



## Reston Citizens Association

June 24, 2013

The Honorable Sharon Bulova, Chairman  
Fairfax County Board of Supervisors  
12000 Government Center Parkway, Suite 530  
Fairfax, Virginia 22035

Dear Chairman Bulova,

Two months ago today, I wrote you a letter asking for an explanation of why the County is using an assumption of 300 gross square feet (GSF) per worker in its development planning for Reston office buildings (and others). In fact, this square footage per worker was raised in the Reston Master Plan Task Force to 300 GSF from 250 GSF in the course of the task force's work without explanation other than to keep the ratio of dwelling unit to office worker square footage at 4:1 as assumed dwelling unit size increased). The high square footage per office worker flies in the face of extensive evidence in the market place and academic research that the square footage requirement for office workers is falling substantially as a result of technological developments and management efforts to control costs, possibly to 100 SF per worker.

I have not yet received a reply to either that letter or the follow-up letter I sent you a month ago today. As I said in that follow-up letter, I understood why an answer might not be forthcoming within a one-month timeframe, but it is increasingly difficult to understand why I have not received a substantive response in two months. Certainly the County has a rationale for its assumption or it is willing to adjust its assumption downward in the face of undisputed empirical evidence that the size of office worker space is and will decline. It cannot be that difficult to explain why the County is using 300 GSF per office worker although it might be more challenging—technically and politically—to change that assumption to more realistic levels in light of its use in Tysons and planned use in Reston. Still, two months is more than enough time to accomplish either.

Over the past month, I have been exploring the technical aspects of this issue further. In particular, I have been trying to understand the relationship between a building's gross square footage—the basis of development planning—and the actual space leased and portion of that used by a building tenant. It is from the last factor—usable space—that one can generally calculate space per office worker. I have learned that understanding the areal relationship is not that easy. The complexity is detailed in the attached graphic reflecting changes in how the Building and Office Management Association (BOMA) divides out the different facets of office building space.

Nonetheless, as described in my attached brief look at “Usable vs. Leasable vs. Gross Square Footage in Large Office Buildings,” Dr. Norman Miller, University of San Diego, took a rather systematic look at the relationship among the key metrics of office space. This table summarizes the results of his findings with my minimal interpretation:

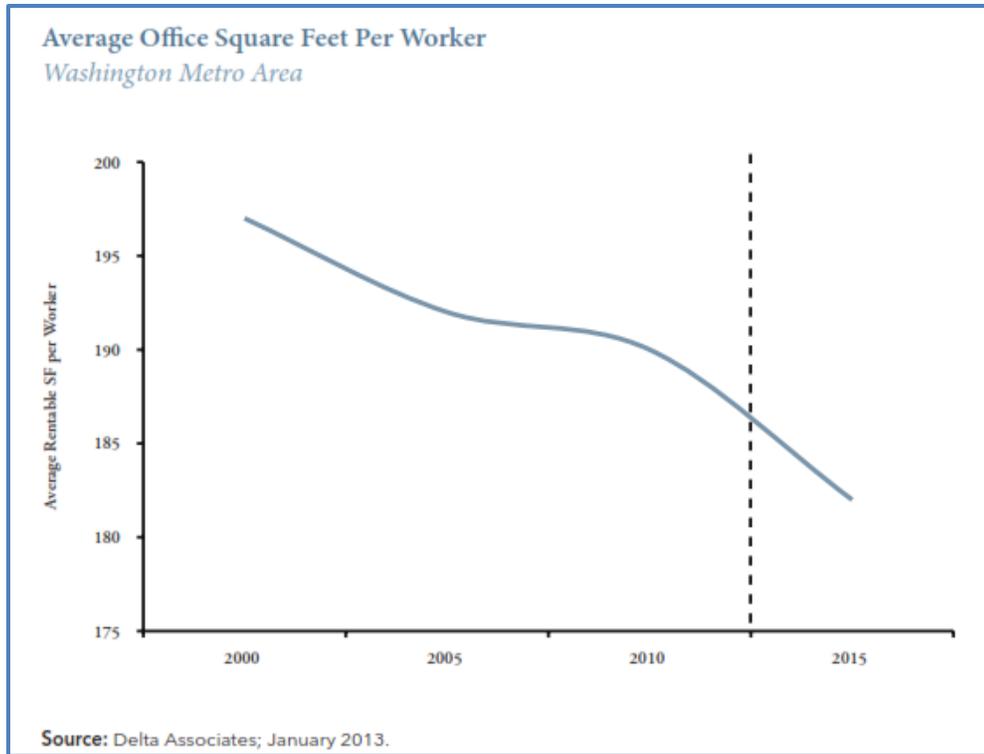
Type of Space	Share of GSF	Multiple of Usable Space
<b>Gross Square Feet</b>	100%	150%
“Interior Gross” Space	94%	140%
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All this excludes first-floor retail and the many levels of parking (not counted in GSF) that are expected in high-rise office development in urbanizing areas of the County, including Reston’s TOD areas. The bottom line is that, with office leasing activity now in existing buildings is less than 190 square feet per office worker in the Washington in both public and private buildings per [Trendlines twentythirteen, a January 2013 analysis by Delta Associates](#) , the gross square footage required is about 32% greater, or 250 GSF per employee. *It is certainly not 300 GSF as the Tysons and Reston task forces have used.* And, as the Delta report states, the square footage per worker is shrinking.

