

***Big Trouble in Little China Town***

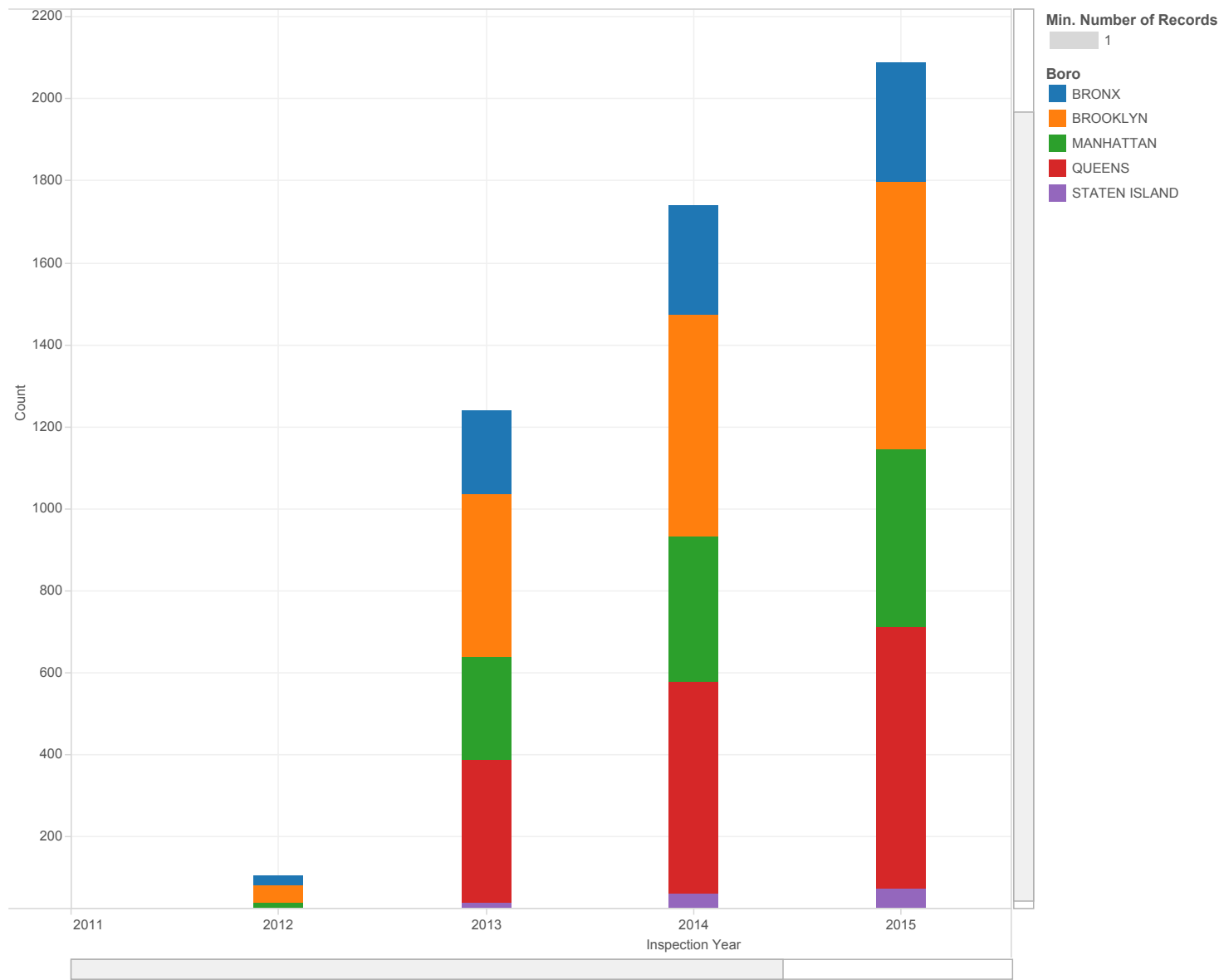
The Appetizer	Chinese Restaurant Growth in NYC	Clean enough to eat off of	Washing the Dishes	The Grading System	First Look At Inspection Grades for NYC	The Big Red Apple
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**Analysis on Sanitary Inspection Grades of Chinese Restaurants in New York**



Big Trouble in Little China Town

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### **The Problem**

As a concerned customer, are Chinese restaurants getting cleaner through the implementation of sanitation scores given by Health Inspectors?

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- Added multiple columns to facilitate aggregation and deal with Nulls
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	CAMIS	DBA	BORO	BUILDING	STREET	ZIPCODE	PHONE	CUISINE D	INSPECTIC	ACTION	VIOLATIO	VIOLATIO	CRITICAL F	SCORE	GRADE
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3	41411052	MOLE	BROOKLYN	178	KENT AVE	11249	3.47E+09	Mexican	#####	No violations were	recorded at	Not Applicable			
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5	41582999	TACOS EL	MANHATT	1548	SAINT NIC	10040	9.18E+09	Tex-Mex	#####	Violations	06B	Tobacco u	Critical	10	A
6	41586332	OLGA'S PI	MANHATT	3409	BROADWA	10031	2.12E+09	Pizza	#####	Violations	02G	Cold food	Critical	19	
7	41557354	RED HOUSE	BROOKLYN	622	GRAND ST	11211	7.18E+09	Chinese	#####	Violations	08A	Facility nc	Not Critic	12	A

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1	CAMIS	DBA	BORO	STREET	ZIPCODE	INSPECTIC	INSPECTIC	ACTION	VIOLATIO	VIOLATIO	CRITICAL F	SCORE	GRADE	Grade_RE	GRADE D/
2	41568346	#1 GARDE	BROOKLYN	PROSPECT	11215	4/2/2014	2014	Violations	15L	Smoke fre	Not Critical			RE	
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## Big Trouble in Little China Town

Chinese Restaurant Growth in NYC	Clean enough to eat off of	Washing the Dishes	The Grading System	First Look At Inspection Grades for NYC	The Big Red Apple	Easily Digested Health Bars
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# Sanitary Inspection Grades

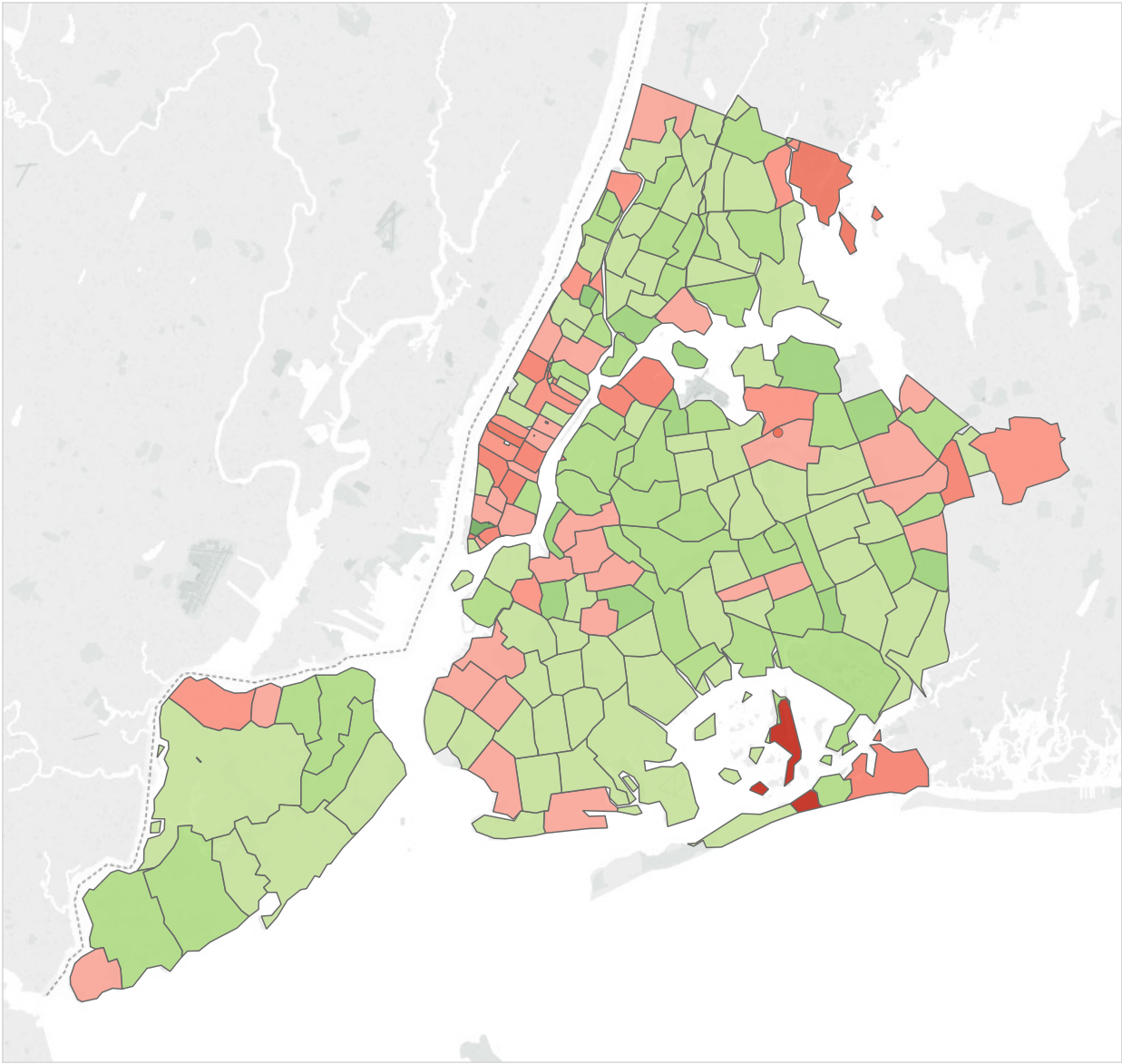
- A is between 0 and 13 points
- B is between 14 and 27 points
- C is 28 points and above
- Grade Pending means failure to obtain an A on the first inspection





