Agenda - Executive Policy Committee – March 1, 2006

REPORTS

Item No. 3 Public Pathway Connection from Wilkes Avenue to Roblin Boulevard via Assiniboine Forest - Land Dedication Reserve
File EP-2

COMMUNITY COMMITTEE RECOMMENDATION:

On February 14, 2006, the Assiniboia Community Committee recommended to the Executive Policy Committee:

1. That funding to assist with the cost of the Public Pathway Connection from Wilkes Avenue to Roblin Boulevard via Assiniboine Forest Project, in the amount of $129,000.00, be allocated from the Wilkes South Land Dedication Reserve.

2. That the Council Policy for the Land Dedication Reserve which allocates the Assiniboia Community's portion of all funds from the 10% dedication in lieu of the requirements for land dedication for the Wilkes South Area for Marj Edey Park (December 14, 1994) be waived in this instance.

3. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

DECISION MAKING HISTORY:

COMMUNITY COMMITTEE RECOMMENDATION:

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3. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

and submitted the matter to the Executive Policy Committee.

INTER-OFFICE MEMORANDUM

Planning, Property and Development Department

Planning and Land Use Division
Unit 15, 30 Fort Street

Date: February 8, 2006

To: Councillor Clement, Charleswood – Tuxedo Ward

From: Tom Fred, Project Management Coordinator

RE: **PUBLIC PATHWAY CONNECTION FROM WILKES AVENUE TO ROBLIN BOULEVARD VIA ASSINIBOINE FOREST**

As per your request last year regarding the above referenced subject, the following information and documentation is provided to you at this time.

On November 4, 2005, Natalie Swayze, Education Coordinator – Naturalist Services Branch, and I walked the preferred location for the proposed crushed limestone pathway through Assiniboine Forest as illustrated on the aerial photo below.

On December 7, 2005, Brent Wark, Manager – Native Plant Solutions (Ducks Unlimited Canada) and I met to consider various construction and drainage methods available to implement this project. Based on these meetings, a number of issues became apparent:

1) Of prime importance is the preservation and protection of the existing vegetation within the forest. Therefore, to minimize damage, it has been determined to locate the proposed crushed limestone pathway, where possible, along existing woodchip walks and fire breaks.

2) To further reduce the impact of this limestone pathway, the maximum width will be kept to no greater than 8 ft. and excavation works will be kept to a minimum to prevent root damage. Where space allows, rest and viewing sites will be provided for the placement of environmental appropriate seating areas and waste receptacles. Where removal of existing vegetation is unavoidable, mitigation and replacement will be required to ensure there is "no net loss" of habitat.

3) As a result of three years of above average rainfalls and the poor drainage conditions within the Assiniboine Forest, it is essential to ensure the proposed pathway is higher than the adjacent elevations and that it does not further impede water flows and drainage patterns. To this end, maintenance-free, environmentally sensitive culverts and weeping tile crossings will be incorporated along the length of the pathway, as required.

4) The excavation for the pathway development will be difficult and time consuming because of the need to utilize smaller excavators and narrow-bed dump trucks in order to minimize existing habitat damage. Where possible, excavated materials will be recycled within the Forest to reduce hauling and disposal costs.

5) The approximate total length of this proposed pathway will be 2.3 kilometers (1.43 miles).

6) During the November 4th site inspection, it became apparent for the need to divide the pathway development into two phases of construction and five distinct segments of design, as illustrated on the attached aerial photo and identified below:

PHASE 1 DEVELOPMENT

The first phase of development involves the construction of three (3) segments of pathway that are not impacted by current construction of the east drainage pond, marshland and related revegetation project. This first phase of construction could commence immediately after the upcoming spring thaw and as the weather conditions permit. The three segments are as follows:

Segment A: South of Grant Avenue to West-East Firebreak

This segment will connect to the asphalt bicycle/pedestrian sidewalk on the south side of Grant Avenue and run south along the existing informal trail to the west-east firebreak. The construction of this segment of pathway will have a minor impact on the existing vegetation and drainage within the Forest. Construction will consist of:

- Minor pruning and removal of a small number of selected poor quality trees and brush,
- Excavation and removal of approximately 6" depth of organic debris, including woodchips, decomposed plant material and topsoil in the location of the pathway,
- Minor compaction of the sub-base to prevent pathway settlement and root damage,
- Installation of three (3) culvert crossings to ensure proper, cross-pathway drainage,
- Installation of medium compaction, 6" depth, 2" down crushed limestone base course,
- Installation of 2" depth, ¼" down, chipped crushed limestone topping compacted to provide a smooth walking surface.
- Installation of an entry feature at the Grant Avenue entrance to the pathway, including appropriate signage.
- Installation of one rest site, including a tyndal stone seating slab and waste receptacle.

