

Congestion Pricing Benefits: Save Lives, Save Time



By CHEKPEDS



Summary

Congestion pricing – similar to tolling roads – is successfully used in London, Singapore and other leading cities to reduce vehicular congestion in their central business district (CBD).

Congestion pricing is proven to reduce traffic congestion and to improve air quality – thus reducing related health issues; it improves quality of life for drivers and transit users who spend less time commuting, and it helps fund better transit for all; deliver value to car and transit

commuters alike. Notably, Congestion Pricing significantly reduces crashes – especially motorist related - and could bring New York City closer to reaching its vital goal of Vision Zero¹.

While Congestion Pricing's value to transit users is well documented, the research here establishes the value of congestion pricing for those drivers who will be paying tolls. This report shows that Congestion Pricing could reduce the number of traffic fatalities by 71 and injuries by 17,000 over two years, of which 11,900 are injuries to motorists. Reductions in CO2 emissions are estimated to reach 16%². And the savings in commute time for motorists add up to five days annually per motorist. A 15% reduction in traffic means a potential 15% improvement in ease of parking. These are substantial benefits for motorists.

Contrary to certain claims, Congestion Pricing is not a regressive policy. Many roads and highways are already tolled in the region without raising such criticism. The proportion of commuters who drive to the Central Business District (CBD) in Manhattan is typically very small, and with few exceptions, these drivers are wealthier than transit riders³. For low-income commuters who must drive because they live in transit deserts, Congestion Pricing will fund other transit options such as express buses that will reduce the need to drive.

CHEKPEDS is a Manhattan- based non-profit advocacy group founded in 2005. It focuses on pedestrian safety, quality of life for pedestrians and reducing traffic congestion.

¹ Vision Zero (New York City) is a program created by Mayor De Blasio in 2014 to eliminate all traffic deaths and serious injuries on New York City Streets by 2024

² November 2018- Balanced Transportation Analyzer (BTA) – Charles Komanoff

³ 2018 Congestion Pricing: An Analysis of New York State Legislative Districts - Tri- State Transportation Campaign

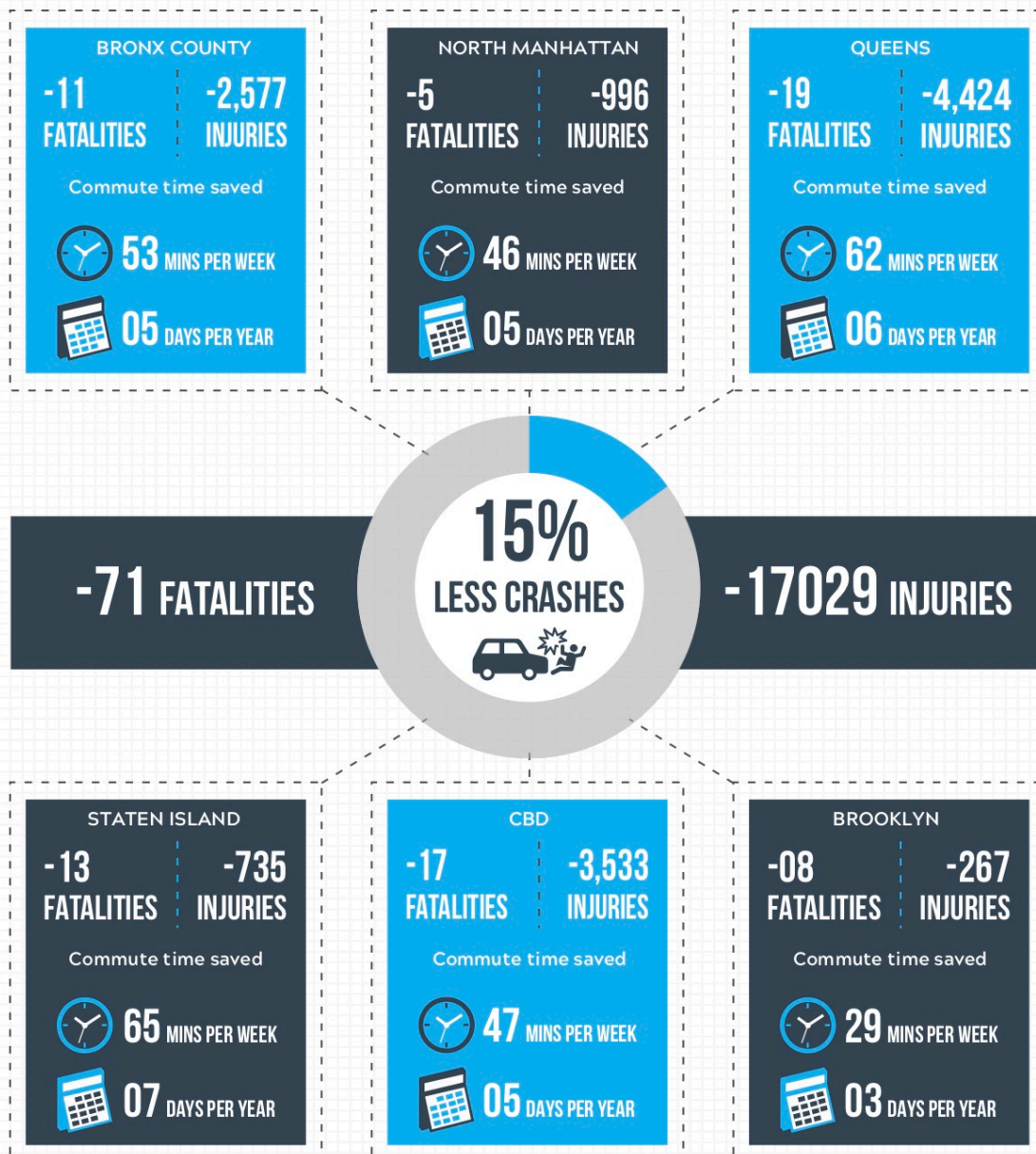


NEW YORK CITY



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Congestion pricing isn't just the single most important step New York can take to fix the subway -- it also brings critical safety and efficiency benefits that help drivers, pedestrians, bus riders, and bicyclists alike.