# Big Trouble in Little China Town

Clean enough to eat off of	Washing the Dishes	The Grading System	First Look At Inspection Grades for NYC	The Big Red Apple	Easily Digested Health Bars	The Health Inspector
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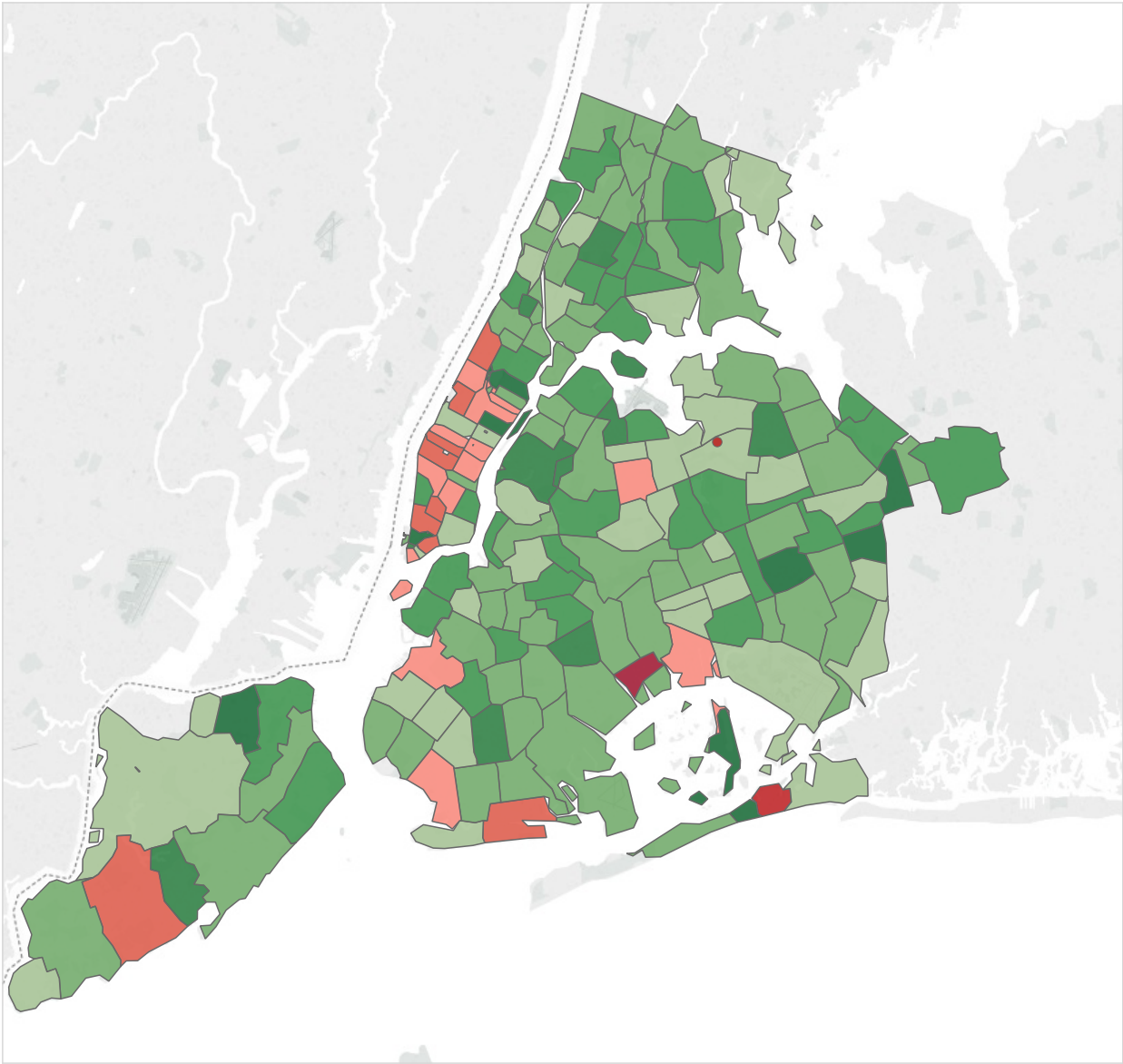


Inspection Year  
2016

Avg. Avg  
3.29 40.14

# Big Trouble in Little China Town

Washing the Dishes	The Grading System	First Look At Inspection Grades for NYC	The Big Red Apple	Easily Digested Health Bars	The Health Inspector	It's Still Okay to Eat At
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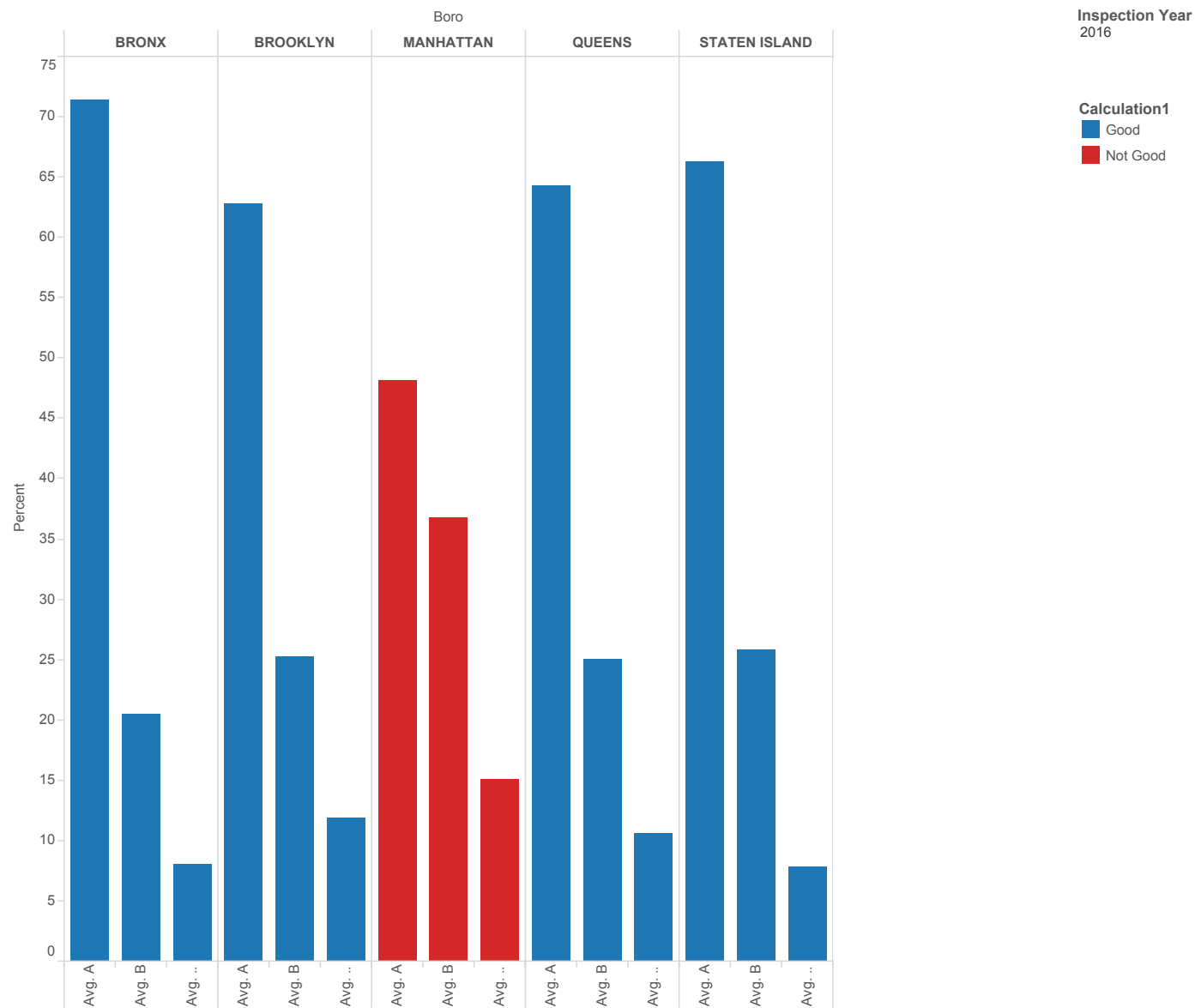


Inspection Year  
2015

Avg. as  
0.0 100.0

# Big Trouble in Little China Town

The Grading System	First Look At Inspection Grades for NYC	The Big Red Apple	Easily Digested Health Bars	The Health Inspector	It's Still Okay to Eat At	Playing with your Food
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## ***Big Trouble in Little China Town***

First Look At Inspection Grades for NYC	The Big Red Apple	Easily Digested Health Bars	<b>The Health Inspector</b>	It's Still Okay to Eat At	Playing with your Food	Digesting the Meal
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# The Violation Point System

- Public Health Hazard 7+ points, may shut down restaurant if not immediately resolved

- Critical Violation, 5+ points

- Non Critical Violations, 2+ points



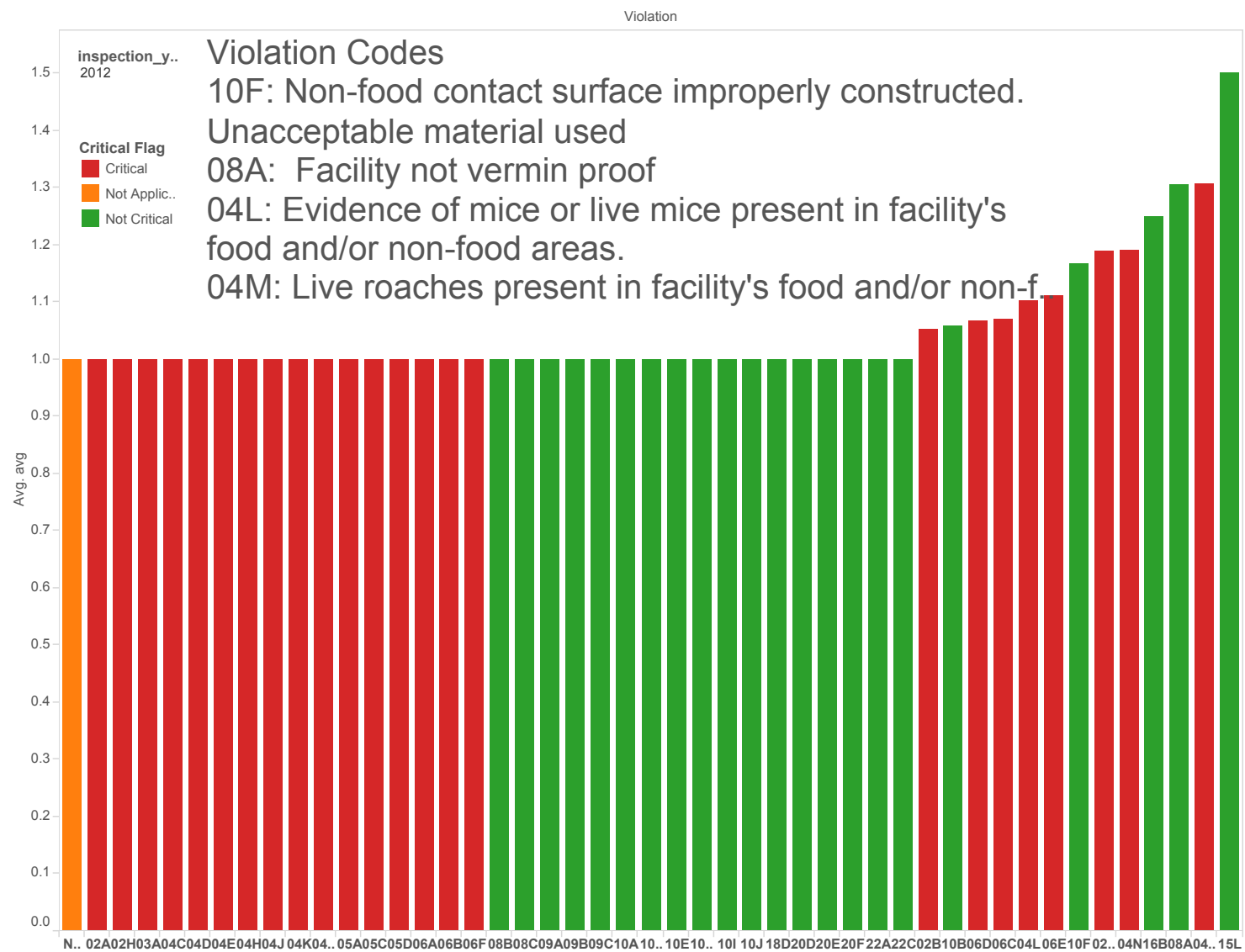
- Points deducted for Violations may intensify depending on severity