The length of this segment is 822 linear meters (2697 ft.). Based on the above listing of components, the estimated construction cost for Segment A will be $49,071.25 as per the attached cost estimate.

Segment B: West-East Firebreak

Segment B will travel west to east along the existing firebreak and corrugated log trail. This portion of the proposed pathway is particularly prone to flooding and has poor drainage. Consequently, the pathway will require a higher elevation and additional drainage culverts. It is anticipated that pruning and some existing vegetation removals will be required to maintain the recommended 8ft. pathway width. Construction will consist of:

- Pruning and removal of a small number of selected poor quality trees and brush,

- Excavation and removal of approximately 8" depth of rotten logs, organic debris, woodchips anddecomposed plant material in the location of the pathway,
- Medium compaction of the sub-base to reduce pathway settlement and saturation,
- Installation of six (6) culvert crossings to ensure proper, cross-pathway drainage,
- Installation of filter fabric barrier material to reduce pathway settlement,
- Installation of medium compaction, 5" depth, 3" down, crushed limestone sub base,
- Installation of 2" depth, 1" down, crushed limestone base course,
- Installation of 2" depth, ¼" down, chipped crushed limestone topping compacted to provide a smooth walking surface.
- Installation of one rest site, including a tyndal stone seating slab and waste receptacle.

The length of this segment is 296 linear meters (971 ft.). Based on the above listing of components, the estimated construction cost for Segment B will be $33,512.50 as per the attached cost estimate.

Segment C: Connection to Shaftsbury Boulevard at Taylor Avenue

This segment of pathway will connect the west-east firebreak to the intersection of Shaftsbury Boulevard at Taylor Avenue. This pathway segment is currently undeveloped and will pass through a previously disturbed meadow resulting in little natural habitat damage. The construction of this segment will have the least impact on the existing vegetation and drainage within the Forest. Construction will consist of:

- Excavation and removal of approximately 4" to 6" depth of organic debris, including decomposed plant material and topsoil in the location of the pathway,
- Heavy compaction of the sub-base to prevent pathway settlement,
- Installation of three (3) culvert crossings to ensure proper, cross-pathway drainage,
- Installation of medium compaction, 6" depth, 2" down crushed limestone base course,
- Installation of 2" depth, ¼" down, chipped crushed limestone topping compacted to provide a smooth walking surface.
- Installation of an entry feature at the Taylor Avenue entrance to the pathway, including appropriate signage.

The length of this segment is 252 linear meters (825 ft.). Based on the above listing of components, the estimated construction cost for Segment C will be $18,213.75 as per the attached cost estimate.

PHASE 2 DEVELOPMENT

The second phase of development involves the construction of two (2) pathway segments that are directly impacted by the current construction of the east drainage pond, marshland and related revegetation project. Phase 2 construction can not commence until the drainage pond and regrading of the adjacent observation hill have been completed which were delayed in 2005 due to excessive rainfall and high water table conditions. These two segments are as follows:

Segment D: East Drainage Pond Observation Hill

Segment D will travel south from the Segment B pathway over the proposed observation mound along the west shoreline of new drainage pond and revegetated marshland. The construction of this segment must be implemented during the final grading of the new observation mound and marshland to ensure proper path elevations to prevent flooding. Consequently, the pathway will require a higher elevation and additional drainage culverts. Construction will consist of:

- Excavation and removal of approximately 8" depth of rotten logs, organic debris, woodchips anddecomposed plant material in the location of the pathway,
- Heavy compaction of the sub-base to reduce pathway settlement and water saturation,
- Installation of four (4) culvert crossings to ensure proper, cross-pathway drainage,
- Installation of filter fabric barrier material to reduce pathway settlement,
- Installation of medium compaction, 5" depth, 3" down, crushed limestone sub-base,
- Installation of 2" depth, 1" down, crushed limestone base course,
- Installation of 2" depth, ¼" down, chipped crushed limestone topping compacted to provide a smooth walking surface.
- Installation of one rest site on the top of the proposed viewing mound, including enhanced surfacing, interpretative signage, tyndal stone seating slabs and waste receptacles.

The length of this segment is 316 linear meters (1,036 ft.). Based on the above listing of components and the cost savings by combining this pathway segment with the new drainage pond development, the estimated construction cost for Segment D will be $29,367.75 as per the attached cost estimate.