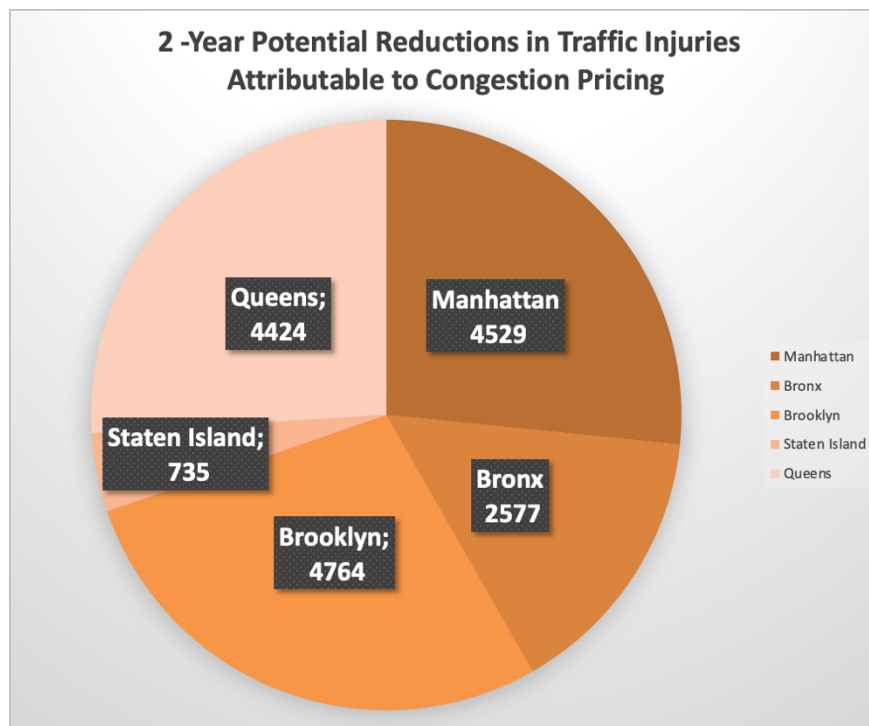


Sources : CHEKPEDS, Tri State Transportation Campaign 2017; Transport For London, Carbon Tax Center
Google maps, CBD=Central Business District, Manhattan below 60th Street.

Saving Lives

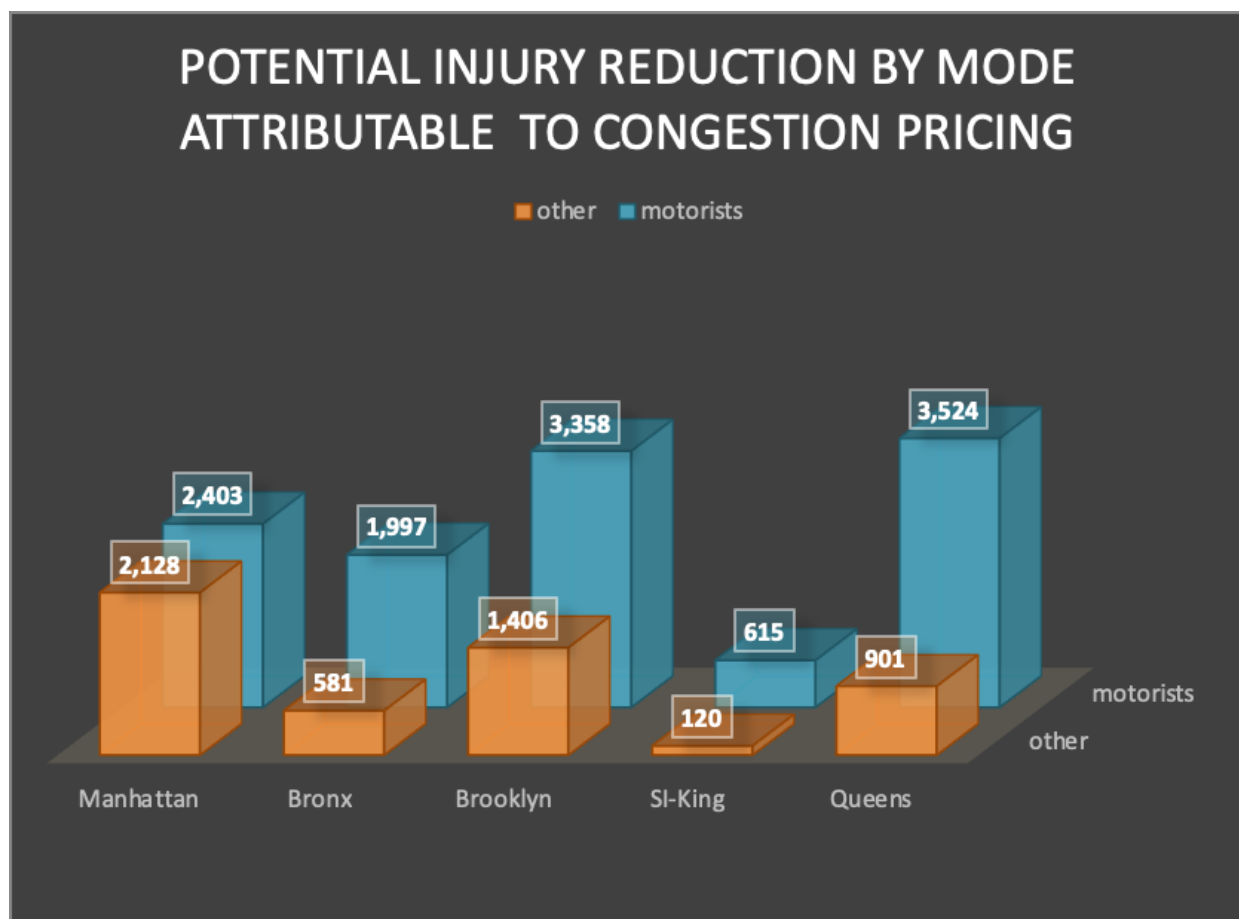
London implemented congestion pricing 10 years ago and reduced its road traffic by 15%. In 2015, Lancaster University Management School⁴ studied the effect Congestion Pricing had on traffic safety and concluded that it reduced crashes leading to fatalities and injuries by 40% in the congestion zone and 13% in the adjacent counties. The study attributes these remarkable results to the fact that with less congestion, trips are more predictable and thus less stressful for drivers.

These results are consistent with a study of the link between crime and extreme traffic recently published in the Journal of Public Economics - Traffic and Crime.⁵ The analysis aimed at estimating the psychological cost of traffic by combining police incident reports with observations of local traffic data in Los Angeles from 2011 to 2015. The conclusion was that extreme traffic increases the incidence of domestic violence by 9%. This is another dimension of the catastrophic human costs of driving in congestion. Chekpeds studied the potential effect Congestion Pricing would have on traffic safety and Vision Zero if it was implemented in New York.