Evidence keeps accumulating that the trend toward smaller work spaces for office workers is continuing with implications for commercial construction and transportation. Here are some recent examples:

- Washington office space per worker is at 251 GSF now and declining. As noted above, Delta Associates’ analysis of the local office market points to the importance of densification in declining space per worker. It describes the situation as follows (p. 16):

***Densification:*** *Tenants (both private and public) are changing the way they utilize space. Changes in the nature of work and how tenants use office space are driving the reduction in the amount tenants lease. In 2000, the average SF leased per worker was approximately 197 SF. This average declined to approximately 190 SF by 2010. It is expected to decline to approximately 182 SF by 2015. Tenants are increasingly consolidating offices, leasing less space per worker due to hotel and telework programs, and right-sizing office space due to Staff reorganization and technological changes in the work place.*



- Two regional US Federal Reserve Banks on opposite coasts say densification is so.
  - [In the August 29, 2012, Federal Reserve Board “Beige Book”](#)—a compilation of regional Fed bank economic reports—The Boston Federal Reserve Bank (First District) reported: *“Across the District, a few contacts note that traditional downtown tenant types, such as law firms and large financial firms, continue to reduce square footage of office space per worker. These reductions are viewed as structural and suggest that future employment growth in professional services may lead to less absorption than previous norms of office space would imply.”*
  - [In its May 2013 “12<sup>th</sup> District Real Estate Conditions” report](#), the San Francisco Federal Reserve Bank reported: *“The office sector is also in the midst of a general trend toward densification. The focus on reducing office space per worker is most noticeable in finance and business services. Companies in these fields disproportionately occupy expensive space, in prime locations. Revenue pressures have many of these companies looking to trim occupancy expenses. Markets with concentrations in finance and business services could see weaker absorption rates if strong job growth does not offset these trends.”*
- Not only densification, but retrofitting focused on “space productivity.” Notes taken at the MIPIM 2013 Conference in San Diego, a meeting of international commercial real estate professionals, highlight the following concerning the downsizing of office worker space:
  - *“Mid-term: Office space per worker is declining due in large part to changes in productivity related technology but also a growing understanding by designers and principals about the behavioral patterns that stimulate productivity. The power of spontaneous interaction in fostering good ideas has true value and is increasingly addressed in office space design.”*
  - *“Long Term:*

- *Innovation will occur most vigorously in “connected” cities – those that embrace the connective power of information technologies to create smarter more responsive live-work-play environments.*
- *Retrofits of existing stock will become an increasingly important practice to master as space for new build declines in certain hubs and densification takes further root.*
- *Commercial real estate values will shift from a correlation to space-size over to space-productivity.”*

A move toward retrofitting existing office buildings will further diminish demand for new office space and yet will be required for a property owner to remain competitive. It will also mean we can expect more workers in existing office spaces with the attendant adverse implications for congestion, infrastructure expenses, the environment, and the jobs-housing balance.

