Appendix E
Economic evaluation procedure

Simple procedure benefit cost calculations for crash reduction studies

Date	
Submitted by	
Crash location	
Type (urban/rural)	

'Urban' refers to all speed limit areas of 70 km/h and under and limited speed zones.
'Rural' refers to all speed limit areas of over 70 km/h.

Treatment life (years)		**A**	
Crash record period	to	No. of crash years	**B**

COSTS

Cost of work	$	**x**	0.91	= $	**C**
Additional annual maintenance	$	**x**		= $	**E**

D Maintenance discount factor

Present value total costs = C + E $ **F**

BENEFITS

Either combine all movements or split into movement types.
Include fatal crashes in the injury total. For more detailed analysis use *Project evaluation manual* method.

	Movement		Movement		Movement	
	Injury	Non-injury	Injury	Non-injury	Injury	Non-injury
No. of crashes **G**						
No. of crash years **B**						
% crash reduction **H**						
Crash savings per year **(G/B) x .01 x H**						
Average crash cost **P**	$	$	$	$	$	$
Crash cost savings per year	$	$	$	$	$	$

Total cost crash savings per year $ **J**

Crash cost discount factor **K**

Present value total benefits = K x J $ **L**

B/C ratio $\frac{L}{F}$ = $\dfrac{\$}{\$}$ =

Treatment life (5, 10, 25 years) **A**		1	5	10	25
Maintenance discount factor **D**		0.95	3.98	6.45	9.52
Crash cost discount factor **K**	Urban	0.95	2.94	5.23	7.82
	Rural	0.96	3.11	5.76	9.32

*Average social cost per reported crash (at June 2005 prices)	**P**	Injury	Non-injury (PDO)
	Urban	208,000	14,800
	Rural	444,000	27,800