- Restaurants are fined heavily per violation

# Big Trouble in Little China Town

First Look At Inspection Grades for ..	The Big Red Apple	Easily Digested Health Bars	The Health Inspector	It's Still Okay to Eat At	Playing with your Food	Digesting the Meal
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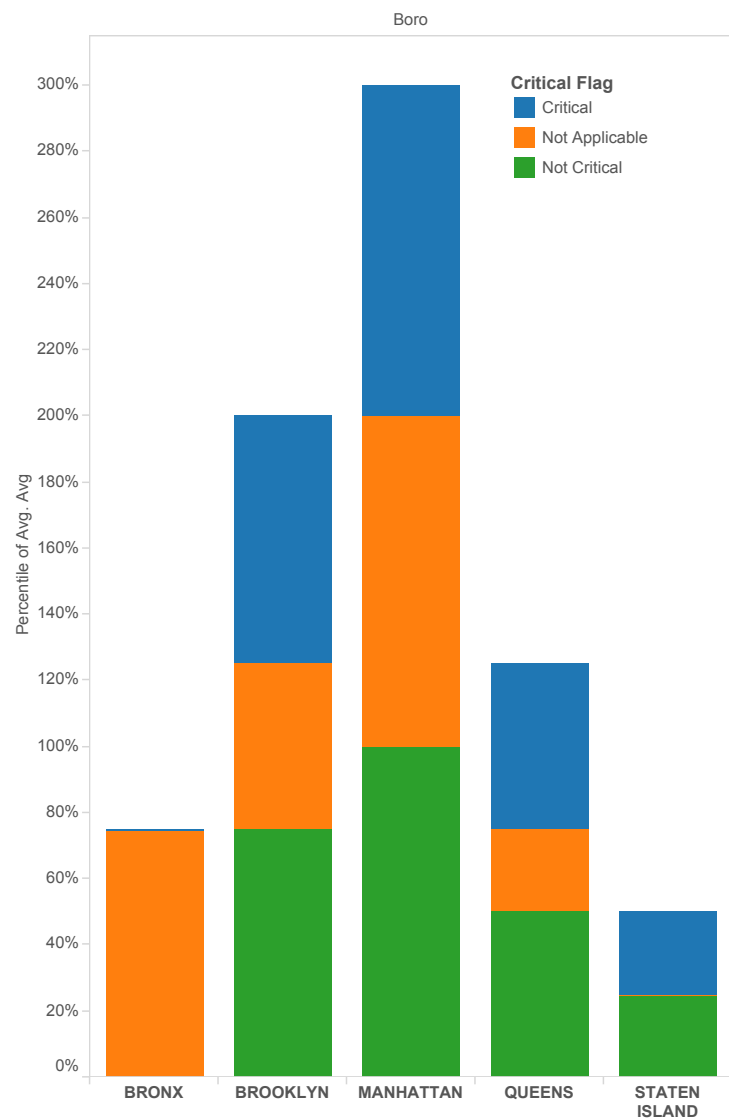
Violations Codes Committed on Average per Restaurant From 2013-2016



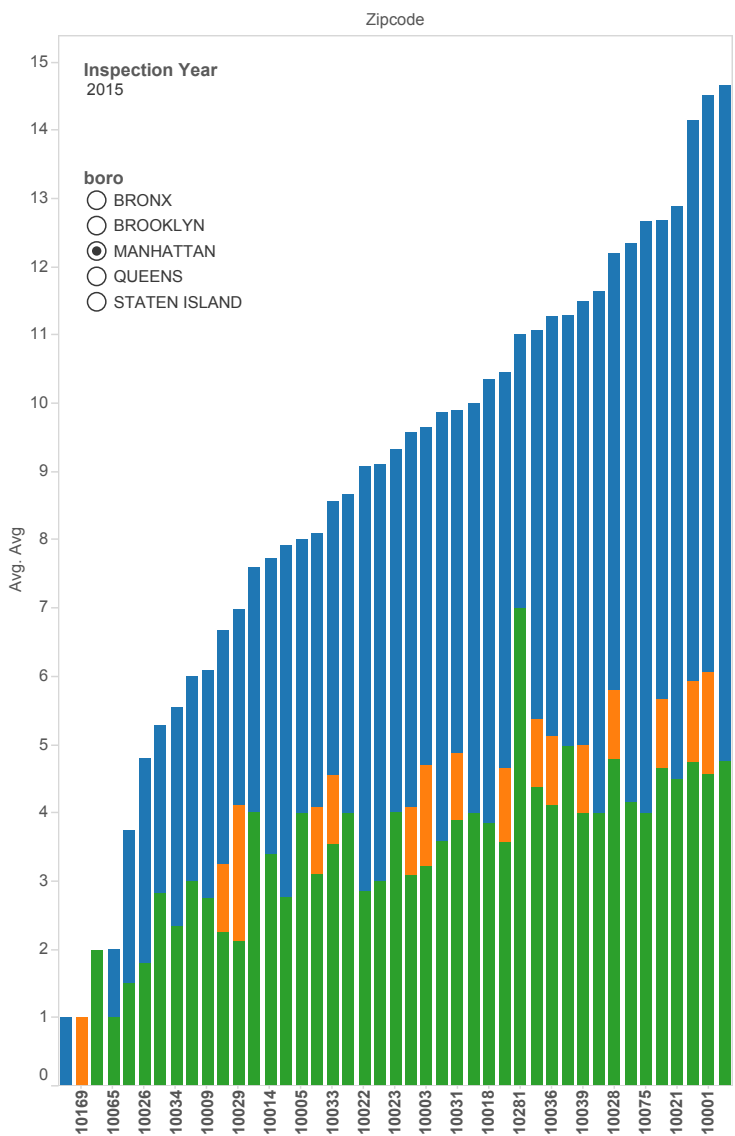
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First Look At Inspection Grades for ...	The Big Red Apple	Easily Digested Health Bars	The Health Inspector	It's Still Okay to Eat At	Playing with your Food	Digesting the Meal
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Percentile of Critical and Not Critical Violations by Boro



Average Non/Critical Violations Committed by Zipcode



## Big Trouble in Little China Town

First Look At Inspection Grades for ..	The Big Red Apple	Easily Digested Health Bars	The Health Inspector	It's Still Okay to Eat At	Playing with your Food	Digesting the Meal
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## Conclusion

### Results

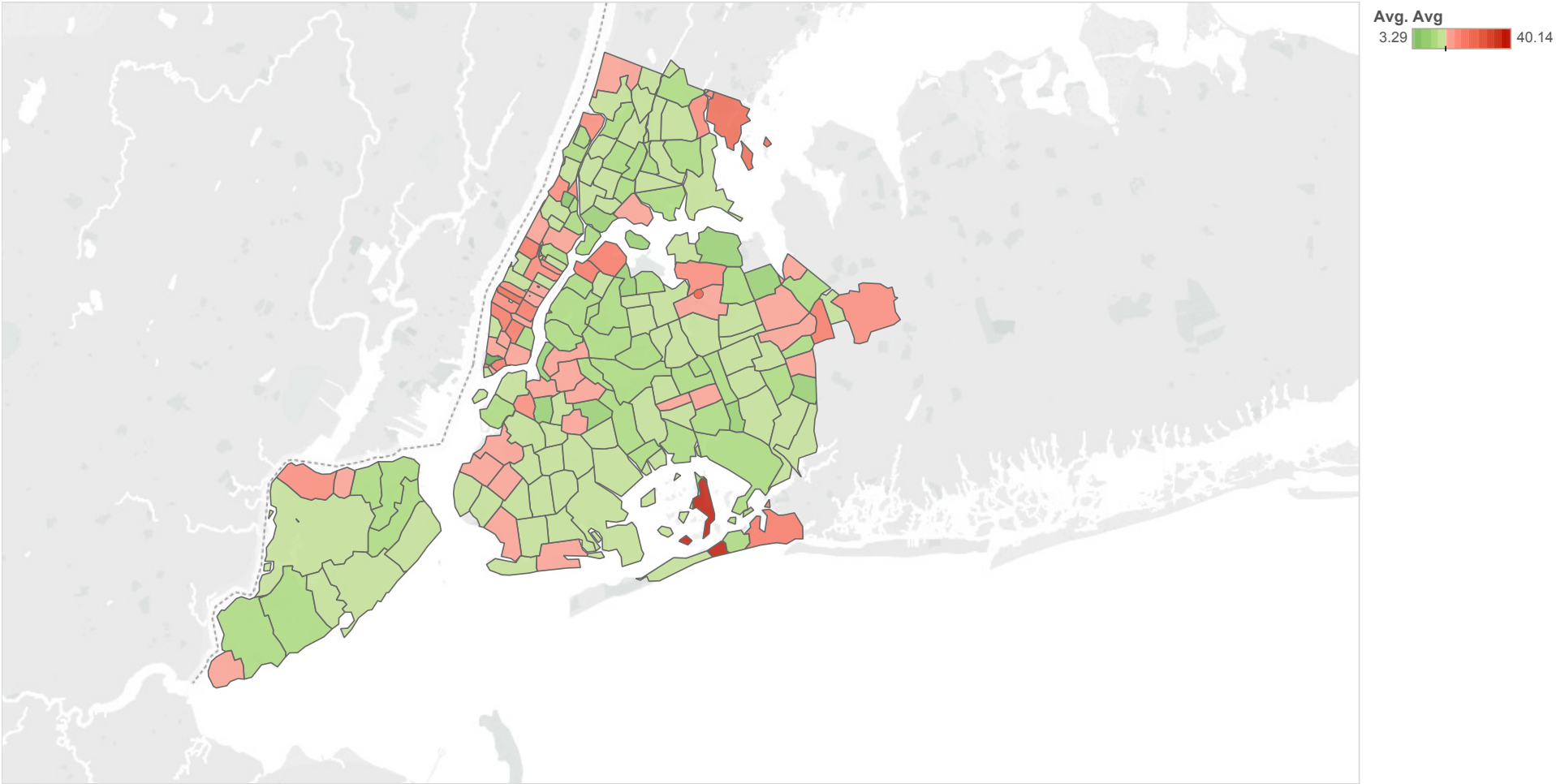
- Sanitary Inspection Scores are down **3 points** across the Boros
- Average Amounts of A are up by **10%**
- Violations per inspection are down 14% (Critical Violations are down 20%)
- One bad apple spoils the whole bunch