⁴ 2014/2015 – Traffic Accidents and the London Congestion Charge – Department of Economics, Lancaster University Management School

⁵ April 2018 – Traffic and Crime, Journal of Public Economics



Methodology: the crash numbers come from NYC Open Data, Traffic Collisions (provided by NYPD November 2016 to November 2018). Using Crashmapper.org, the data was disaggregated in fatalities and injuries, pedestrians, bicyclists and motorists. It was further filtered by Boroughs, State Assembly and State Senatorial districts. The potential fatality and injury reductions in New York City were then determined by applying to New York data the crash reduction rates found in London (40% in the congestion zone and 13% outside of it).

The crash rate reduction outside of the congestion zone may be under estimated: the congestion zone crash rate reduction applies to all crashes in the congestion zone, regardless of the drivers' residence. With drivers in the congestion zone coming from other counties, many of the averted crashes in the zone will benefit commuters who live outside the congestion zone.

Appendix A shows the statistics for each of the Boroughs of New York city.
Appendix B shows the statistics for each of the State legislative districts in New York City.

Saving Time

In June 2018, the NYC Department of Transportation published a study of the effects of congestion on vehicular speed here ⁶ and concluded that the travel speed in the CBD has decreased from 9.1 to 7.2 miles per hour or 20.1 % over the 7 years from 2010 to 2016. Residents of the Tri State Region experience the second longest commute in the country.

Congestion adds time to travel in a second, more insidious way: by making the trip duration unpredictable, it forces drivers to leave much earlier in order to keep appointments and family commitments - like picking up the children from school. That additional time is difficult to quantify as it is usually not accounted for in survey or statistics.

The reduction in trip duration demonstrated below have been derived exclusively from traffic speeds and thus are underestimated. They do not take into account the improvements in predictability that Congestion Pricing will provide.



⁶ June 2018- New York City Mobility Report – New York City Department of Transportation

Methodology: using Google maps, we calculated the two-way trip duration from each legislator's district office to a central point in the CBD (34th Street and 5th Avenue). The trip was planned for a Monday morning at 7 a.m. That itinerary was then divided between two segments, one in the congestion zone, and one outside of it, in order to apply the proper speed reduction obtained from the assumptions contained in the Balanced Transportation Analyzer (BTA)⁷, (22.6% and 7.6% respectively). "Average commute time" is the average of lowest and highest times for that trip. "Time wasted in congestion" is the minimum daily commute time subtracted from the average daily commute time. The proportion of commuters who drive to the CBD was obtained from the 2017 Tri-State Transportation Campaign. The number of minutes saved by day was then multiplied by 250 working days a year, and divided by 480 minutes for each 8-hour working day saved.

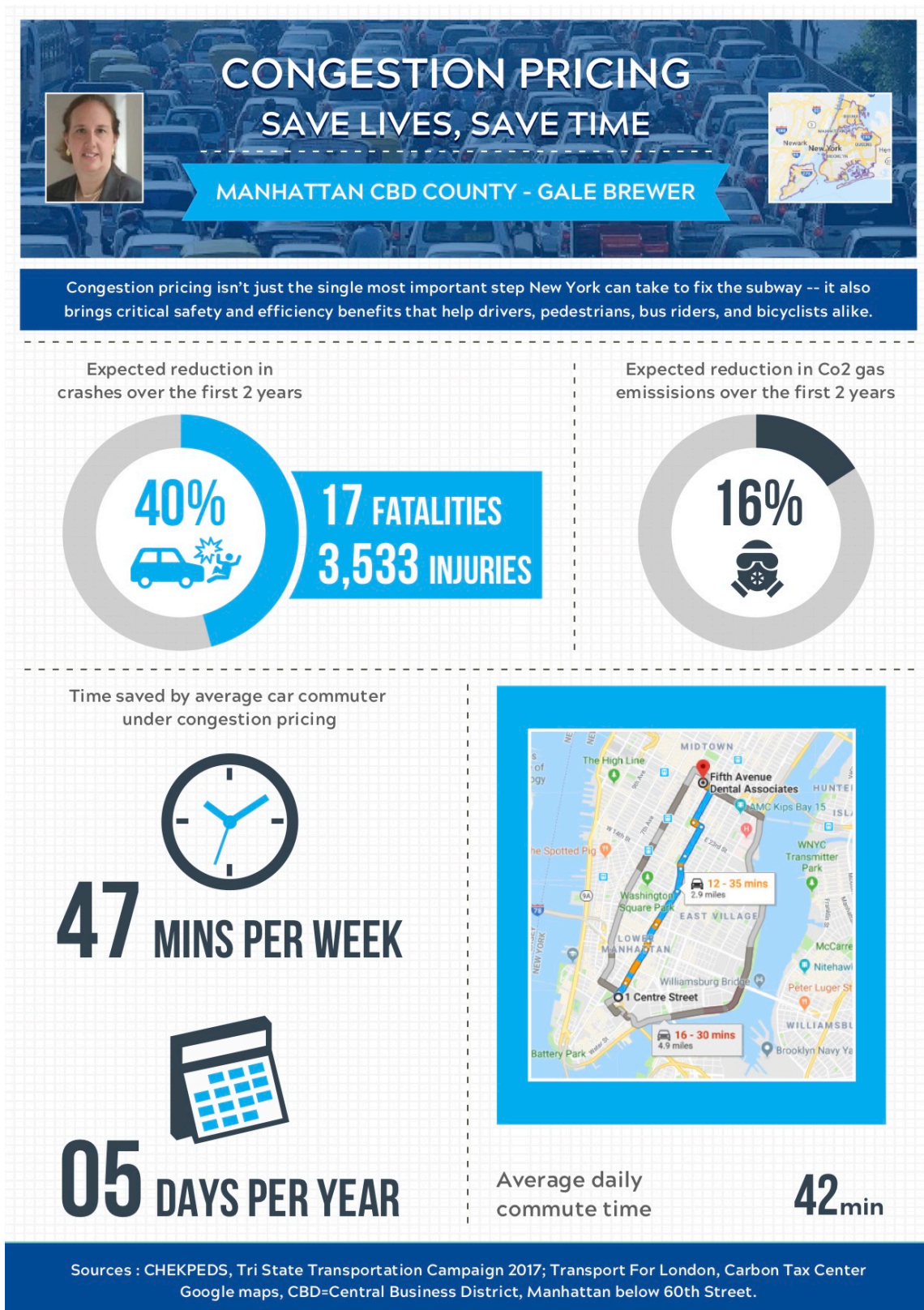
Conclusion

For those commuters who want to continue to drive to the CBD, the benefits of Congestion Pricing include safer trips, shorter trips and predictable commute time. For those commuters who would like to switch to mass transit, congestion pricing offers the best way to bring public transportation to transit deserts and make transit faster and more reliable. Enacting Congestion Pricing is the one proven way to achieve these benefits.