- A boon to biking in WDC. [WashingtonCityPaper notes](#) that, with more workers using the same space, the trend toward greater biking in WDC may be accentuated:

*Rich Bradley, executive director of the Downtown Business Improvement District, spoke of "a happy coincidence of demographics, of changes in the workplace and changes in the workforce."*

*Bradley described a downsizing trend in office space per worker: Since federal workers have been found to spend only about 40 percent of their working time in the office, the city's workers have begun sharing space and requiring less of their own. That's more efficient, but it also means more people cramming into downtown D.C. The problem will only be compounded by the opening of the CityCenter offices and retail.*

*"Well," Bradley continued, "it also turns out that the workforce is more interested in riding bikes." And bikes take up a lot less space than cars, on the road and when parked.*

And while people living in WDC may turn to biking to commute, those in Fairfax County and other suburban counties will probably require better public transit (including Metrorail), more housing close to where they work (so they can work here to), and expanded highways and streets for those without immediate transit or biking access.

I have yet to find any authoritative source that suggests the planning for larger office space per worker is an appropriate planning model, certainly none that would point at the need for 300 GSF per office worker. Still, I await a County explanation for why that may be an appropriate assumption for office development planning.

Thank you for continuing to consider this query. I look forward to a reply soon.

Sincerely,  
 Terry Maynard  
 Board of Directors  
 Reston Citizens Association  
 Co-Chair, RCA Reston 2020 Committee

CC:

Fairfax County Board of Supervisors

Fairfax County Planning Commission

Gerald Gordon, President, Fairfax County Economic Development Authority (FCEDA)

Fred Selden, Chief, Department of Planning and Zoning (DPZ)

Heidi Merkel, DPZ Project Manager, Reston Master Plan Task Force

Patty Nicoson, Chairman, Reston Master Plan Task Force

The Reston Master Plan Task Force (via DPZ)