### Limitations

- Years 2012 and 2016 are incomplete
- Zipcodes only, no precise locations
- Does not include food carts or food trucks
- Restaurants that fail repeatedly do not have grades recorded

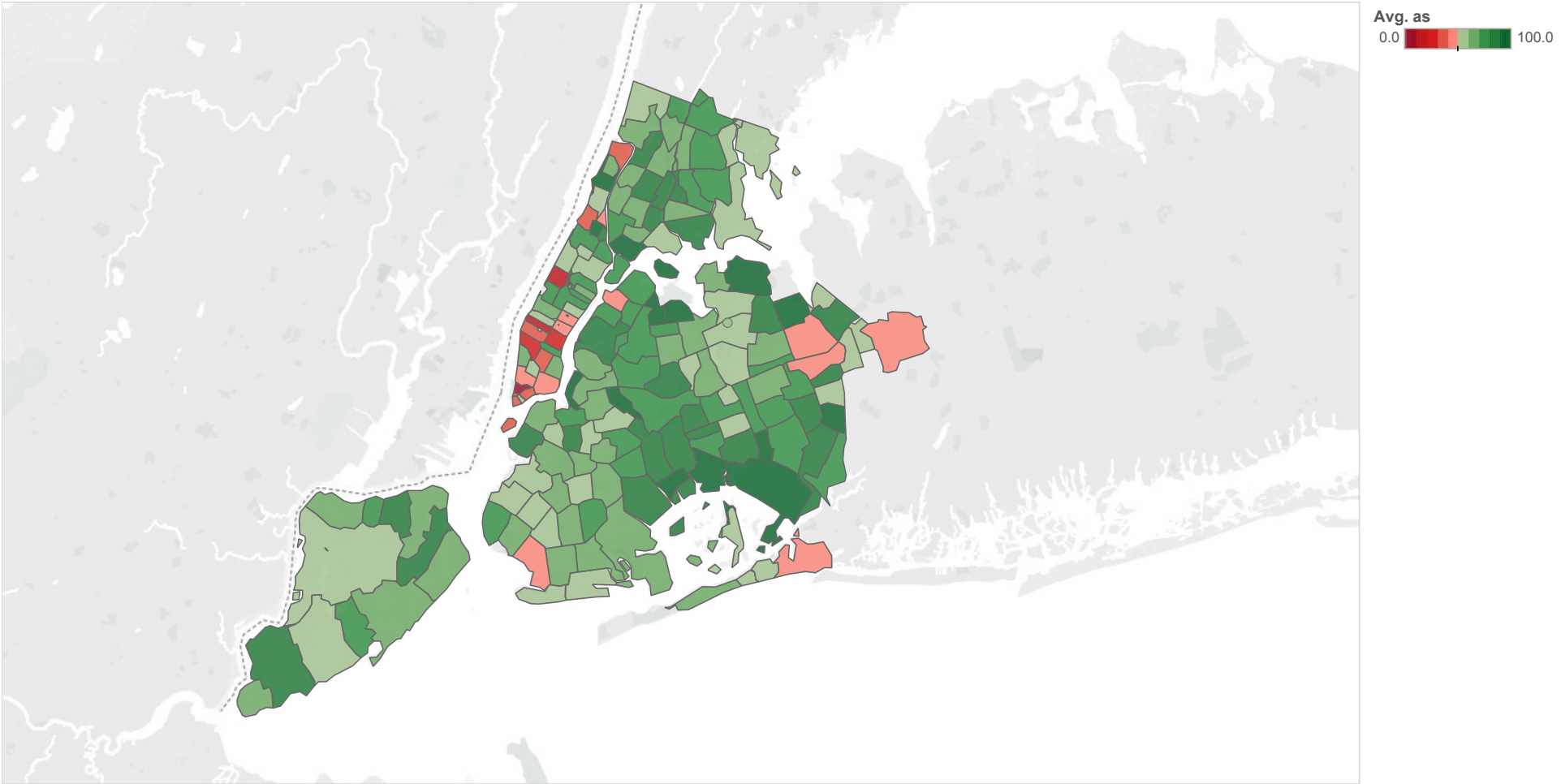
Food for Thought: It only costs \$1000 dollars to hide a C

Geop of Zipcodes and Average Score



Map based on Longitude (generated) and Latitude (generated). Color shows average of Avg. Details are shown for Zipcode. The data is filtered on Inspection Year, which keeps 2016.