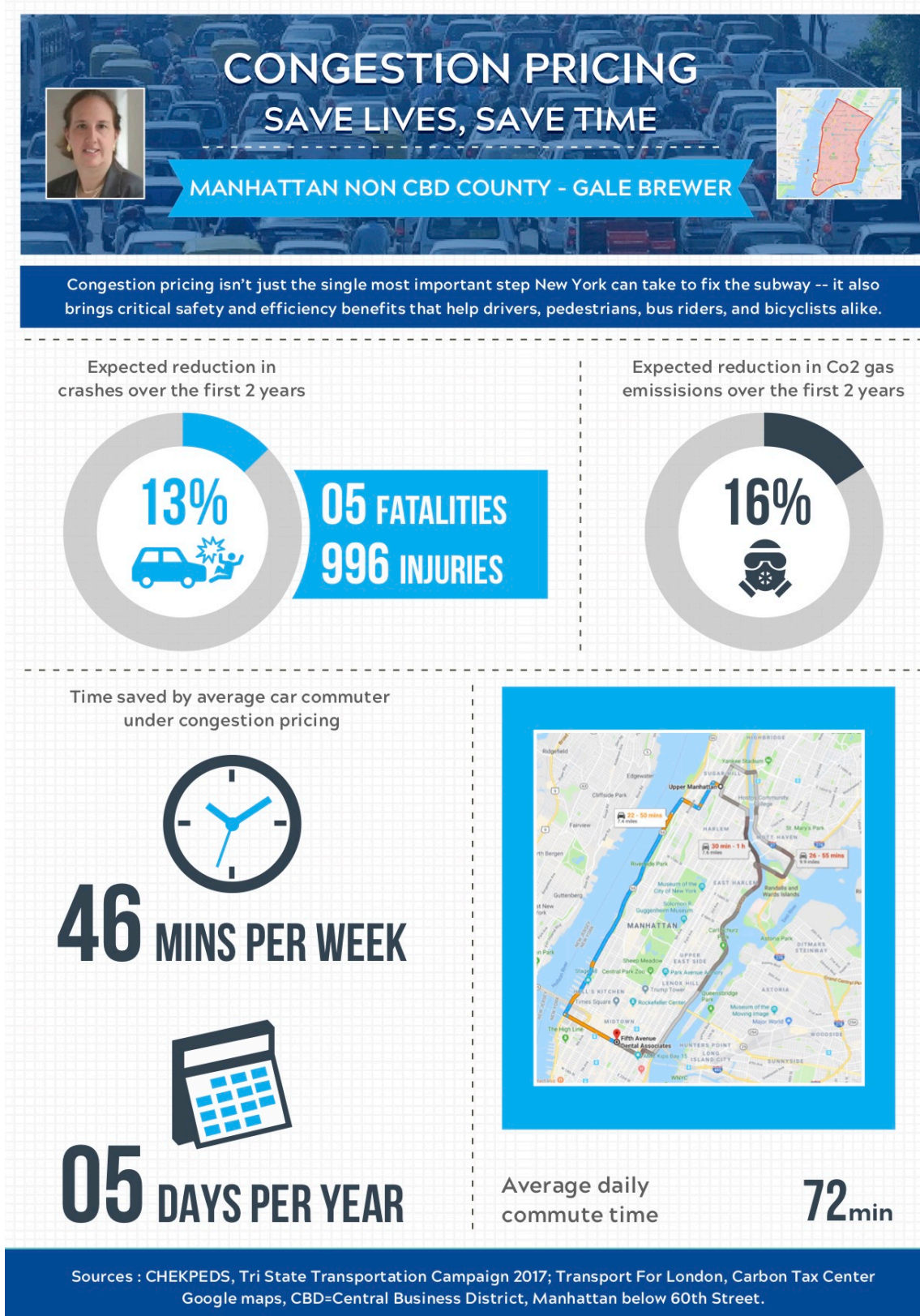


⁷ November 2018- Balanced Transportation Analyzer (BTA) – Charles Komanoff

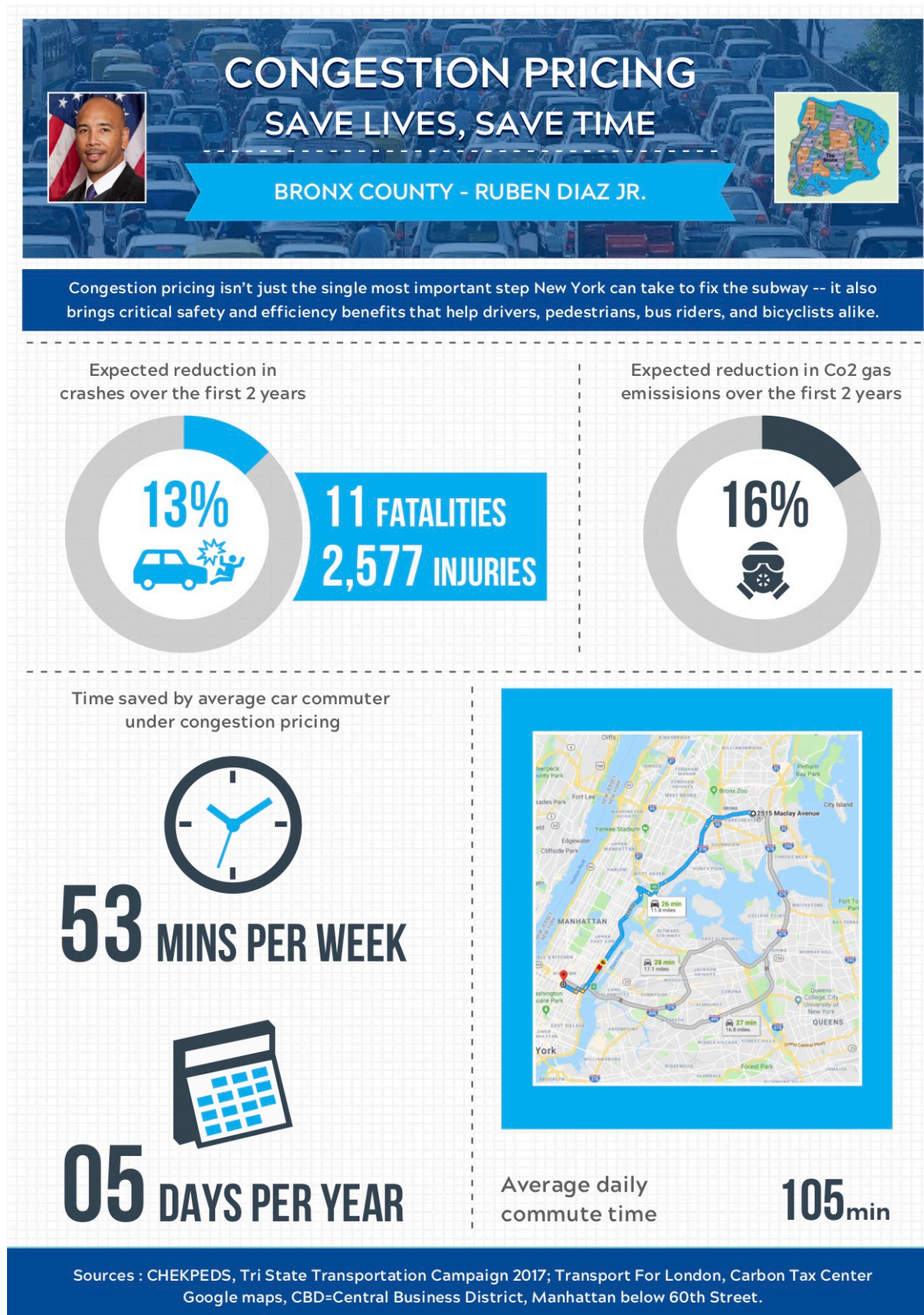
Appendix A: Boroughs' Summaries

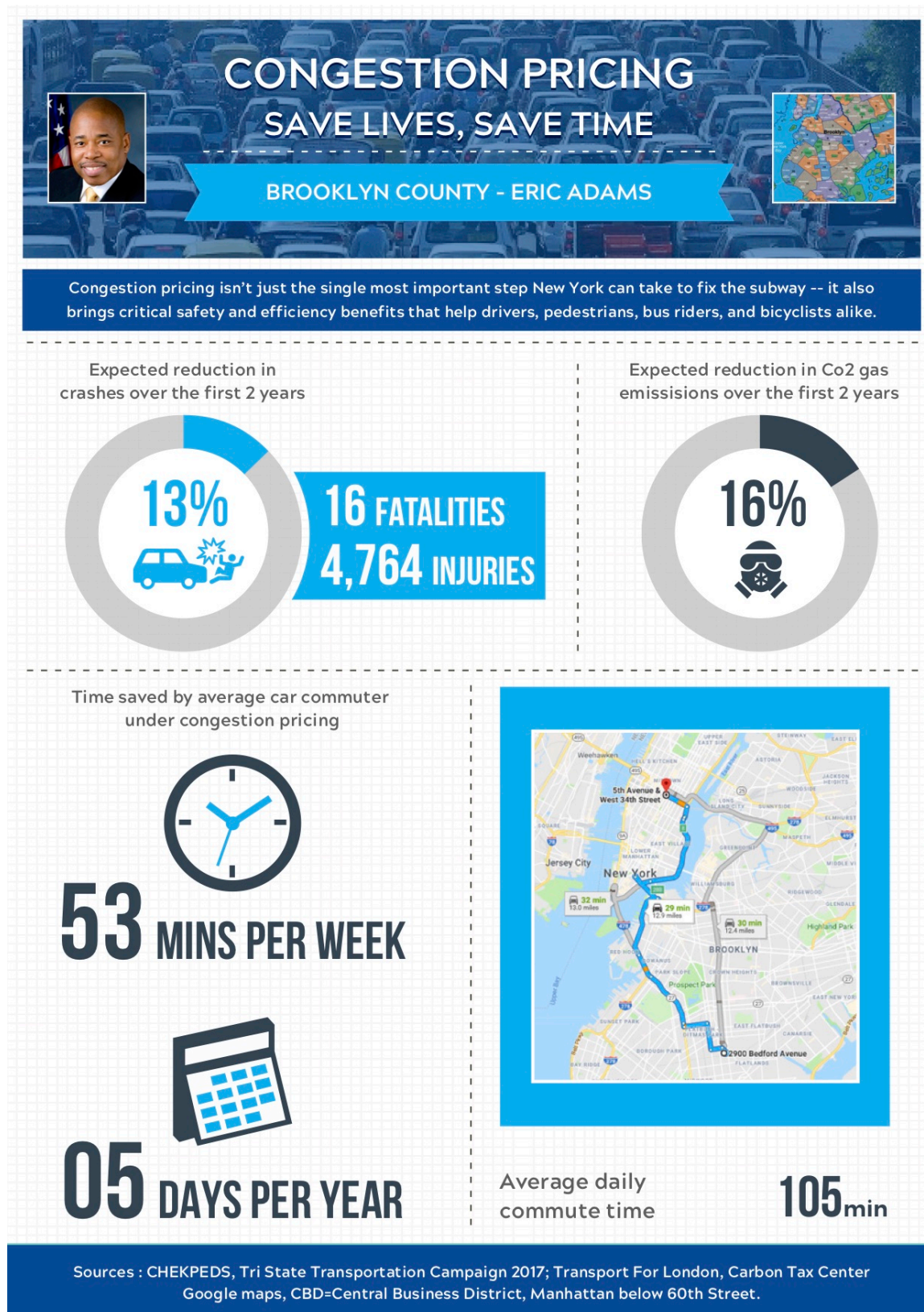


Appendix A: Boroughs' Summaries

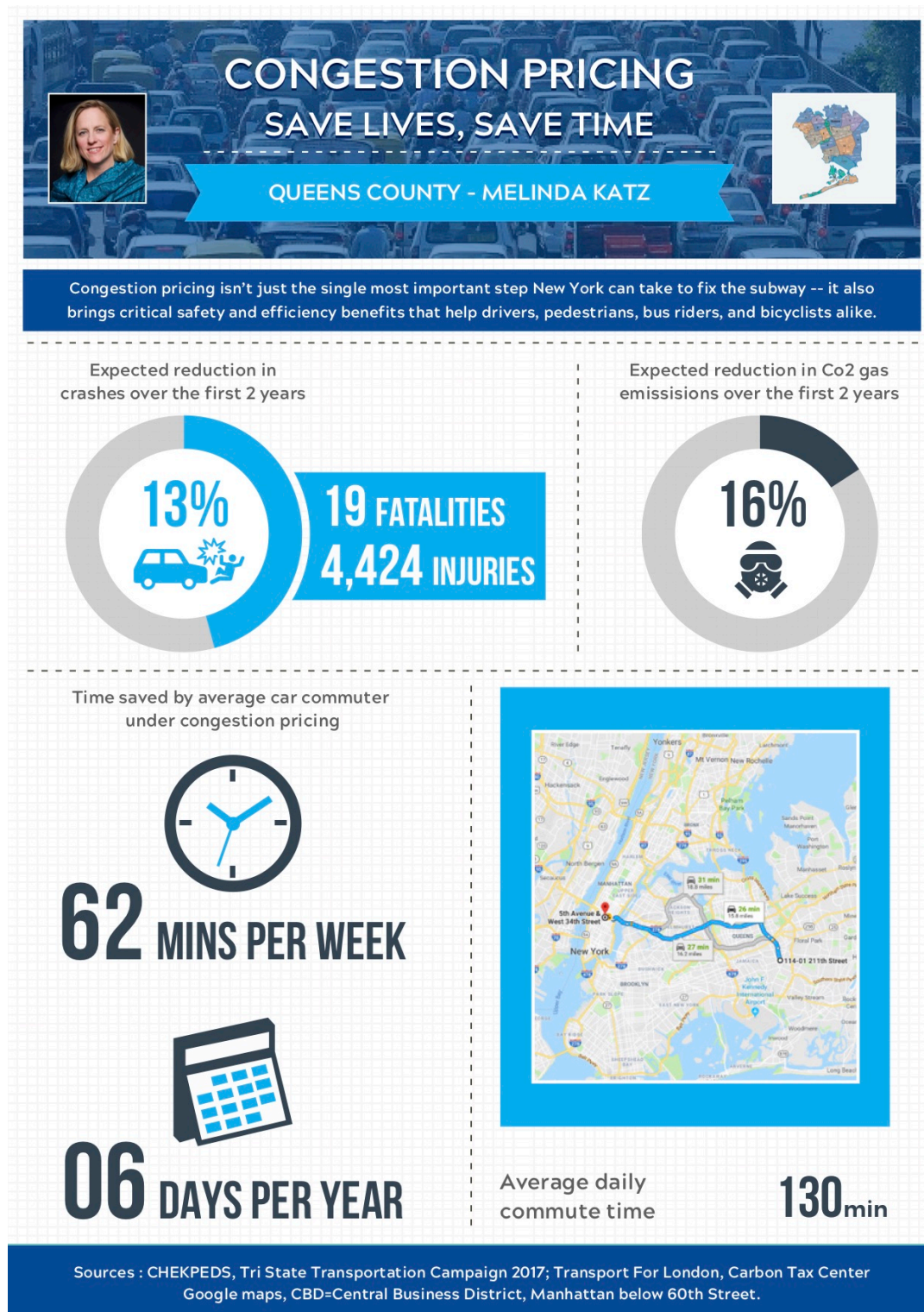


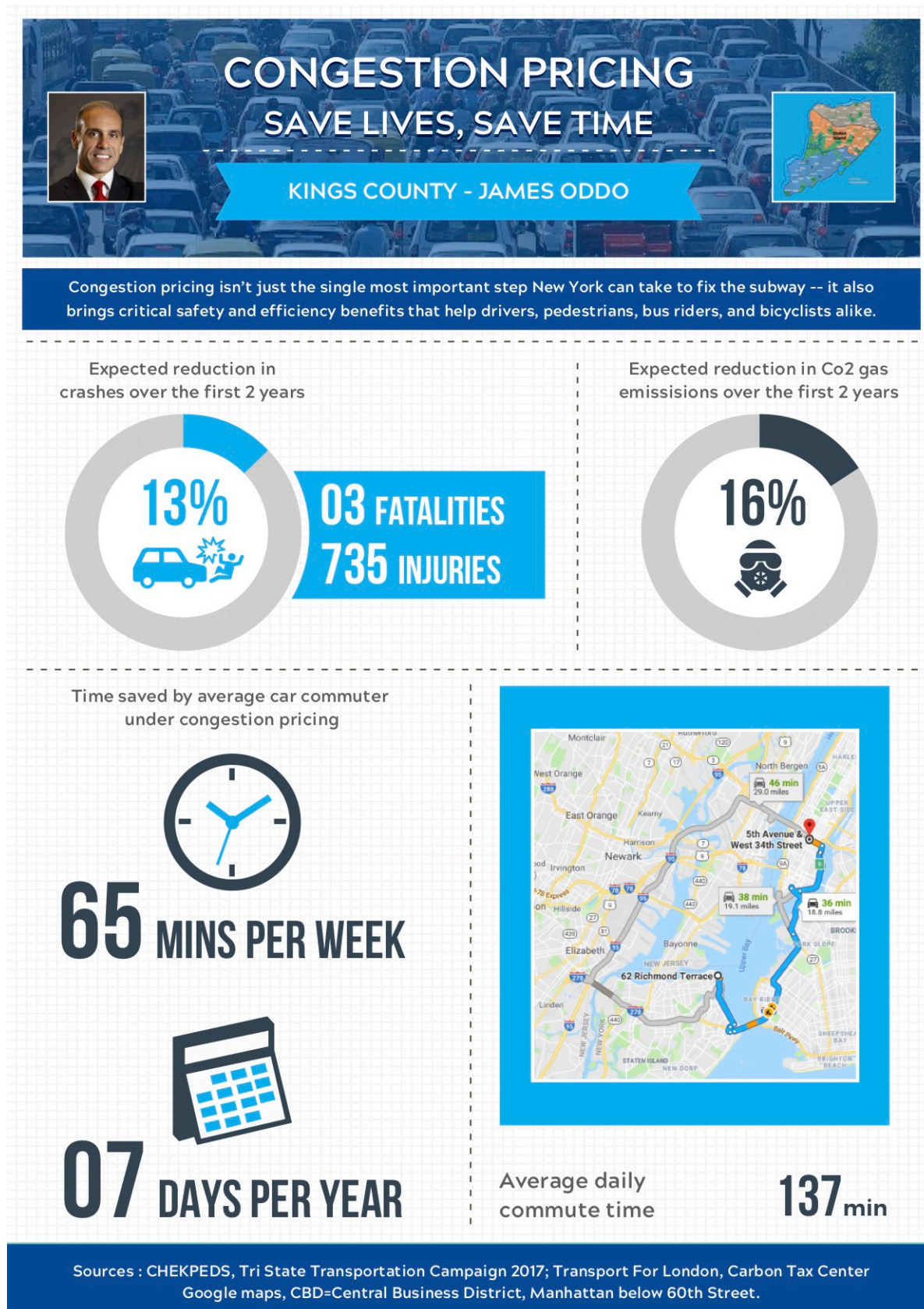
Appendix A: Boroughs' Summaries





Appendix A: Boroughs' Summaries





Appendix B: Legislative District Summaries

Projected Crash and Time Reductions
resulting from Congestion Pricing - by county and legislative office

county	office name	district #	elected name	% crash reduction	reduction in fatalities #	reduction in injuries #	drivers' time save per week (min)	drivers' time saved per year (day)	% drivers commute to CBD (2017- TSTC)	average daily 2-way commute (min)
Manhattan CBD	Borough President	**	Gale Brewer	40%	17	3,533	47	5	**	42
Manhattan non CBD	Borough President	**	Gale Brewer	13%	5	996	46	5	**	72
Manhattan	Borough President	**	Gale Brewer	27%	22	4,529	**	**	**	**
Bronx	Borough President	**	Ruben Diaz Jr.	13%	11	2,577	53	5	**	105
Brooklyn	Borough President	**	Eric Adams	13%	16	4,764	53	5	**	105
