Memorandum

Re: Question of Gap in Coverage & Population Around 5 Craig Rd, Acton, MA
February 4, 2014
Town Hall, Acton, MA

Introduction

SBA Towers, LLC[1] has submitted population data and computer modeling data in support of an application to erect a cell tower at 5 Craig Rd, Acton, MA. The above mentioned data suggests that approximately 10,000 people in Acton, MA are affected by a 'gap in cell coverage' in the area surrounding the site in question (5 Craig Rd, Acton, MA).

Questions & Conflicting Data

The question of whether there is a 'gap in cell coverage' around 5 Craig Rd was discussed at the last town meeting. In the last meeting, the drive test conducted by the public as well as the marketing data shown to the public by AT&T (the cell phone company currently planning to partner with SBA Towers) showed no gap in coverage. Meanwhile, the applicant's computer modeling data suggests that such a gap does exist. The public has conducted another drive test to serve as further evidence. The findings of the second public drive test are presented below.

Based on the documents submitted to date, the applicant has not cited a source for its population data. To the public's knowledge, the U.S. Census Bureau is the most objective and reliable third party source available for population data. Thus, the Census is the source which is cited throughout this report. Until the applicant clarifies the source of its population data, its accuracy is in question.

Summary of Findings

There Is No Gap in Coverage in the 1 Mile Diameter of 5 Craig Rd

To act as corroborating evidence of the public's initial drive test on January 5, 2014 using an AT&T serviced cell phone (results of which can be seen here: http://www.youtube.com/watch?v=BuwoOP_f-jA), the public conducted a second drive test on January 21, 2014 with an AT&T serviced iphone. This second test includes a larger geographic area and records a call to a continuously playing audio source. The geographic area that was driven can be seen on the map in figure 4 below and the results can be viewed here: (youtube link forthcoming). To further demonstrate the degree of coverage in the area, the public conducted a separate drive test using a pay-as-you-go phone serviced by AT&T. This drive test was conducted on February 2, 2014 and included the immediate driving loop around the proposed cell tower location (from School Street to route 2 to Hosmer Street). This test also found no gap in coverage and had continuous audio playing on the pay-as-you-go phone for the duration of the test (youtube link also forthcoming).

[1] SBA Towers, LLC is referred to as 'the applicant' throughout this document.

Memorandum

Re: Question of Gap in Coverage & Population Around 5 Craig Rd, Acton, MA

February 4, 2014

Town Hall, Acton, MA

This second drive test showed no gaps in coverage (with three or more bars of service throughout) just as in the first test, and the call was not dropped at any point during the test.

The Affected Population in Acton Would Be Relatively Small (Estimated at 2,325 People or About 11% of the Total Population in Acton)

Contrary to the applicant's data of approximately 10,000 people, the U.S. Census Bureau recorded only 3,020 individuals residing within the approximate < 1 mile diameter of 5 Craig Rd in the town limits of Acton, MA as of the 2010 Census (See Figures 1 & 2 below).

This figure of 3,020 people may need to be adjusted given two variables that are unclear at this time: 1) the applicant has not made the affected geographic region clear, and 2) census data is reported via 'blocks,' which are misshapen and irregular geographies on the map that are not able to be broken down in further detail (these two variables are further explained in the appendix of this document). Thus, depending on the defined region of interest, some 'blocks' included in this figure may need to be added or subtracted. Nevertheless, the difference of 10,000 people and 3,020 people appears significant and worthy of further research and investigation.

Furthermore, the proportion of the population which is eligible for cell phone usage is likely smaller than the total population within a given area. For example, the youngest age groups are the least likely to be potential users of cell phones. Though the exact age groups that are potential customers are up for debate, the public selected the age group 15+ as the most likely potential cell phone users. For Acton as a whole (see Figure 3 below), this age group comprises 77% of the total population. If we apply this ratio to the approximately 3,020 total people surrounding 5 Craig Rd that would mean about 2,325 people are likely to be potential cell phone users.

