Old Scugog Road
500 m north of Concession Rd. 6
to Concession Rd. 7

Calculating Schedule C Benefits

Project #1 Road Resurfacing - mill & overlay

Definitions

input field
calculated field (no data entry required)

AADT = Average Annual Daily Traffic
RCR = Ride Comfort Rating
MJ = mega joules

Assumptions

- milling of existing asphalt surface full width of pavement to a depth of 90mm
- surfacing with 2 lifts of hot mix asphalt to a depth of 90mm
- base lift of hot mix asphalt contains RAP

Project Description

project length	1458	m
width of pavement	6.5	m
intersections (and areas not included in above)	0	m^2
Total Project Area	9477	m^2

current traffic volume (actual or estimated)	1160	AADT
% light trucks (pickup)	0	%
% trucks (heavy truck)	2	%
% trucks (tractor/trailer)	0	%
% trucks (B trains)	0	%

pavement smoothness	2.2	RCR

Current CO_2 Emissions

Total Current Emissions	353.2	kg/day

NOTE: Based on Natural Resources Canada - 2.36Kg/L CO_2 Gasoline, 2.73kg/L CO_2 Diesel and Transport Canada - Company Average Fuel Consumption 2004

Old Scugog Road
500 m north of Concession Rd. 6 to Concession Rd. 7

Energy Used For Construction

milling of existing asphalt surface	9477	m^2
trucking of milled asphalt (distance to dump site and return)	0	km
base lift of Hot Mix Asphalt with RAP	0	mm
% RAP	0	%
Surface lift of Hot Mix Asphalt	20	mm
Total MJ of energy required for project	317,414.5	MJ

NOTE: Natural Resources Canada - Road Rehabilitation Energy Reduction Guide for Canadian Road Builders 2005, IVL Swedish Environmental Research Institute - Lifecycle Assessment of Road, March 2001

Benefits

Maintaining this road with a smooth surface condition reduces emissions

pavement smoothness (on the above project length)	9	RCR
Total Emissions (on the above project length if pavement maintained with a smooth riding surface)	334.1	kg/day
Reduction in CO_2	19.0	kg/day
	6948.5	kg/year

Resurfacing at appropriate lifecycle to maintain the road with a smooth surface can reduce the total energy required as the pavement will require less work to rehabilitate. For example: instead of double lift of hot mix asphalt a single lift may be all that is required to maintain a smooth surface

milling of existing asphalt surface	9477	m^2
trucking of milled asphalt (distance to dump site and return)	0	km
Surface lift of Hot Mix Asphalt	20	mm
Total MJ of energy required for single lift resurfacing	317,414.5	MJ
Reduced Energy requirements	0.0	MJ