Calculating Schedule C Benefits

19th. Avenue (East) Bridge (B19)

Definitions

input field
calculated field (no data entry required)

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

Assumptions

- that a road closure will occur for the duration of the project

- that new technologies will be used to reduce the number of days a road closure is required

Details

length of road closed to traffic	1.92	km
length of detour route for bridge closure	5.5	km
estimated # of days road closed to traffic (conventional construction)	150	days
current traffic volume (actual or estimated)	1000	AADT
% light trucks (pickup)	32	%
% trucks (heavy truck)	2	%
% trucks (tractor/trailer)	0	%
% trucks (B trains)	0	%
pavement smoothness (of road section to be closed)	8	RCR

Current CO_2 Emissions (before road closed to traffic)

Total Current Emissions	428.8

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

CO_2 Emissions (as a result of the road closure)

pavement smoothness (of detour route)	8	RCR
Total Emissions	1,228.5	
Increased CO_2 (as a result of road closure)	799.6	kg/day
	119,942.2	increased kg while detour in effect

Benefits of Using New Technologies

using technologies that reduces the number of days a road closure is required reduces emissions

estimated # of days road closed to traffic (new technologies used for construction)	105	days
Increased CO_2 (as a result of road closure)	83,959.5	increased kg while detour in effect
Reduced CO_2 (a result of using of technologies that reduce the number of days a road closure is required)	35,982.7	total kg