

City of Milwaukee

Milwaukee Small Cell Wireless Network System



Summary Valuation Brief

Presented by:



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Dear Sharon,

Milwaukee Small Cell Wireless Network

It is with pleasure that we submit the Superlative Group's Phase I Valuation report for a partnership with the City of Milwaukee Small Cell Wireless network. On the basis of our site visits and the work undertaken during Phase I of our assignment, we believe we can create and manage a number of unique sales programs which could deliver significant additional revenue to the City of Milwaukee.

This report presents the findings from our site visits and Phase I Valuation process. I look forward to working with you to agree next steps as we move toward activation of our sales program.

Best wishes,

A handwritten signature in blue ink that reads "Kyle".

Kyle Canter
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1 Introduction: Wireless & Cellular – Small Cell Leases

1.1 Small-Cell Lease Agreement Introduction

This section of the MCPI Marketing Strategy identifies revenue generating activities available to the City of Milwaukee in the Wireless and Cellular Category in regards to Small Cell networks.

1.2 Small Cell Networks

Small Cells are operator-controlled, low-powered radio access points that operate in both the licensed wireless spectrum and unlicensed carrier-grade Wi-Fi. Small Cell networks are often used by wireless carriers to increase the 3G, 4G and Wi-Fi coverage within their network areas. By placing more-easily installed Small Cell technology on “street assets” such as lampposts, street signs, intersection cameras, wireless and cellular coverage can be greatly improved in areas where buildings can normally get in the way of a signal. With almost no new infrastructure investment required, providers can drastically improve the connectivity of their customers.

According to a recent Cisco study, global mobile data traffic will increase nearly 11-fold between 2013 and 2018. This means carriers urgently need to increase network capacity. They can do this by moving to 4G, improving spectrum efficiency, Wi-Fi offload, and so on. But nothing comes close to frequency reuse through increased numbers of cell sites using small cells – this can improve capacity by up to 1600x. In addition, small cells yield important benefits for the macro network, placing four small cells within one macro, not only delivers data offload of over 50 per cent, but also improves macro network performance by 315 per cent.¹

While Small Cells have a limited range – often between 250 and 500 feet – utilizing many small cells within a city allows for greater connectivity and a more efficient cellular network. While large Cell towers or “macro cells” can have ranges of up to a mile, they allow for gaps in coverage when the signal is blocked by buildings or geographical obstacles. Installing Small Cells in those areas with service gaps allows for more complete coverage. Cities around the world have begun to allow wireless carriers to install Small Cells for this very reason. For example, the city of San Francisco is allowing the installation of more than 400 Small Cell units over the next year in highly trafficked areas order to meet the demand of nearly 1 million expected visitors arriving for Super Bowl 50 in February, 2016. According to city officials, the LTE network speeds in locations near the Small Cells will be up to three times faster than those areas without the new units².

The City of Milwaukee has ongoing lease arrangements with a number of major wireless providers for its Cell Tower sites. **Section 4** of the Asset Inventory and Valuation details the revenue opportunities to these locations. For Small-Cell networks, however, the City has the opportunity to bundle its existing sites to one official provider. Typically, Small-Cell lease locations rent for a flat fee per site over a term of 20 total years. In addition, Small-Cell lessees typically incur a percentage of costs associated with any planning, permitting, site review and replacement of any existing equipment, including cell poles. In addition, the lessee would incur some costs for additional utilities brought to the site, as well as taxes.

¹ Smallcellforum.com

² Moon, Maria; “Verizon will speed up San Francisco data by installing ‘small cells’”; Engadget.com; February 21, 2015

2 Methodology Overview

2.1 Opportunity Identification

The scope of this market valuation covers leasing and partnership opportunities to the City of Milwaukee Small Cell Wireless Network System. The rights and benefits currently include flat-fee equipment and facility rental, as well as a percentage of costs associated with any planning, permitting, site review and replacement of any existing equipment, including cell poles. In addition, the lessee would incur some costs for additional utilities brought to the site, as well as taxes.

2.2 Quantitative Evaluation of Partnership

Financial modeling is used to assess the dollar value of commercial opportunities including facility and equipment leases. This enables The Superlative Group to build a profile of partnership value and assign a price to each benefit identified within any partnership.

A template financial model has been developed over time, which is refined to the specifics of each project. The findings of the quantitative evaluation are presented below. The quantitative evaluation involves consideration of contract term options and escalation assumptions. The Superlative Group template Partnership Agreement includes an annual escalation clause in line with the Consumer Price Index (CPI). After calculating the media value as described above, Superlative is able to build a profile of the Small Cell lessee partnership value.

2.3 Benchmarking

The Superlative Group maintains a database which provides detail of commercial terms and contract values. Proposed market values are compared against existing systems as part of the benchmarking exercise, in order to make a robust assessment of whether an impression-based valuation is appropriate.

