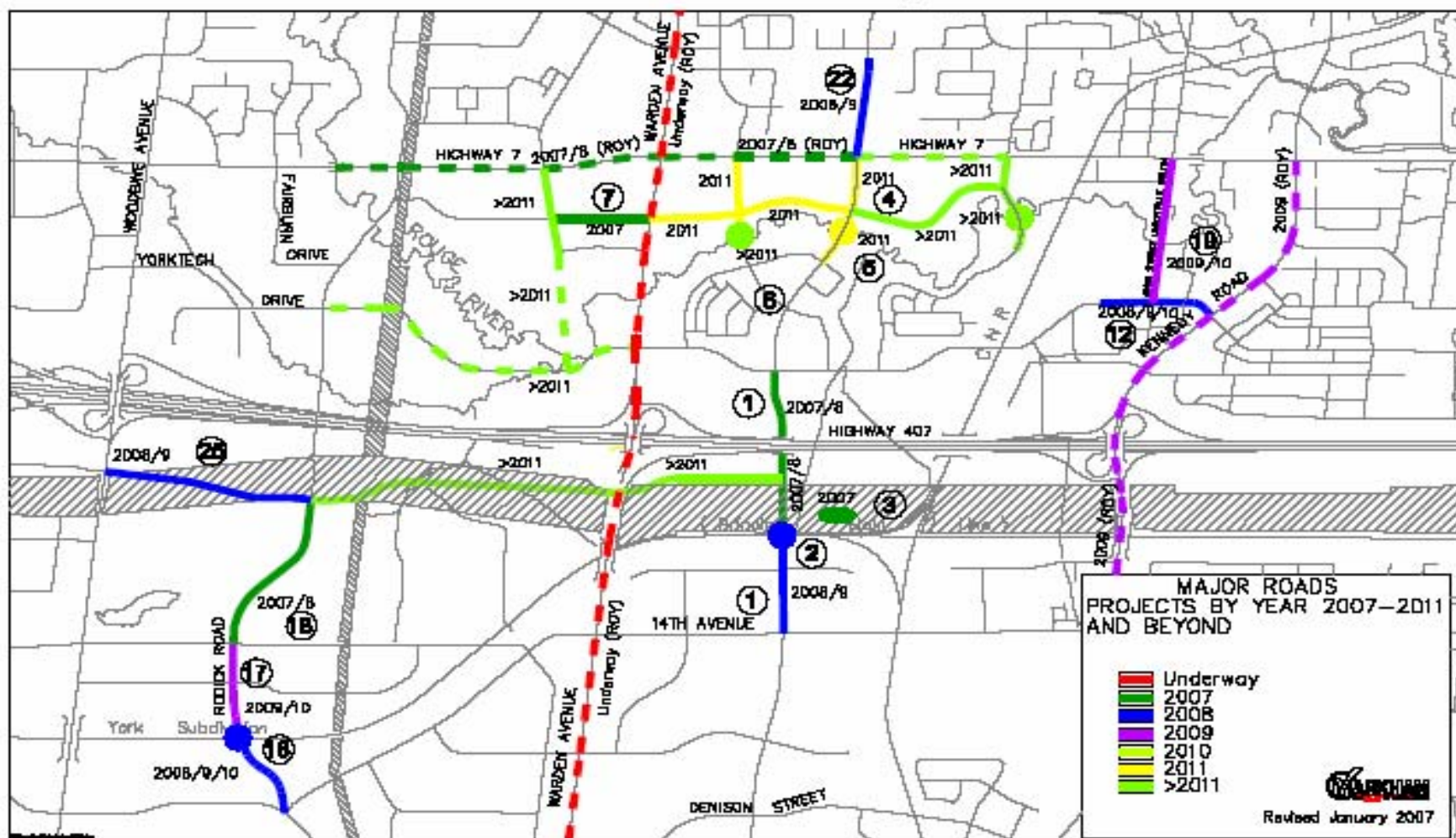
Revisions from 2006 & 10 yr. Capital Program

- Birchmount Road @ CNR Underpass deferred 1 year, to 2008/2009 pending resolution of construction jurisdiction
- Highway 404 Mid-block Crossing, north of Highway 7 deferred 1 year to 2008/2009, pending confirmation of funding from Richmond Hill

Map A: Town Wide 10 Year Capital Projects



Map B: Markham Centre 10 Year Capital Program



B) Sidewalks

- The Sidewalk 5 Year Program has been developed based on:
 - Development phasing
 - Anticipated demand for infrastructure (pedestrian volume)
 - Council/Public input
 - Coordination with Markham/Region/MTO/407ETR/Toronto road construction projects
 - Available property
 - Available platform to build a sidewalk
 - Anticipated funding
- Approximately \$2.5 million sidewalk program for 2007 in construction and commitments

Sidewalks - Continued

- Specific dates for sidewalk construction have been finalized for the next 5 years (2007-2011).
- Specific dates beyond 2011 will be finalized in future years when there is certainty of development phasing and the Regional/Town Road Capital Program.
- Key sidewalk projects for 2007 are noted on the following tables and maps.