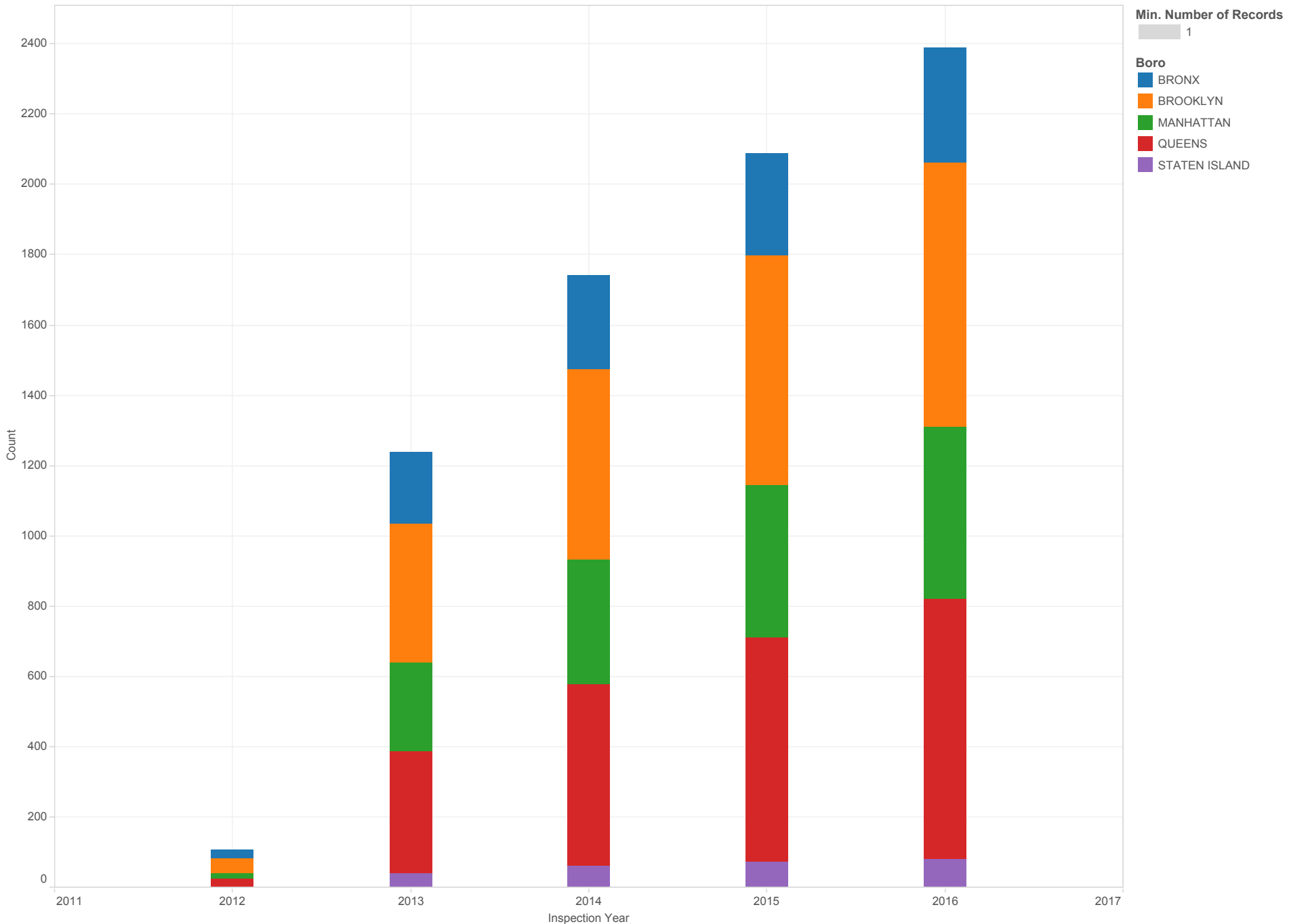
Geomap of Zip Codes and %A Grades



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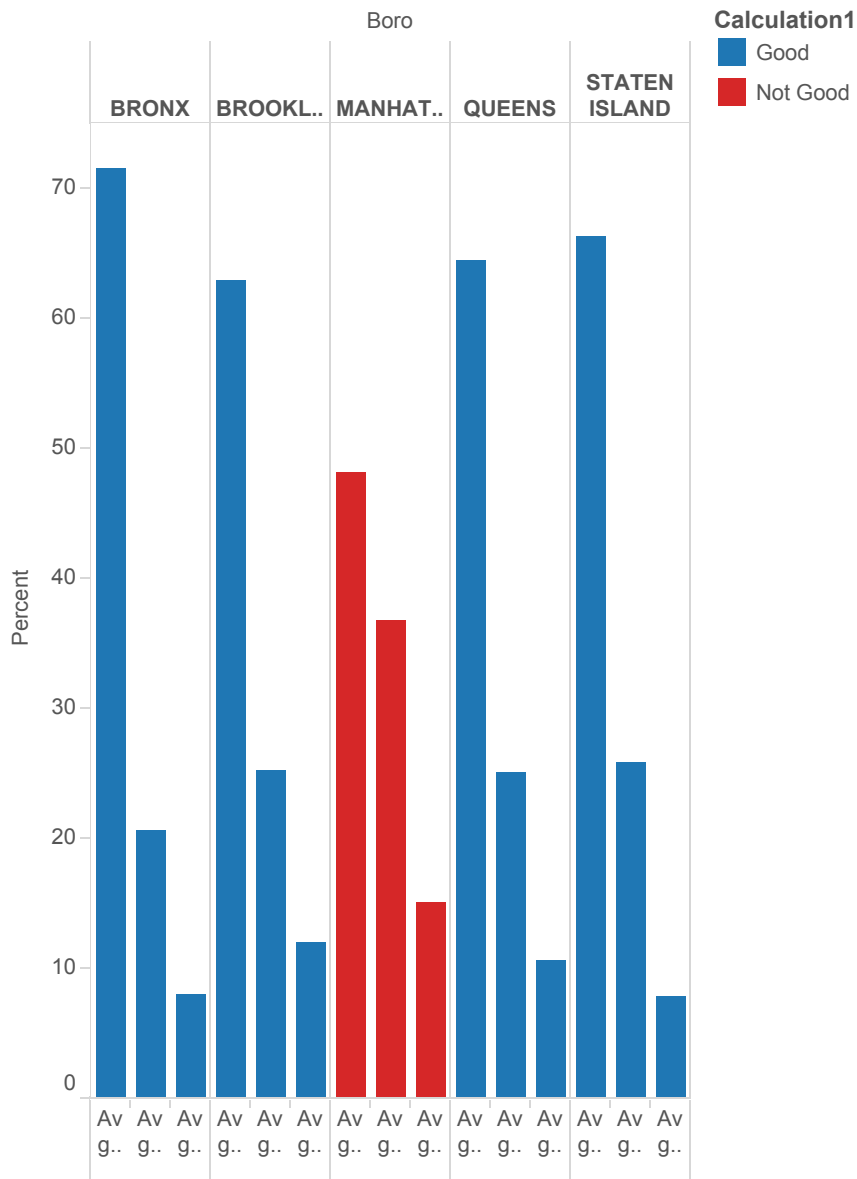


Restaurant Growth By Year and Boro



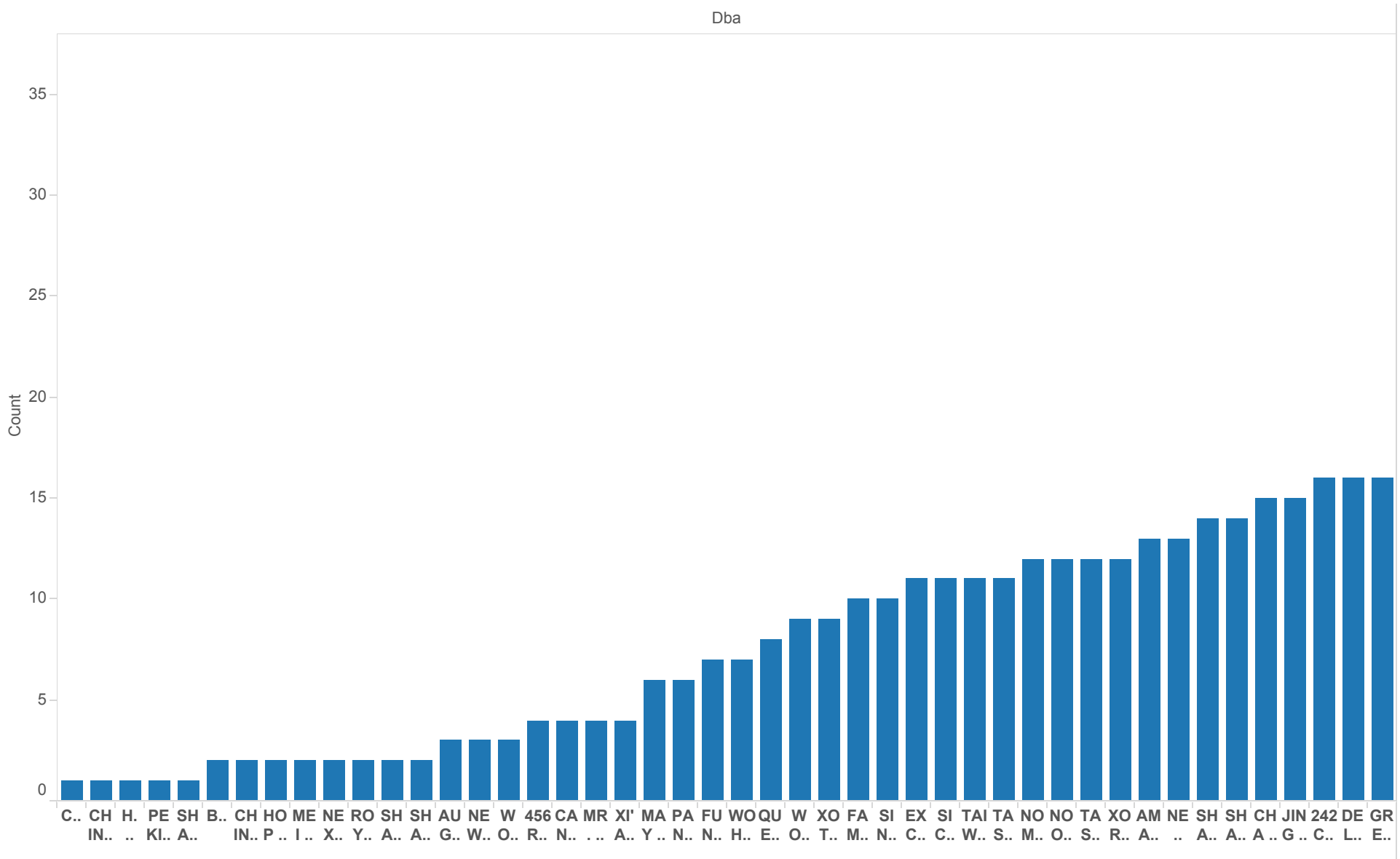
The plot of sum of Count for Inspection Year. Color shows details about Boro. Size shows minimum of Number of Records.

Distribution of Grades by Boro



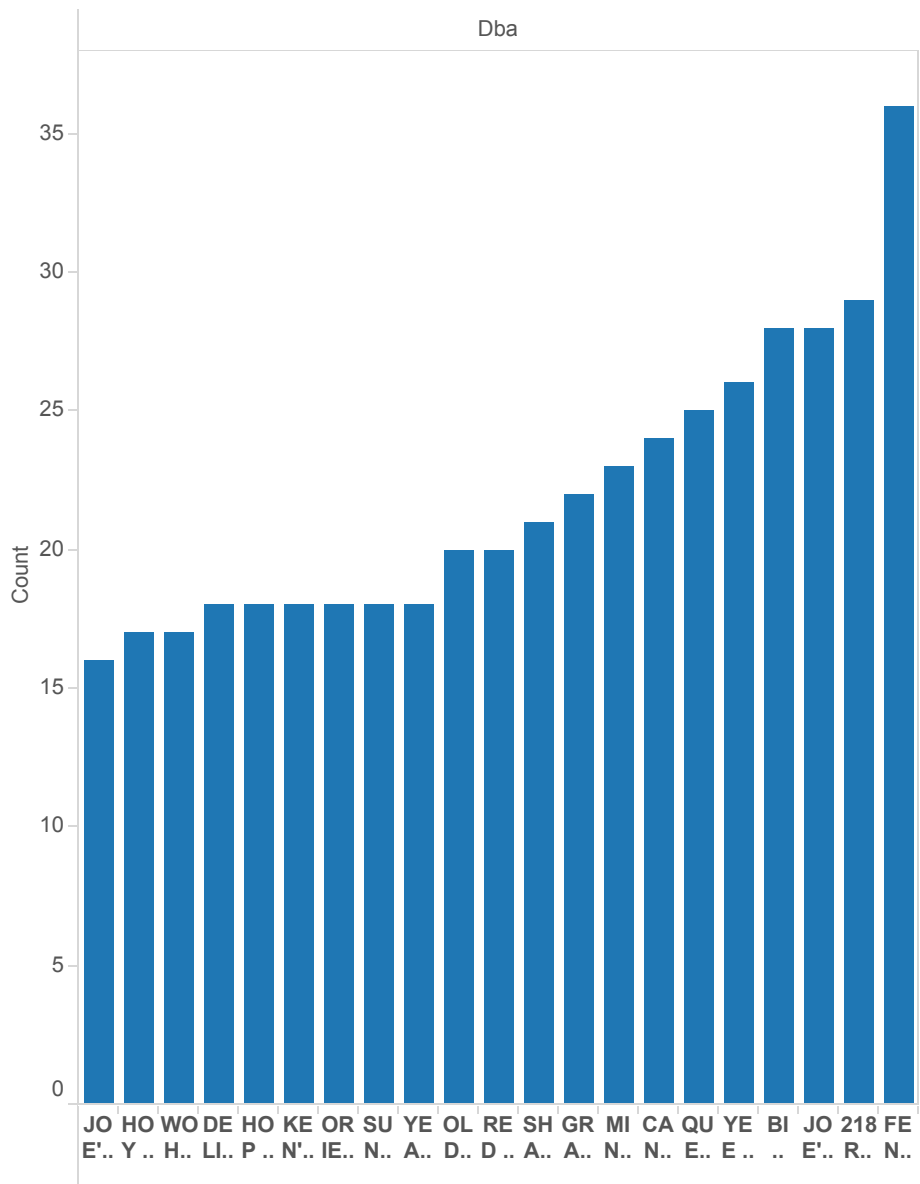
Avg. A, Avg. B and Avg. C for each Boro. Color shows details about Calculation1. The data is filtered on Inspection Year, which keeps 2016.