Staten Island	Borough President	**	James Oddo	13%	3	735	65	7	**	137
Queens	Borough President	**	Melinda Katz	13%	19	4,424	62	6	**	130
Citywide					71	17,029				
Bronx & New York Counties	Senator	S29	Jose M. Serrano	13%	3	673	35	4	3.8%	62
Bronx & Westchester Counties	Senator	S34	Alessandra Biaggi	13%	4	609	59	6	5.2%	125
Bronx & Westchester Counties	Senator	S36	Jamaal T. Bailey	13%	2	430	59	6	3.6%	125
Bronx County	Assembly Member	A83	Carl Heastie	13%	2	239	61	6	2.5%	130
Bronx County	Assembly Member	A84	Carmen E. Arroyo	13%	2	343	36	4	2.2%	65
Bronx County	Assembly Member	A81	Jeffrey Dinowitz	13%	2	244	43	4	5.1%	83
Bronx County	Assembly Member	A78	Jose Rivera	13%	1	163	47	5	2.3%	95
Bronx County	Assembly Member	A87	Karines Reyes	13%	2	185	53	6	3.1%	110
Bronx County	Assembly Member	A77	Latoya Joyner	13%	1	249	37	4	3.4%	67
Bronx County	Assembly Member	A85	Marcos Crespo	13%	1	198	47	5	4.2%	95
Bronx County	Assembly Member	A79	Michael A. Blake	13%	1	194	35	4	3.0%	62
Bronx County	Assembly Member	A82	Michael Bendetto	13%	2	250	57	6	5.3%	120
Bronx County	Assembly Member	A80	Nathalia Fernandez	13%	1	211	61	6	3.4%	130