Proposed 2007 Sidewalk Program

Location	To/From	Construction Administration
Major Mackenzie S.S	Woodbine to Kennedy	ROY
Major Mackenzie N.S	Woodbine to Jennings Gate	ROY
Warden Avenue W. S	14 th Avenue South to south of Hwy 7	ROY
Warden Avenue E.S	14 th Avenue to Hwy 7	ROY
9 th Line W.S	Roseway to Major Mackenzie	ROY
9 th Line E.S	Roseway to Bur Oak	407 ETR
Yonge Street *	At Hwy 407	ROY
Highway 7 Bridge *	West of Bullock Drive	ROY
Highway 7 N.S	Woodbine to Highway 404	ROY
Highway 7 S.S	Fairburn to Rodick	ROY
Highway 7 N.S	Montgomery to Rodick	ROY
9 th Line W.S	Highway 407 to Roseway	ROY
9 th Line W.S	Bur Oak to Major Mackenzie	ROY
9 th Line E.S.	Highway 407 Crossing	ROY
9 th Line E.S	Bur Oak to Markham By-pass	ROY

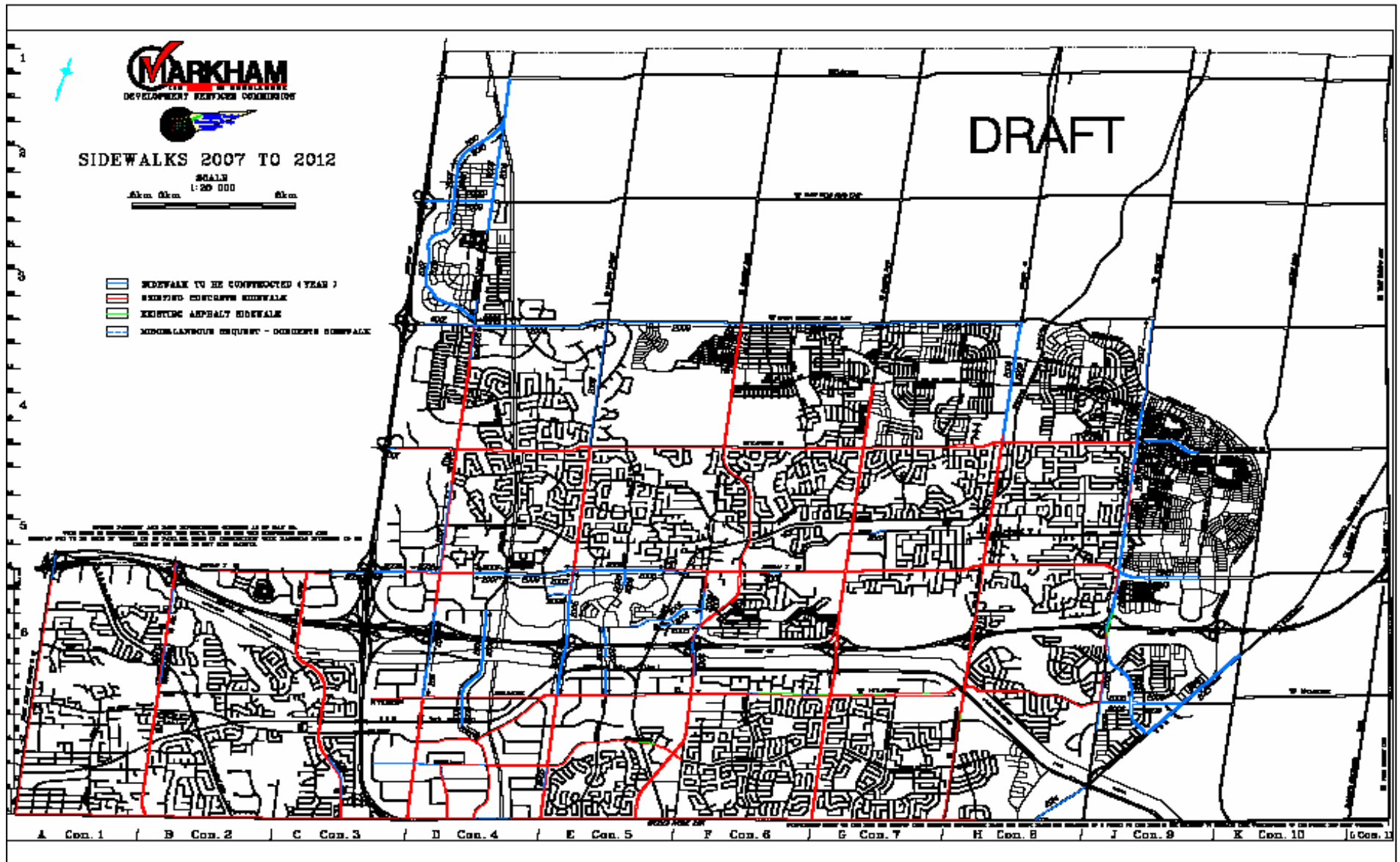
* Public/Council requests

Proposed 2007 Sidewalk Program

Road	To From	Construction Administration
Sidewalk on the west side of Hwy 48 (Mobius)		TOM
Warden Avenue W.S	Gibson to Denison	TOM
Commerce Valley West E.S	Hwy 7 to Leslie	TOM
Commerce Valley East N.S–	Minthorn to Leslie	TOM
Major Mackenzie S.S.	Kennedy to McCowan	TOM
Major Mackenzie S.S	McCowan to Markham Road	TOM
Highway 7 S.S	Kennedy to McCowan	TOM
Country Glen S.E	South East corner to driveways	TOM
Galsworthy Drive	Robinson to Abercorn	TOM
Willow Heights Blvd. E.S	Hillsmount to Oakford	TOM
Woodbine E.S *	Personna Blvd. to Major Mackenzie	TOM
Hooper Road B.S	Woodbine to Renfrew Drive	TOM
Beckenridge S.S * (subject to resident input)	Beckenridge Drive to Ravenhill Cres	TOM
Miscellaneous Sidewalk	Contingency	TOM/ROY

* Public/Council requests

Map: Sidewalk 5 Year Program



C) Illumination

- Based on:
 - Public safety/Illumination coverage
 - Development phasing
 - Council/Public input
 - Coordination with Markham/Region/MTO/407 ETR/Toronto road construction projects
 - Anticipating funding
 - Available staff resources to manage the projects
- Upgrades to existing local streets (tax rate) budgeted through Operations and Asset Management
- Specific dates for illumination have been finalized for the next 5 years (2007-2011).
- Specific dates beyond 2011 will be finalized in future years when there is certainty of development phasing, and the Region's/Town's Capital Road program
- Average \$1.1 million per year over 5 years budgeted
- An \$125,000 allowance (development charges related) included in yearly budget for miscellaneous requirements
- Approximately \$2.8 million in illumination projects scheduled for 2007 in construction and commitments.

Proposed 2007 Illumination Projects

