

## Columbia Road Signal Optimization Project Benefit Summary

	MOE	Daily Benefit (Weekday)				Annual Net Reduction <sup>1</sup>
		Before	After	Net Reduction	Percent Improvement	
<b>User Costs<sup>3</sup></b>	<b>Stops (no. of veh)</b>	173,808	145,749	<b>28,059</b>	<b>16.1%</b>	<b>7,042,684</b>
	<b>Delay (hr)</b>	1,777	1,566	<b>211</b>	<b>11.9%</b>	<b>52,871</b>
	<b>Fuel Consumption (gal)</b>	4,520	4,327	<b>193</b>	<b>4.3%</b>	<b>48,456</b>
<b>Travel Time<sup>4</sup></b>	<b>Travel Time (min:sec)</b> <b>AM PEAK - Northbound</b>	7 : 44	5 : 18	2 : 26	<b>32%</b>	--
	<b>Travel Time (min:sec)</b> <b>AM PEAK - Southbound</b>	7 : 18	5 : 30	1 : 49	<b>25%</b>	--
	<b>Travel Time (min:sec)</b> <b>PM PEAK - Northbound</b>	8 : 07	5 : 44	2 : 23	<b>30%</b>	--
	<b>Travel Time (min:sec)</b> <b>PM PEAK - Southbound</b>	10 : 16	6 : 11	4 : 05	<b>40%</b>	--
	<b>Columbia Road - Benefit to Cost Ratio</b>					

<sup>1</sup> Total weekday days (261) were reduced by 10 to account for Holidays. 251 total days included.

Saturday and Sundays were not included as part of the Benefit/Cost Analysis.

<sup>2</sup> Dilemma Zone is a safety measure and is equal to the number of vehicles arriving on "yellow" indication and presented with a decision to stop or go

<sup>3</sup> Measures of effectiveness or MOE (Stops, Delay, Fuel Consumption and Dilemma Zone) measured using Synchro/SimTraffic Modeling Software.

<sup>4</sup> Travel time is field measured. Data collected on September 15-16, 2009 (Before) and October 27-28, 2009 (After)