Data

Figure 1. Population of Acton Neighborhoods Around 5 Craig Rd

Source: U.S. Census 2010, Interactive Map (www.census.gov/2010census/popmap/)

Geographic Region of Interest (See Map in Figure 2): South of Taylor Rd/Minot Ave/Concord Rd, East of Piper Rd, North of the Commuter Rail, & West of the Concord Line)

Census Block	Population (2010)	Proximity of Closest Resident to 5 Craig Rd	Proximity of Farthest Resident to 5 Craig Rd
4014	93	< .5 mile radius	< 1 mile radius
4013	112	< .5 mile radius	< 1 mile radius
2053	18	< .5 mile radius	< .5 mile radius
2052	1	< .5 mile radius	< .5 mile radius
2051	30	< .5 mile radius	< .5 mile radius

2050	17	< .5 mile radius	< .5 mile radius
2049	101	< .5 mile radius	< .5 mile radius
2043	7	< .5 mile radius	< .5 mile radius
2040	17	< .5 mile radius	< 1 mile radius
2038	19	< .5 mile radius	< 1 mile radius
2037	118	< .5 mile radius	< 1 mile radius
2035	32	< .5 mile radius	< 1 mile radius
2034	56	< .5 mile radius	< 1 mile radius
2033	29	< .5 mile radius	< 1 mile radius
2032	211	< .5 mile radius	< 1 mile radius
2031	6	< .5 mile radius	< 1 mile radius
1049	52	< 1 mile radius	< 1 mile radius
1047	107	< 1 mile radius	> 1 mile radius
1045	0	< 1 mile radius	< 1 mile radius
1044	0	< 1 mile radius	< 1 mile radius
1043	0	< 1 mile radius	< 1 mile radius
1041	28	< 1 mile radius	< 1 mile radius
1038	21	< 1 mile radius	< 1 mile radius
1036	8	< 1 mile radius	< 1 mile radius
1033	102	< .5 mile radius	< .5 mile radius
1031	97	< 1 mile radius	< 1 mile radius
1030	169	< .5 mile radius	< 1 mile radius
1029	35	< .5 mile radius	< .5 mile radius
1027	149	< .5 mile radius	< .5 mile radius
1026	0	< .5 mile radius	< .5 mile radius
1025	157	< .5 mile radius	< 1 mile radius
1024	38	< 1 mile radius	< 1 mile radius
1023	275	< 1 mile radius	< 1 mile radius
1022	44	< .5 mile radius	< .5 mile radius
1021	58	< .5 mile radius	< .5 mile radius
1020	460	< .5 mile radius	< 1 mile radius
1019	33	< 1 mile radius	< 1 mile radius
1018	6	< 1 mile radius	> 1 mile radius
1017	0	< 1 mile radius	< 1 mile radius
1016	27	< 1 mile radius	< 1 mile radius
1015	26	< 1 mile radius	< 1 mile radius
1014	35	< 1 mile radius	< 1 mile radius
1013	39	< 1 mile radius	< 1 mile radius
1012	143	< .5 mile radius	< 1 mile radius
1000	44	< .5 mile radius	< 1 mile radius