Violations count in Chinatown per Year by Restaurants



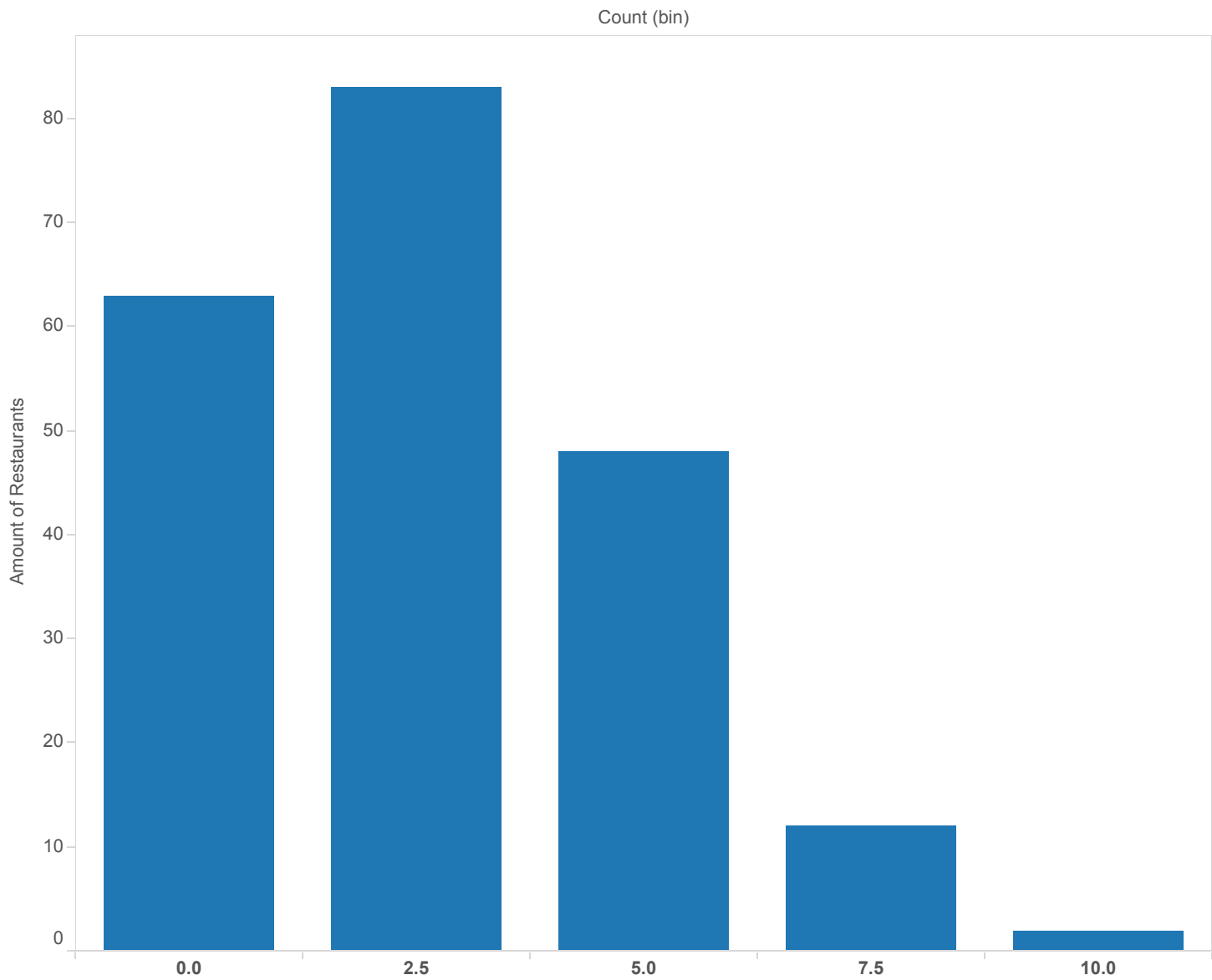
Sum of Count for each Db. The data is filtered on Inspection Year, which keeps 2015.

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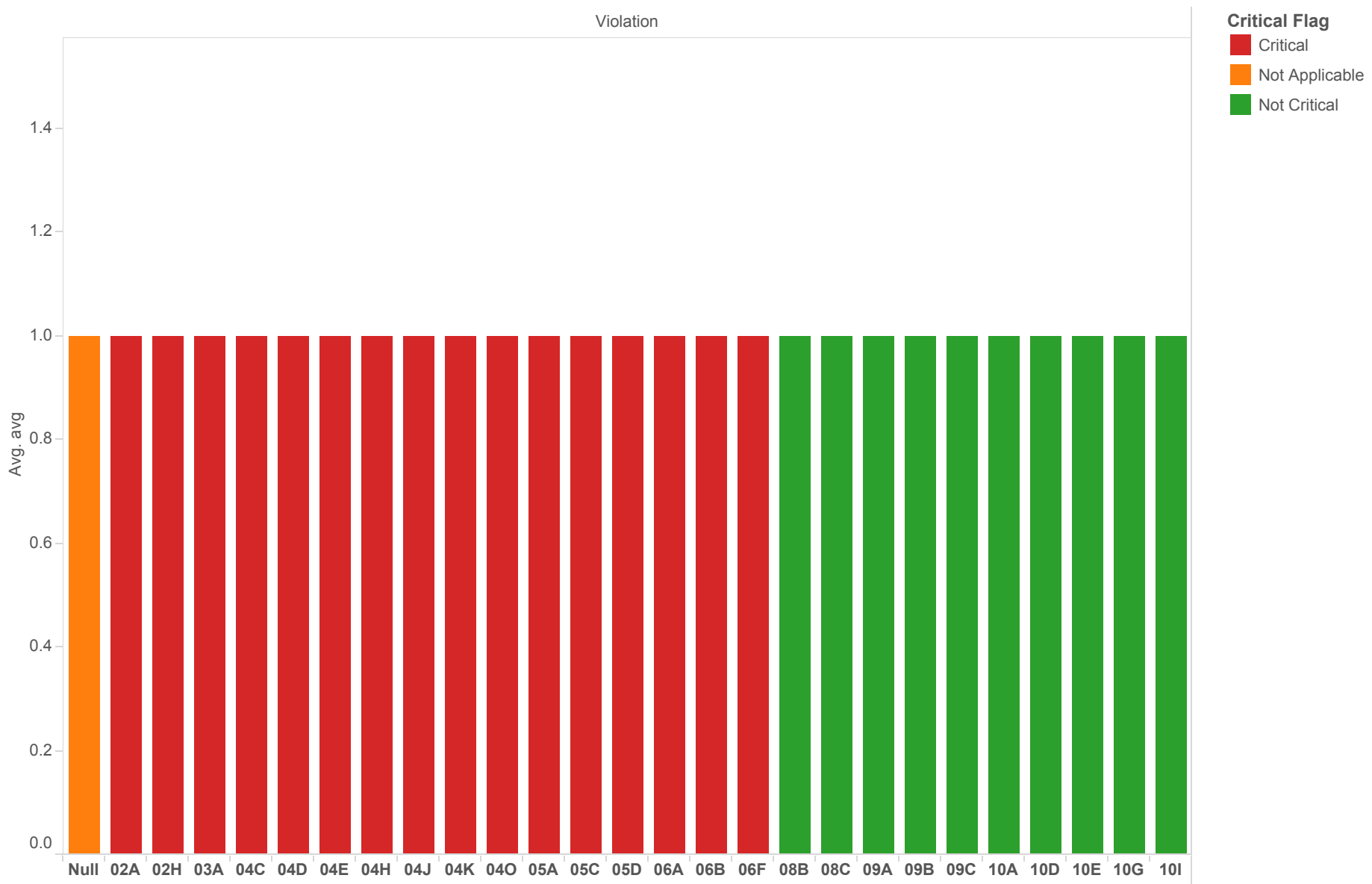
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# Frequency of Violations Committed by Restaurants in Chinatown



Count of Count for each Count (bin). The data is filtered on Inspection Year, which keeps 2015.

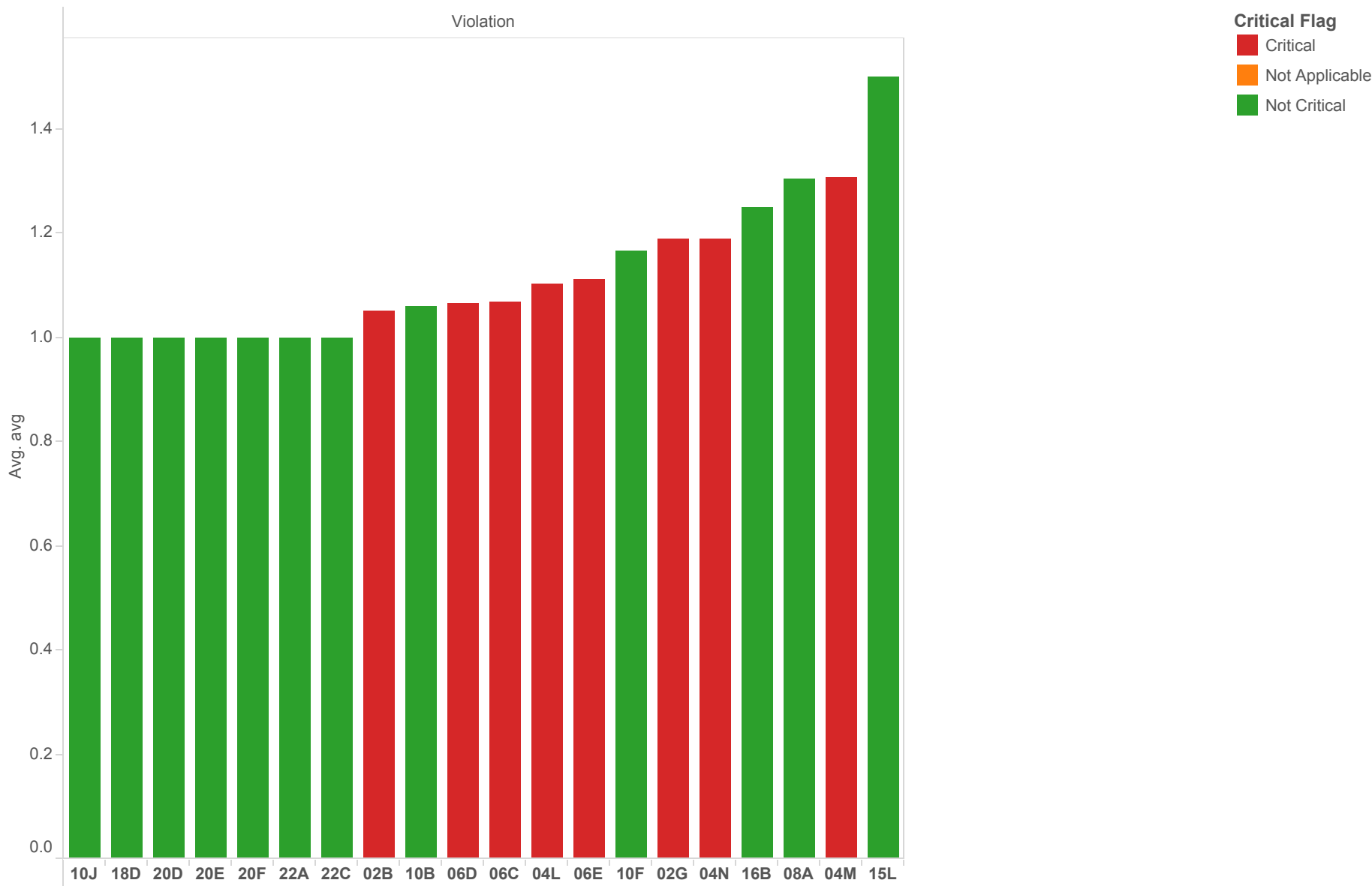
Violations Codes Committed on Average per Restaurant From 2013-2016