Segment E: Connection to Shaftsbury Boulevard at Wilkes Avenue.

Segment E will travel south from the Segment D pathway around the existing forest wetland, through the revegetated landfill site to the intersection of Shaftsbury Boulevard and Wilkes Avenue. It is anticipated this pathway segment will be the most difficult to construct due to the high water table, low existing elevations and higher probability of spring and excessive rainfall flooding. Consequently, it is recommended that the construction of this pathway segment be delayed till the late autumn or early winter of 2006 to allow for the new east drainage pond to ease the potential of flooding in this area. Construction will consist of:

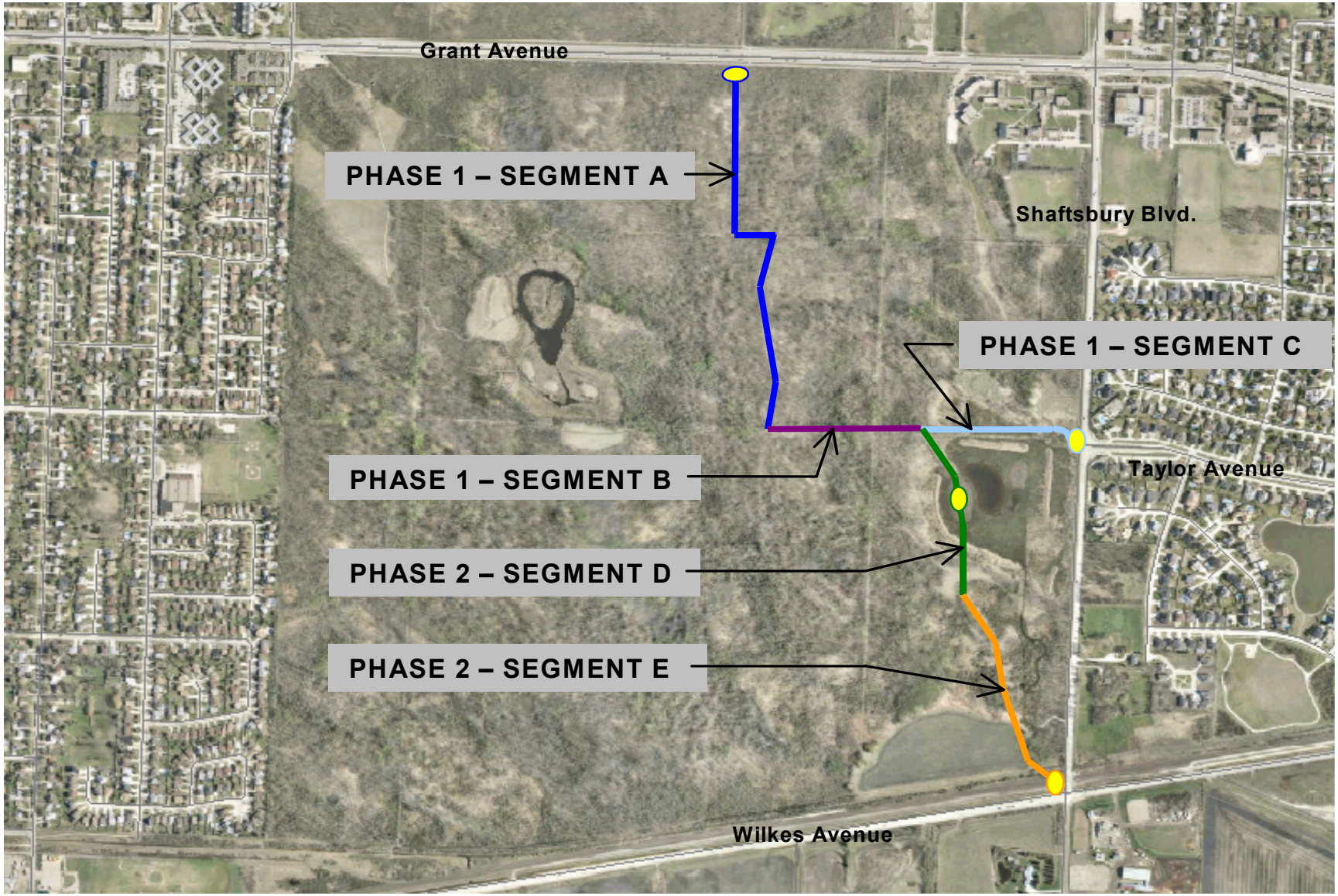
- Excavation and removal of approximately 8" depth of organic material and topsoil in the location of the pathway,
- Heavy compaction of the sub-base to reduce pathway settlement and water saturation,
- Installation of eight (8) culvert crossings to ensure proper, cross-pathway drainage,
- Installation of filter fabric barrier material to reduce pathway settlement,
- Installation of medium compaction, 8" depth, 3" down, crushed limestone sub-base,
- Installation of 2" depth, 1" down, crushed limestone base course,
- Installation of 2" depth, ¼" down, chipped crushed limestone topping compacted to provide a smooth walking surface.