Bronx County	Assembly Member	A86	Victor Pichardo	13%	2	282	42	4	2.2%	81
Bronx County	Senator	S33	Gustavo Rivera	13%	3	604	45	5	2.5%	90
Bronx County	Senator	S32	Luis R.Sepúlveda	13%	2	439	39	4	2.8%	74
Kings & New York Counties	Senator	S26	Brian P. Kavanagh	13%	3	590	50	5	6.5%	53
Kings & Richmond Counties	Senator	S23	Diane J. Savino	13%	2	486	66	7	3.1%	145
Kings County	Assembly Member	A60	Charles Barron	13%	2	344	59	6	2.2%	125
Kings County	Assembly Member	A43	Diana C. Richardson	13%	1	236	65	7	1.6%	93
Kings County	Assembly Member	A54	Erik Martin Dillan	13%	2	231	44	5	1.6%	86
Kings County	Assembly Member	A51	Feliz Ortiz	13%	1	253	61	6	2.1%	81
Kings County	Assembly Member	A41	Helene Weinstein	13%	2	185	76	8	3.2%	120
Kings County	Assembly Member	A59	Jaime R. Williams	13%	2	283	79	8	4.5%	130
Kings County	Assembly Member	A52	Jo Anne Simon	13%	1	269	47	5	2.0%	65
Kings County	Assembly Member	A50	Joseph R. Lentol	13%	2	267	29	3	2.1%	44
Kings County	Assembly Member	A55	Latrice Monique Walker	13%	2	353	57	6	2.1%	120
Kings County	Assembly Member	A53	Maritza Davila	13%	2	243	39	4	1.6%	72
Kings County	Assembly Member	A46	Mathilde Frontus	13%	1	198	72	7	3.1%	110