Average of avg for each Violation. Color shows details about Critical Flag. The data is filtered on inspection\_year, which keeps 2012.

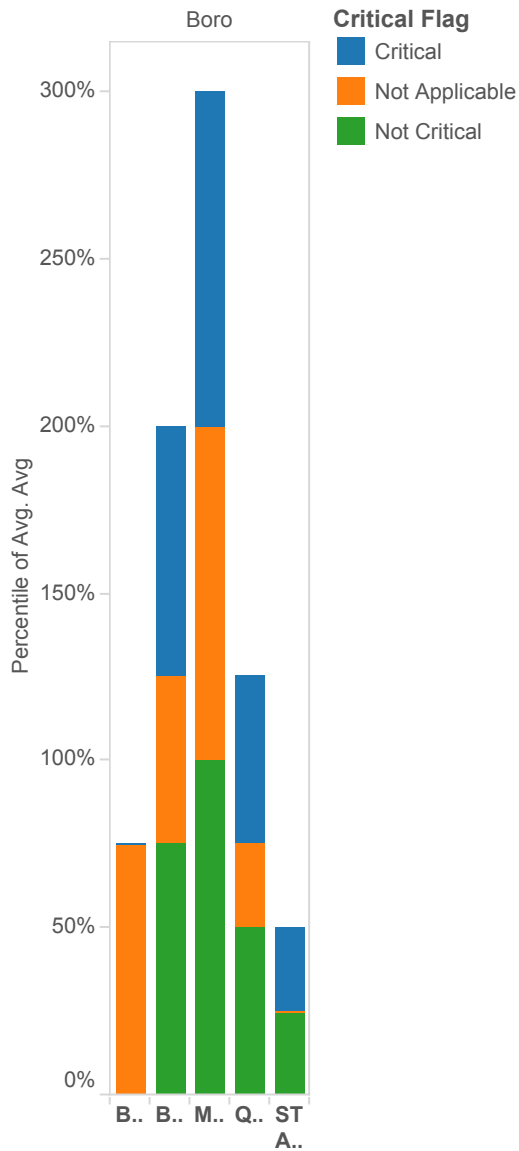


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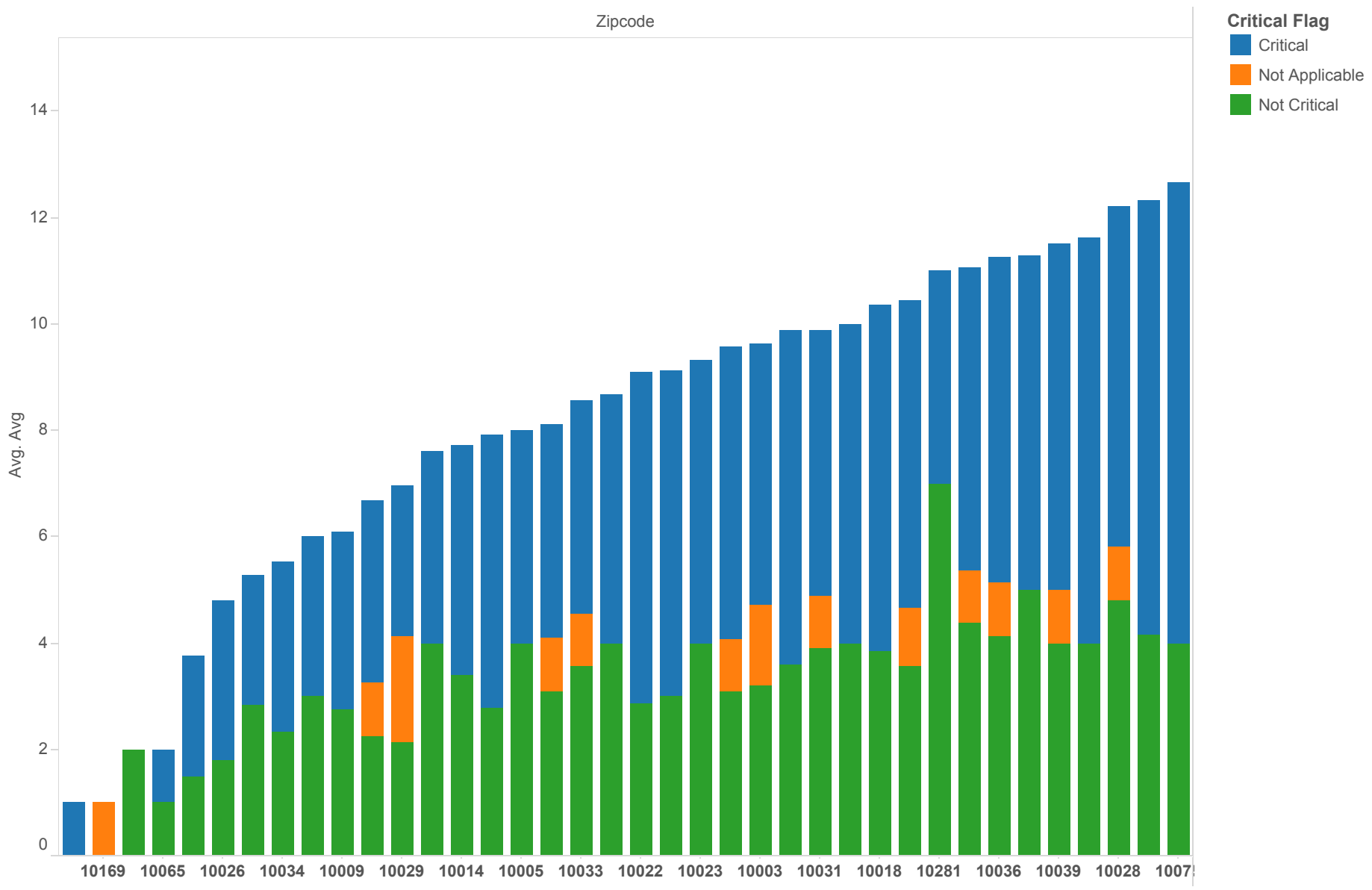


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Percentile of  
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# Average Non/Critical Violations Committed by Zipcode



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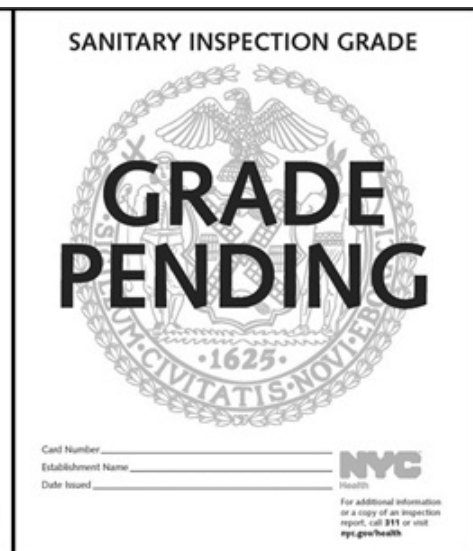
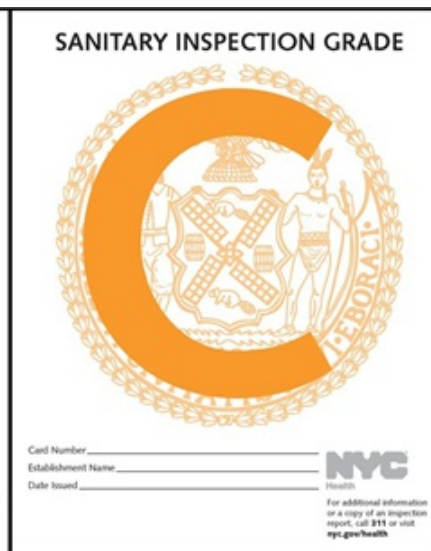
  