Location	Side	From / To	Comments	Total Costs
Major Mackenzie	S.S.	Warden to Glenbourne Park	Underway 2007 ROY's contract	43,035.30
Major Mackenzie	S.S.	Glenbourne to Kennedy	Underway 2007 ROY's contract	178,128.72
Major Mackenzie	N.S.	Warden Avenue to Kennedy	Underway 2007 ROY's contract	220,041.36
Major Mackenzie	S.S.	Woodbine Ave. to Warden Ave.	Underway 2007 ROY's contract	214,802.28
Major Mackenzie	N.S.	Markland Street to Woodbine	In contract 083-T-06	72,622.07
Major Mackenzie	N.S.	Woodbine Avenue to OHEPC	Underway 2007 ROY's contract	64,552.95
Major Mackenzie	N.S.	OHEPC to Warden Avenue	Underway 2007 ROY's contract	151,933.32
Major Mackenzie	S.S.	Kennedy Rd. to McCowan Rd.	In contract 083-T-06	297,055.84
Major Mackenzie	N.S.	Kennedy Rd. to McCowan Rd.	In contract 083-T-06	297,055.84
Major Mackenzie	S.S.	McCowan Rd. to Markham Rd.	In contract 083-T-06	297,055.84
Major Mackenzie	N.S.	McCowan Rd. to Markham Rd.	In contract 083-T-06	297,055.84
Ninth Line	W.S.	Roseway to Church St	Underway 2007 ROY's contract	39,817.01
Ninth Line	E.S.	Church to 16th Avenue	Underway 2007 ROY's contract	160,315.85
Ninth Line	B.S.	16th Avenue to Bur Oak	Underway 2007 ROY's contract	107,627.52
Sixteenth Avenue	S.S.	Markham Rd to 300m westerly	In contract 083-T-06	43,573.24
Sixteenth Avenue	S.S.	Markham Rd. to Fincham Ave.	In contract 083-T-06	72,622.07
Warden Avenue	E.S.	Enterprise to Riverside Dr.	Preliminary stage	64,552.95
Design for 2008 projects**				200,000.00
			Region's Contracts	1,180,254.31
			Town's Contracts	1,377,040.72
			Others	264,552.95
			2007 TOTAL ILLUMINATION	2,821,847.98

** Public / Council Requests

D) Environment

- Erosion Implementation Plan adopted by Committee on February 20, 2007 prioritized erosion works
- Design and restoration of six erosion sites in 2007 scheduled at a cost of approximately \$1.72 million
- Other 2007 environmental initiatives include:
 - Flood Emergency Response Plan (Phase 2)
 - Stormwater Management Pond Maintenance Plan
 - Pomona Mills Creek implementation
 - TRCA studies/policy review
 - Woodbine/Hwy 7 Flood Storage improvements
 - Update Stormwater Management Guidelines
- Total Environmental Initiatives for 2007 is \$2.4 million

Next Steps

- Council's input requested on:
 - The 5 Year (2007 - 2011) Roads/Structure Capital Program;
 - The 5 Year (2007 – 2011) Sidewalk Program;
 - The 5 Year (2007 - 2011) Illumination Program;
- Staff to report back on the Region's 2007 and 10 Year Capital Program and any required modifications to Markham's 10 year capital program