- Installation of an entry feature at the Wilkes Avenue entrance to the pathway, including appropriate signage.

This segment length is 616 linear meters (2,022 ft.). Based on the listing of components, the estimated construction cost for Segment E will be $55,962.75 as per the attached cost estimate.

ADDITIONAL RECOMMENDED WORKS

In addition to the actual construction of the proposed pathway and related landscape works, it is recommended that funding in the amount of $15,000 be allocated to prepare a GPS survey and plot plan of Assiniboine Forest, south of Grant Avenue. This grading data, which is currently unavailable, will be invaluable to identify and provide an accurate grading design for the pathway development and for future drainage works to be considered in the Forest.



LAYOUT FOR PROPOSED PATHWAY

PRELIMINARY COST ESTIMATE

Planning, Property and Development Department

Planning and Land Use Division
Unit 15, 30 Fort Street

Name **ASSINIBOINE FOREST**
Project **PROPOSED PATHWAY DEVELOPMENT**

Item	Description	Unit	Quantity	Unit Price	Amount
	PHASE 1 DEVELOPMENT				
	Segment A: South of Grant Avenue to West-East Firebreak				
1.	Clearing, grubbing and removal of existing vegetation	l.s.	1	$2,000.00	$2,000.00
2.	Excavation of proposed pathway to a depth of 150mm, including relocation of fill on site.	sq.m.	2,005	$3.25	$6,516.25
3.	Corrugated metal culvert, 300mm diameter; supplied and installed.	ea.	3	$725.00	$2,175.00
4.	Compacted crushed limestone base course material, 50mm down and 150mm depth; supplied and installed.	sq.m.	2005	$12.00	$24,060.00
5.	Compacted crushed limestone surface material, 20mm down and 50mm depth; supplied and installed.	sq.m.	2005	$4.00	$8,020.00
6.	Pathway entrance feature at Grant Avenue, including appropriate interpretative signage	l.s.	1	$2,200.00	$2,200.00
7.	Rest site feature, including tyndal stone seating slab, waste receptacle and appropriate interpretative signage; supplied and installed.	l.s.	1	$2,100.00	$2,100.00
8.	Revegetation repairs to habitat damaged during construction, as required.	l.s.	1	$2,000.00	$2,000.00
	Segment A: South of Grant Ave to West-East Firebreak - Preliminary Cost Estimate				**$49,071.25**
	Segment B: West-East Firebreak				
9.	Clearing, grubbing and removal of existing vegetation	l.s.	1	$1,500.00	$1,500.00
10.	Excavation of proposed pathway to a depth of 150mm, including relocation of fill on site.	sq.m.	722	$5.25	$3,790.50
11.	Corrugated metal culvert, 300mm diameter; supplied and installed.	ea.	6	$725.00	$4,350.00
12.	Filter fabric barrier material; supplied and	sq.m.	722	$2.00	$1,444.00

	installed.				
13.	Compacted crushed limestone sub-base material, 75mm down and 150mm depth; supplied and installed.	sq.m.	722	$16.00	$11,552.00
14.	Compacted crushed limestone base course material, 50mm down and 50mm depth; supplied and installed.	sq.m.	722	$4.00	$2,888.00
15.	Compacted crushed limestone surface material, 20mm down and 50mm depth; supplied and installed.	sq.m.	722	$4.00	$2,888.00
16.	Rest site feature, including tyndal stone seating slab, waste receptacle and appropriate interpretative signage; supplied and installed.	l.s.	1	$2,100.00	$2,100.00
17.	Revegetation repairs to habitat damaged during construction, as required.	l.s.	1	$3,000.00	$3,000.00
	Segment B: West-East Firebreak - Preliminary Cost Estimate				**$33,512.50**