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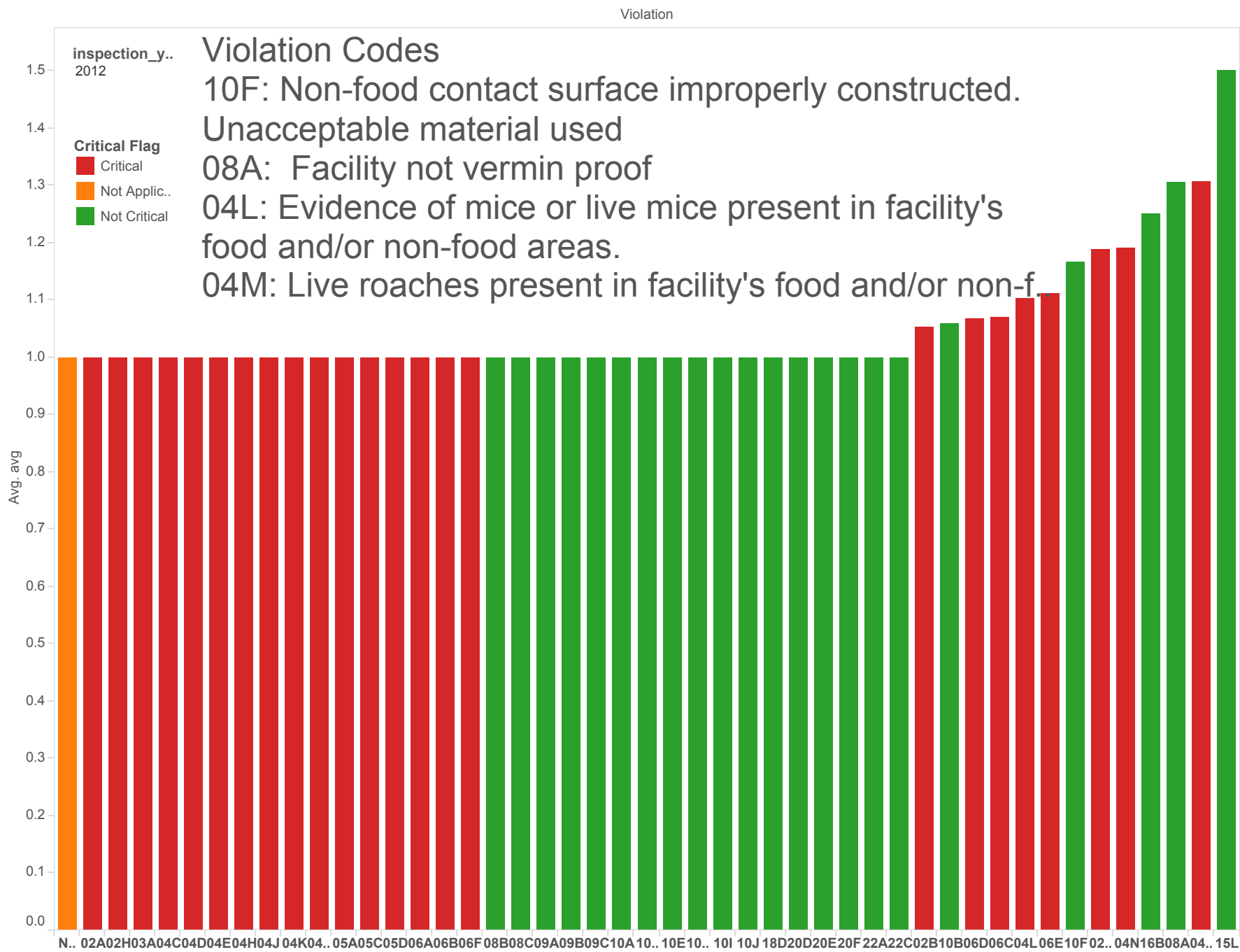
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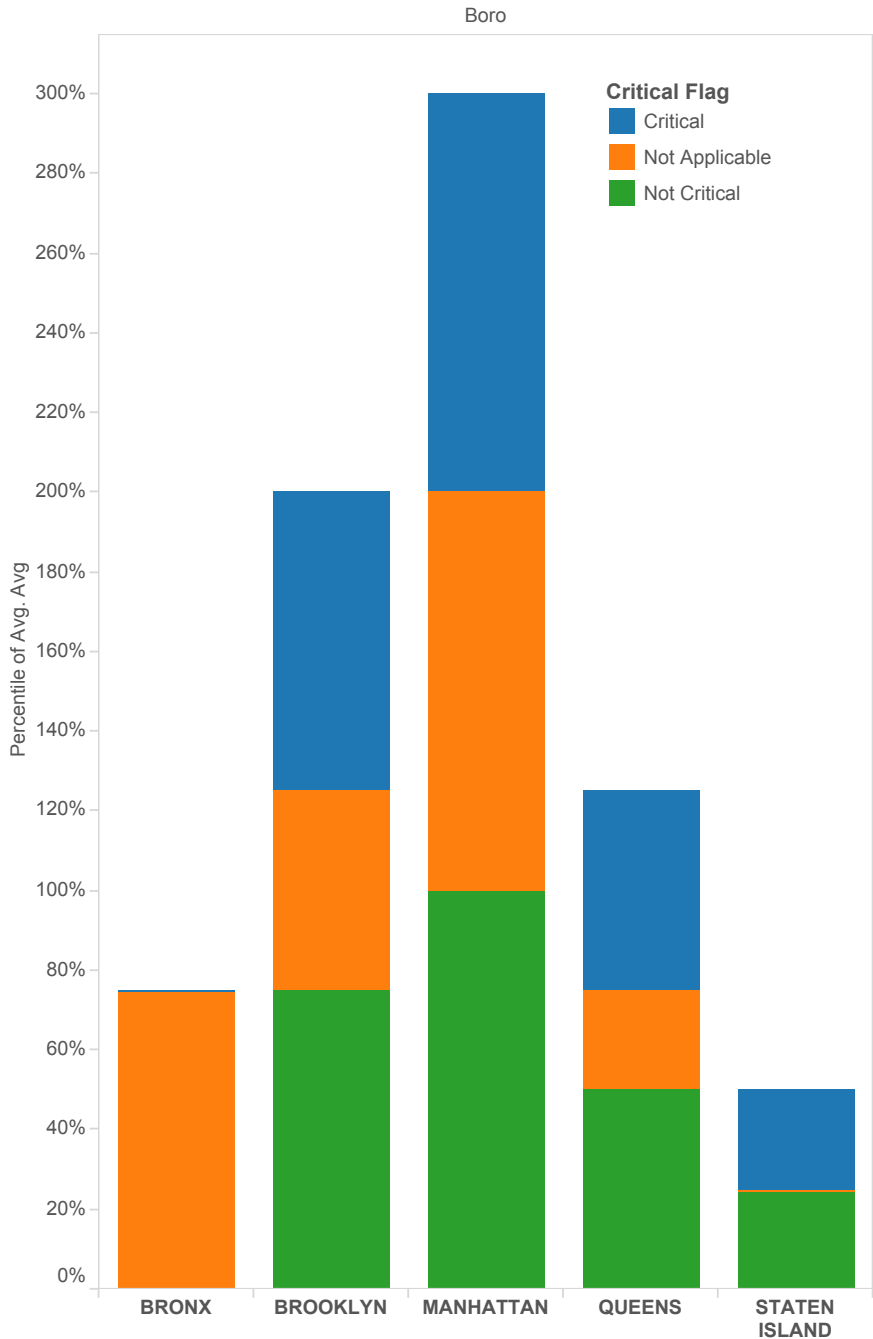


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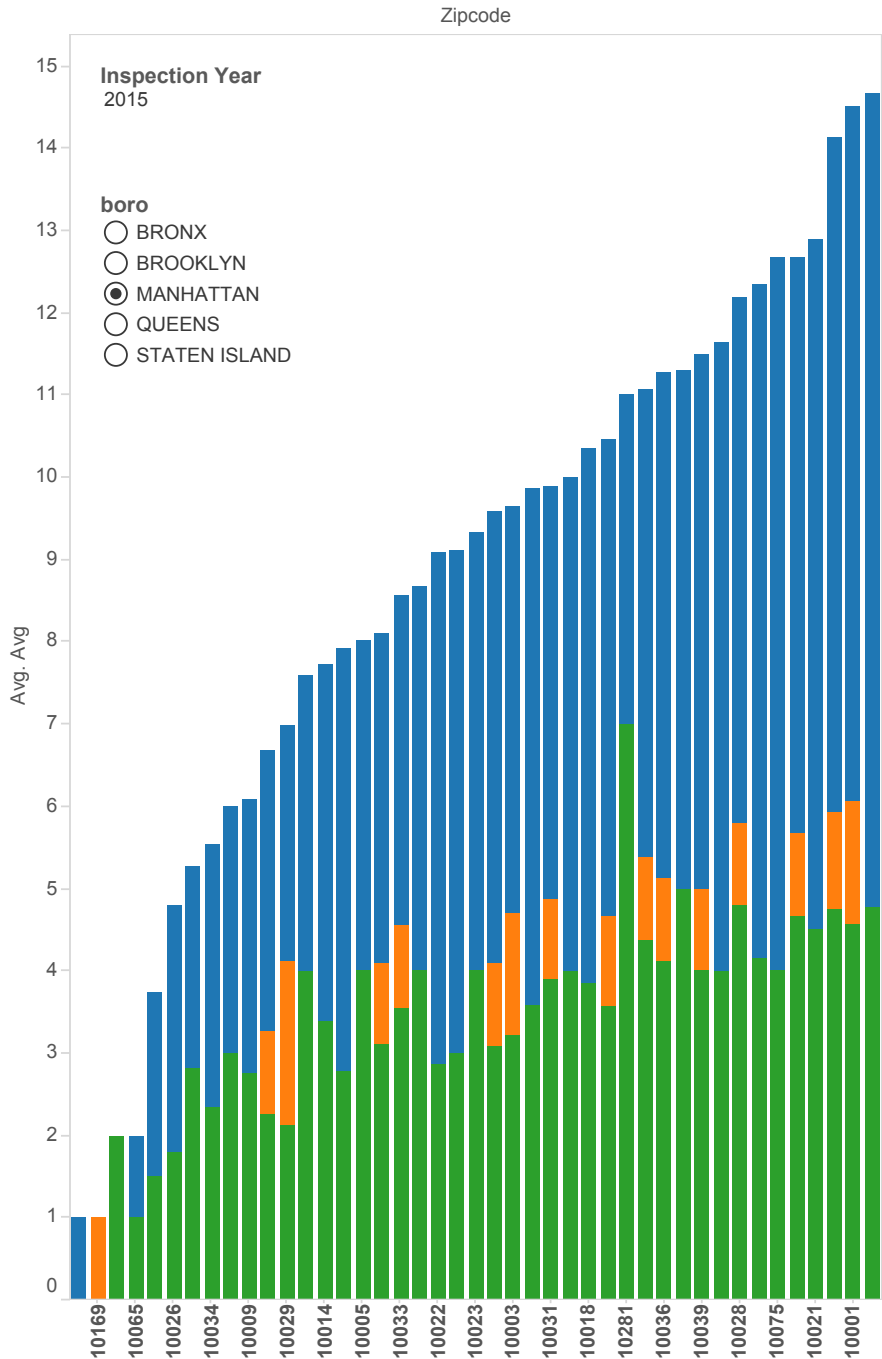
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