Kings County	Assembly Member	A58	N. Nick Perry	13%	1	347	72	7	2.3%	110
Kings County	Assembly Member	A49	Peter Abbate Jr.	13%	1	133	63	7	3.2%	86
Kings County	Assembly Member	A44	Robert C. Carroll	13%	1	149	56	6	2.4%	69
Kings County	Assembly Member	A42	Rodneyse Bichotte	13%	1	248	66	7	1.9%	95
Kings County	Assembly Member	A48	Simcha Eichenstein	13%	0	151	62	6	2.7%	83
Kings County	Assembly Member	A45	Steven Cymbrowitz	13%	1	185	72	7	2.8%	110
Kings County	Assembly Member	A56	Tremaine S.Wright	13%	1	239	43	4	1.9%	84
Kings County	Assembly Member	A57	Walter T. Mosley	13%	1	271	56	6	2.0%	65
Kings County	Assembly Member	A47	William Colton	13%	1	119	72	7	2.7%	110
Kings County	Senator	S22	Andrew Gounardes	13%	2	409	63	7	3.6%	88
Kings County	Senator	S18	Julia Salazar	13%	4	645	51	5	1.7%	101
Kings County	Senator	S21	Kevin S. Parker	13%	2	659	66	7	2.1%	95
Kings County	Senator	S19	Roxanne J. Persaud	13%	4	750	70	7	3.0%	155
Kings County	Senator	S17	Simcha Felder	13%	1	368	33	3	2.7%	47
Kings County	Senator	S25	Velmanette Montgomery	13%	2	773	55	6	2.0%	62
Kings County	Senator	S20	Zellnor Myrie	13%	2	639	64	7	1.6%	86