Memorandum

Re: Question of Gap in Coverage & Population Around 5 Craig Rd, Acton, MA

February 4, 2014

Town Hall, Acton, MA

TOTAL:	**3020**	**N/A**	**N/A**

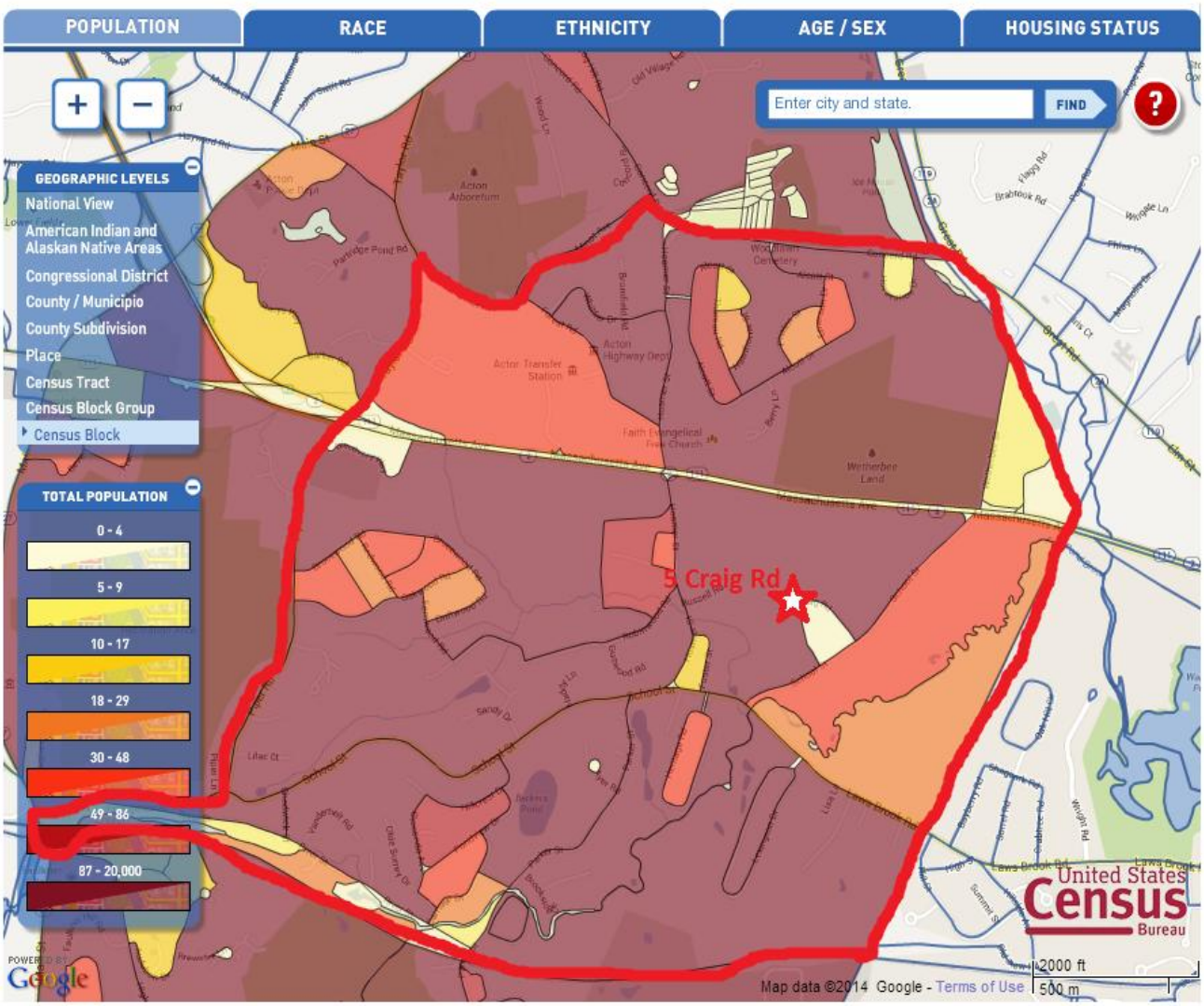
Memorandum

Re: Question of Gap in Coverage & Population Around 5 Craig Rd, Acton, MA

February 4, 2014

Town Hall, Acton, MA

Figure 2. Geographic Region of Interest Per Census Data or Approximately the <1 mile diameter Around Craig Rd. Within Acton Town Limits



Memorandum

Re: Question of Gap in Coverage & Population Around 5 Craig Rd, Acton, MA

February 4, 2014

Town Hall, Acton, MA

Figure 3. Total Population in Acton, MA Broken Down by Age Group

2010 Census data for ZIP Code 01720		
POPULATION BY AGE		
Total 2010 Census Population for ZIP Code 01720	21,361	100.0%
Under 5 years	1,112	5.2%
5 to 9 years	1,718	8.0%
10 to 14 years	2,057	9.6%
15 to 19 years	1,577	7.4%
20 to 24 years	695	3.3%
25 to 29 years	728	3.4%
30 to 34 years	841	3.9%
35 to 39 years	1,246	5.8%
40 to 44 years	1,952	9.1%
45 to 49 years	2,356	11.0%
50 to 54 years	1,960	9.2%
55 to 59 years	1,573	7.4%
60 to 64 years	1,190	5.6%
65 to 69 years	786	3.7%
70 to 74 years	538	2.5%
75 to 79 years	443	2.1%
80 to 84 years	289	1.4%
85 years and over	300	1.4%