3 Valuation

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3.1 Revenue Potential

This section will provide detail to revenue opportunities for Small-Cell network locations. According to industry research, Small-Cell sites typically rent for approximately \$50 per site. Due to the number of sites available within the City of Milwaukee, the Superlative Group believes that an official wireless partner should expect to pay no less than a range of \$60 - \$80 per site. Table 3.1.1 provides an overview of the revenue that the City could expect to receive over a 20-year term.

Figure 3.1.1

Initial Proposal				Agreed after Superlative Negotiations			
Year	Rate	# of sites	Annual Revenue	Year	Rate	# of sites	Annual Revenue
Year 1	\$ 50.00	51	\$ 30,600.00	Year 1	\$ 150.00	51	\$ 91,800.00
Year 2	\$ 50.00	51	\$ 30,600.00	Year 2	\$ 154.50	51	\$ 94,554.00
Year 3	\$ 50.00	51	\$ 30,600.00	Year 3	\$ 159.14	51	\$ 97,390.62
Year 4	\$ 50.00	51	\$ 30,600.00	Year 4	\$ 163.91	51	\$ 100,312.34
Year 5	\$ 50.00	51	\$ 30,600.00	Year 5	\$ 168.83	51	\$ 103,321.71
Year 6	\$ 50.00	51	\$ 30,600.00	Year 6	\$ 173.89	51	\$ 106,421.36
Year 7	\$ 50.00	51	\$ 30,600.00	Year 7	\$ 179.11	51	\$ 109,614.00
Year 8	\$ 50.00	51	\$ 30,600.00	Year 8	\$ 184.48	51	\$ 112,902.42
Year 9	\$ 50.00	51	\$ 30,600.00	Year 9	\$ 190.02	51	\$ 116,289.49
Year 10	\$ 50.00	51	\$ 30,600.00	Year 10	\$ 195.72	51	\$ 119,778.18
Year 11	\$ 50.00	51	\$ 30,600.00	Year 11	\$ 201.59	51	\$ 123,371.52
Year 12	\$ 50.00	51	\$ 30,600.00	Year 12	\$ 207.64	51	\$ 127,072.67
Year 13	\$ 50.00	51	\$ 30,600.00	Year 13	\$ 213.86	51	\$ 130,884.85
Year 14	\$ 50.00	51	\$ 30,600.00	Year 14	\$ 220.28	51	\$ 134,811.39
Year 15	\$ 50.00	51	\$ 30,600.00	Year 15	\$ 226.89	51	\$ 138,855.74
Year 16	\$ 50.00	51	\$ 30,600.00	Year 16	\$ 233.70	51	\$ 143,021.41
Year 17	\$ 50.00	51	\$ 30,600.00	Year 17	\$ 240.71	51	\$ 147,312.05
Year 18	\$ 50.00	51	\$ 30,600.00	Year 18	\$ 247.93	51	\$ 151,731.41
Year 19	\$ 50.00	51	\$ 30,600.00	Year 19	\$ 255.36	51	\$ 156,283.36
Year 20	\$ 50.00	51	\$ 30,600.00	Year 20	\$ 263.03	51	\$ 160,971.86
Year 21	\$ 50.00	51	\$ 30,600.00	Year 21	\$ 270.92	51	\$ 165,801.01
Year 22	\$ 50.00	51	\$ 30,600.00	Year 22	\$ 279.04	51	\$ 170,775.04
Year 23	\$ 50.00	51	\$ 30,600.00	Year 23	\$ 287.42	51	\$ 175,898.29
Year 24	\$ 50.00	51	\$ 30,600.00	Year 24	\$ 296.04	51	\$ 181,175.24
Year 25	\$ 50.00	51	\$ 30,600.00	Year 25	\$ 304.92	51	\$ 186,610.50
Total Cash Value			\$ 765,000.00	Total Cash Value			\$ 3,346,960.46
Poles to R ^e *Avg Cost of a Pole				Poles to F *Avg Cost of a Pole			
90		\$ 2,700		90		\$ 2,700	
Total Value In Kind			\$ 243,000.00	Total Value In Kind			\$ 243,000.00
Total Value Over Term			\$ 1,008,000.00	Total Value Over Term			\$ 3,589,960.46

*The cost of approved City of Milwaukee poles ranges between \$1,800 and \$3,600. Does **not** include cost of labor, which Verizon will also pay for.

Labor can be charged back to Verizon if City chooses to complete the installation, or Verizon will contract out the labor and complete the installation.

4 Conclusions

4.1 Conclusion and Next Steps

Initial review of the Small-Cell lease opportunity indicates that, with an annual escalator of 3 percent and in-kind equipment value provided by the lessee, a 20-year agreement could generate between \$2.5 million and \$3.8 million.

Next Steps

The Superlative Group will solicit proposals from interested 3rd party partners of the Milwaukee small-cell opportunity. The Superlative Group will assist the City with review of the financial and operational aspects of each proposal and make recommendations to Common Council regarding the proposed buyout program.

4.2 Prospective Partners

The most likely partners to be included in this category opportunity are Verizon Wireless and AT&T



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