Item	Description	Unit	Quantity	Unit Price	Amount
	Segment C: Connection to Shaftsbury Boulevard at Taylor Avenue				
18.	Excavation of proposed pathway to a depth of 150mm, including relocation of fill on site.	sq.m.	615	$3.25	$1,998.75
19.	Corrugated metal culvert, 300mm diameter; supplied and installed.	ea.	3	$725.00	$2,175.00
20.	Compacted crushed limestone base course material, 50mm down and 150mm depth; supplied and installed.	sq.m.	615	$12.00	$7,380.00
21.	Compacted crushed limestone surface material, 20mm down and 50mm depth; supplied and installed.	sq.m.	615	$4.00	$2,460.00
22.	Pathway entrance feature at Grant Avenue, including appropriate interpretative signage	l.s.	1	$2,200.00	$2,200.00
23.	Revegetation repairs to habitat damaged during construction, as required.	l.s.	1	$2,000.00	$2,000.00
	Segment C: Connection to Shaftsbury Blvd at Taylor Ave - Preliminary Cost Estimate				**$18,213.75**

PHASE 2 DEVELOPMENT

	Segment D: East Drainage Pond Observation Hill				
24.	Excavation of proposed pathway to a depth of 150mm, including relocation of fill on site.	sq.m.	771	$3.25	$2,505.75
25.	Corrugated metal culvert, 300mm diameter; supplied and installed.	ea.	4	$725.00	$2,900.00
26.	Filter fabric barrier material; supplied and installed.	sq.m.	771	$2.00	$1,542.00

27.	Compacted crushed limestone sub-base material, 75mm down and 150mm depth; supplied and installed.	sq.m.	771	$12.00	$9,252.00
28.	Compacted crushed limestone base course material, 50mm down and 50mm depth; supplied and installed.	sq.m.	771	$4.00	$3,084.00
29.	Compacted crushed limestone surface material, 20mm down and 50mm depth; supplied and installed.	sq.m.	771	$4.00	$3,084.00
30.	Observation hill rest site feature, including tyndal stone seating slabs, waste receptacle and appropriate interpretative signage; supplied and installed.	l.s.	1	$5,000.00	$5,000.00
31.	Revegetation repairs to habitat damaged during construction, as required.	l.s.	1	$2,000.00	$2,000.00
	Segment D: East Drainage Pond Observation Hill - Preliminary Cost Estimate				**$29,367.75**
	Segment E: Connection to Shaftsbury Boulevard at Wilkes Avenue				
32.	Clearing, grubbing and removal of existing vegetation	l.s.	1	$2,000.00	$2,000.00
33.	Excavation of proposed pathway to a depth of 150mm, including relocation of fill on site.	sq.m.	1503	$3.25	$4,884.75
34.	Corrugated metal culvert, 300mm diameter; supplied and installed.	ea.	8	$725.00	$5,800.00
35.	Filter fabric barrier material; supplied and installed.	sq.m.	1503	$2.00	$3,006.00
36.	Compacted crushed limestone sub-base material, 75mm down and 200mm depth; supplied and installed.	sq.m.	1503	$16.00	$24,048.00
37.	Compacted crushed limestone base course material, 50mm down and 50mm depth; supplied and installed.	sq.m.	1503	$4.00	$6,012.00
38.	Compacted crushed limestone surface material, 20mm down and 50mm depth; supplied and installed.	sq.m.	1503	$4.00	$6,012.00

Item	Description	Unit	Quantity	Unit Price	Amount
39.	Pathway entrance feature at Wilkes Avenue, including appropriate interpretative signage	l.s.	1	$2,200.00	$2,200.00
40.	Revegetation repairs to habitat damaged during construction, as required.	l.s.	1	$4,000.00	$4,000.00
	Segment E: Connection to Shaftsbury Blvd. at Wilkes Ave. - Preliminary Cost Estimate				**$55,962.75**

COST ESTIMATE SUMMARY

	Segment A: South of Grant Ave to West-East Firebreak - Preliminary Cost Estimate	$49,071.25
	Segment B: West-East Firebreak - Preliminary Cost Estimate	$33,512.50
	Segment C: Connection to Shaftsbury Blvd at Taylor Ave - Preliminary Cost Estimate	$18,213.75
	Segment D: East Drainage Pond Observation Hill - Preliminary Cost Estimate	$29,367.75
	Segment E: Connection to Shaftsbury Blvd. at Wilkes Ave. - Preliminary Cost Estimate	$55,962.75
	Total Construction Preliminary Cost Estimate	**$186,128.00**
	Construction Contingency @ 10 %	$18,612.80
	GPS Survey and Map Plotting	$15,000.00
	Design Build Design and Project Management Fees - Native Plant Solutions	$10,000.00
	TOTAL PROJECT PRELIMINARY COST ESTIMATE	**$229,740.80**