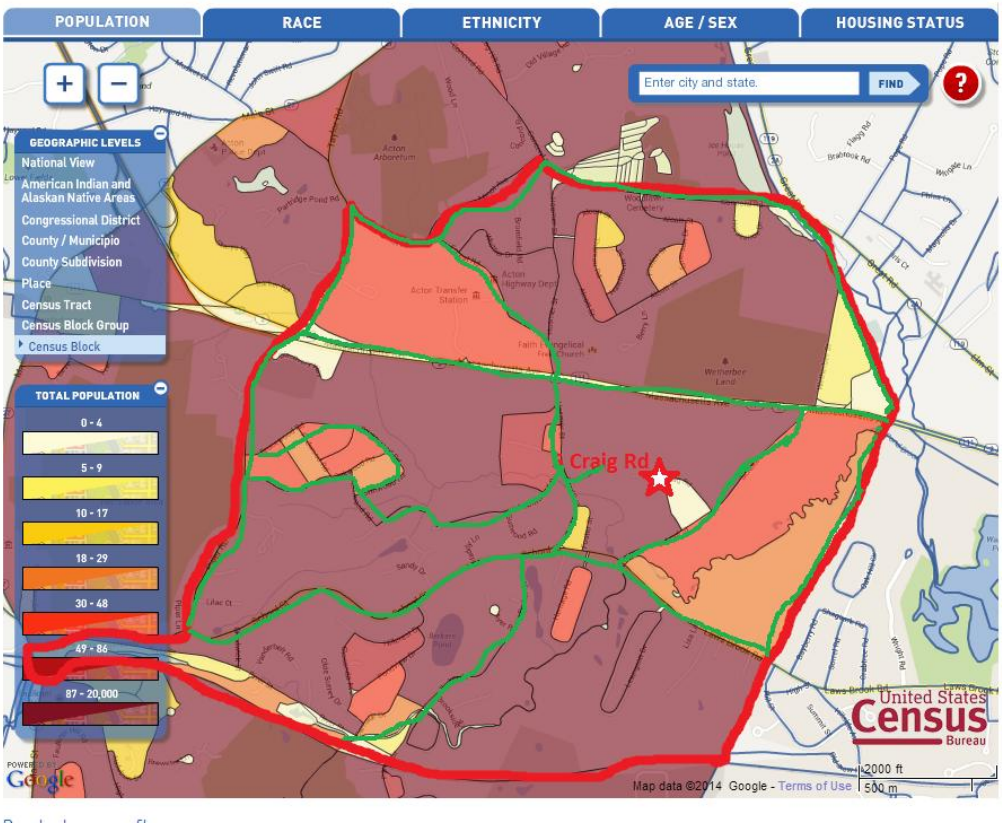
Memorandum

Re: Question of Gap in Coverage & Population Around 5 Craig Rd, Acton, MA

February 4, 2014

Town Hall, Acton, MA

Figure 4. Map of Drive Test Conducted in Acton (Roads in Green Were Part of the Test; Lines in Red Demarcate the Approximate 1 Mile Diameter Around 5 Craig Rd in Acton, MA)



Appendix

1) The applicant has not made the geographic region of interest clear based on the materials it has submitted thus far. For example, one of the maps submitted suggests a 1 mile diameter is of interest (which is why the data in this memo uses this region), but this map does not clearly state that this is the boundary that will be affected and to what extent other surrounding areas will or will not be affected. In short, the question remains: what will be the reach of the proposed cell tower and at what geographic point does its sphere of influence diminish?

2) The most detailed data available through the Census Bureau is at the 'block' level. Census 'blocks' are irregular in shape (see Figure 2 below), with geographic boundaries that vary in terms of size and shape on the map. Furthermore, the Census Bureau does not provide a database that is capable of capturing a population that transcends 'block' boundaries. In other words, one cannot type in an address (e.g., 5 Craig Rd, Acton, MA) and find out the exact population within a specific mile radius. Rather, one must look at the scale provided on the map

and judge which 'blocks' are included or excluded within an area of interest. Thus, based on the irregularities in 'blocks' on the map and #1 above, the area of interest may need to be adjusted.