Using NYC Open Data and Crashmapper.org (11/16 to 11/18)

Appendix B: Legislative District Summaries

Projected Crash and Time Reductions
resulting from Congestion Pricing - by county and legislative office

county	office name	district #	elected name	% crash reduction	reduction in fatalities #	reduction in injuries #	drivers' time save per week (min)	drivers' time saved per year (day)	% drivers commute to CBD (2017- TSTC)	average daily 2-way commute (min)
New York County	Assembly Member	A71	Alfred Taylor	13%	1	129	39	4	2.4%	74
New York County	Assembly Member	A72	Carmen N. De La Rosa	13%	1	132	40	4	2.3%	76
New York County	Assembly Member	A73	Dan Quart	18%	2	317	9	1	9.7%	8
New York County	Assembly Member	A69	Daniel J. O'Donnell	13%	1	101	38	4	3.0%	50
New York County	Assembly Member	A66	Deborah J. Glick	40%	6	722	28	3	2.0%	25
New York County	Assembly Member	A74	Harvey Epstein	40%	1	516	53	6	9.2%	47
New York County	Assembly Member	A70	Inez E. Dickens	13%	1	188	37	4	3.1%	67
New York County	Assembly Member	A67	Linda Rosenthal	20%	2	200	28	3	6.8%	38
New York County	Assembly Member	A76	Rebecca Seawright	40%	1	298	22	2	7.8%	27
New York County	Assembly Member	A75	Richard N. Gottfried	40%	6	1,004	21	2	8.5%	19
New York County	Assembly Member	A68	Robert J. Rodriguez	13%	1	235	34	4	4.0%	54
New York County	Assembly Member	A65	Yuh-Line Niou	40%	4	629	41	4	2.2%	36
New York County	Senator	S27	Brad M. Holyman	40%	8	1,560	37	4	8.3%	33
New York County	Senator	S30	Brian A. Benjamin	13%	2	352	41	4	3.1%	76
New York County	Senator	S28	Liz Krueger	26%	3	830	26	3	9.8%	32
New York County	Senator	S31	Robert Jackson	24%	4	644	43	4	3.7%	83
county	office name	district #	elected name	% crash reduction	reduction in fatalities #	reduction in injuries #	drivers' time save per week (min)	drivers' time saved per year (day)	% drivers commute to CBD (2017- TSTC)	average daily 2-way commute (min)
Queens County	Assembly Member	A29	Alicia L. Hyndman	13%	1	310	72	8	3.1%	160
Queens County	Assembly Member	A28	Andrew Hevesi	13%	2	171	39	4	4.3%	74
Queens County	Assembly Member	A30	Brian Barnwell	13%	1	216	40	4	4.2%	49
Queens County	Assembly Member	A33	Clyde Vanel	13%	2	304	59	6	4.2%	125
Queens County	Assembly Member	A27	Daniel Rosenthal	13%	2	269	51	5	4.1%	105
Queens County	Assembly Member	A24	David I. Weprin	13%	2	274	51	5	4.2%	105
Queens County	Assembly Member	A26	Edward C. Braunstein	13%	1	217	61	6	5.7%	130
Queens County	Assembly Member	A31	Michele R. Titus	13%	2	456	57	6	2.9%	120
Queens County	Assembly Member	A25	Nily Rozic	13%	2	242	25	3	4.8%	105
Queens County	Assembly Member	A40	Ron Kim	13%	2	179	43	4	4.0%	83
Queens County	Assembly Member	A23	Stacey Pheffer Amato	13%	1	214	57	6	4.2%	120
Queens County	Assembly Member	A32	Vivian Cook	13%	1	344	57	6	3.0%	120
Queens County	Assembly Member	A36	Aravella Simotas	13%	1	189	34	4	2.6%	61
Queens County	Assembly Member	A37	Catherine Nolan	13%	2	292	20	2	3.1%	24
Queens County	Assembly Member	A39	Catrina Cruz	13%	1	101	36	4	1.9%	65
Queens County	Assembly Member	A35	Jeffron L. Aubry	13%	2	240	39	4	2.8%	74
Queens County	Assembly Member	A34	Michael G. DenDekker	13%	1	152	34	4	3.4%	60
Queens County	Assembly Member	A38	Michael Miller	13%	1	199	38	4	3.3%	70
Queens County	Senator	S10	James Sanders, Jr.	13%	2	834	57	6	3.1%	120
Queens County	Senator	S13	Jessica Ramos	13%	2	423	39	4	2.6%	72
Queens County	Senator	S11	John Liu	13%	4	587	59	6	5.3%	125
Queens County	Senator	S15	Joseph P. Addabbo, Jr.	13%	4	553	55	6	4.6%	115
Queens County	Senator	S14	Leroy Comrie Jr.	13%	3	845	59	6	3.6%	125
Queens County	Senator	S12	Michael N. Gianaris	13%	2	586	34	4	2.8%	61
Queens County	Senator	S16	Toby Ann Stavisky	13%	3	532	43	4	3.6%	83
county	office name	district #	elected name	% crash reduction	reduction in fatalities #	reduction in injuries #	drivers' time save per week (min)	drivers' time saved per year (day)	% drivers commute to CBD (2017- TSTC)	average daily 2-way commute (min)
Richmond County	Assembly Member	A61	Charles Fall	13%	1	189	85	9	4.0%	145
Richmond County	Assembly Member	A63	Michael Cusick	13%	2	237	72	8	5.3%	160
Richmond County	Assembly Member	A64	Nicole Malliotakis	13%	1	175	85	9	4.2%	145
Richmond County	Assembly Member	A62	Ronal Castorina	13%	1	167	72	8	7.1%	160
Richmond County	Senator	S24	Andrew J. Lanza	13%	3	510	89	9	5.8%	205

Using NYC Open Data and Crashmapper.org (11/16 to 11/18)