Fairfax County Federation of Civic Associations, Board of Directors

The Reston Citizens Association Board of Directors

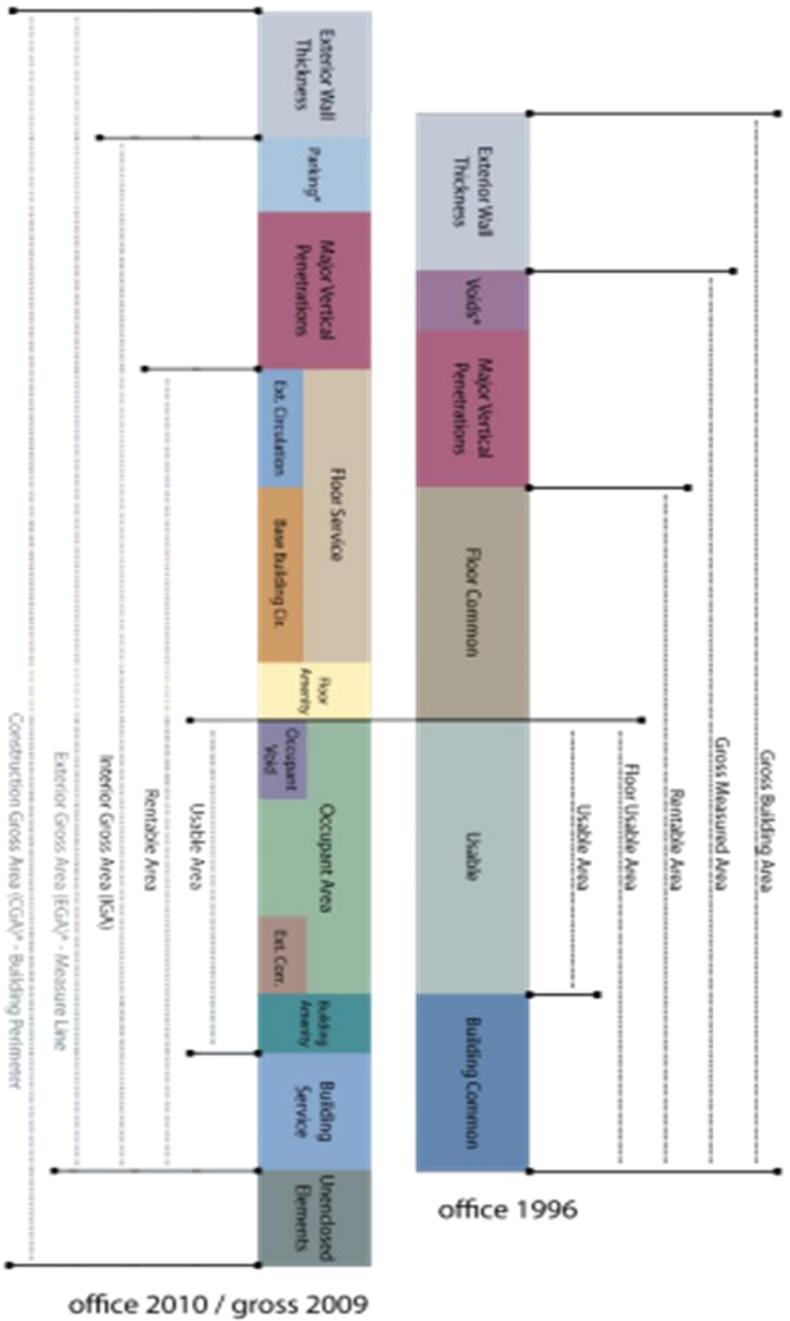
The RCA Reston 2020 Committee

Sally Horn, President, McLean Citizens Association

Tom Loftus, President, Equitable Housing Institute

BCC:

Local News Media



# boma standards diagram

office 1996 vs 2010 - gross area 2009

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www.buildingmeasurementstandards.com

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- Construction & Exterior Gross Area are defined in the "BOMA Gross Area of a Building Metrics of Measurement (BAMMS)" and are a part of the BOMA Office Standard.
- Exterior Circulation is an unendorsed multi-occupant corridor, new to the 2010 Standard and included in the ISA.
- Open to below area originally measured in 1996 Standard. Not measured in 2010 Standard.
- Parking located within the building envelope is included in the ISA (unlike 1996 Standard).



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## Usable vs. Leasable vs. Gross Square Footage in Large Office Buildings

Terry Maynard  
Reston Citizens Association  
June 14, 2013

Characterizing the difference among gross, leasable, and usable square footage is difficult, especially since spokespersons on the matter—whether lessors or lessees—rarely distinguish among the three measures of size. In particular, there is a tendency to not distinguish between leasable and usable square footage. Here is my layman’s interpretation of the difference among the three:

- Gross space or gross square feet (GSF) is the area defined by the outside dimensions of an office building.
- Leasable space is that portion of the gross space that an owner may lease to a tenant. It incorporates all the usable space and a proportional share of common areas, including floor common areas (hallways, restrooms, etc.) and building common areas (lobby, client fitness center, etc.). It generally excludes building vertical shafts (HVAC, elevator, emergency stairwells, etc.) extended through the building.
- Usable space is that portion of leasable space that a tenant may actually use for its employees and related amenities. *From this can be calculated “office space per worker.”*

In his rather definitive [March 5, 2013, research paper on current office space per worker trends](#), Dr. Norman Miller, University of San Diego, looked at the space relationship issue based on research done by the International Facilities Managers Association (IFMA) and BOMA. Here is how he describes the relationship among the square footage elements and results:

*In 2007 IFMA, the International Facility Management Association, in conjunction with BOMA (Building Owners Management Association International) agreed upon terms that are different from those traditionally used in commercial real estate by brokers, developers and leasing agents within NAR (National Association of Realtors), NAIOP, (Commercial Real Estate Development Association) or CCIM (Chartered Commercial Investment Member). IFMA with BOMA came up with the following terms:*

*“Interior Gross,” which is basically the same as “Gross Area” in commercial real estate terms.*

*“Plannable Gross”: Perimeter encroachments are subtracted from gross area. For example, window seals are subtracted or posts and beams that protrude into the interior.*

*“Plannable”: Vertical penetrations like elevators and service areas are subtracted. This is fairly akin to what commercial real estate people call the RBA (Rentable Building Area) although the commercial real estate people may not subtract all space intrusions.*

*“Assignable”: This is the net usable space where all interior encroachments including demising walls and partitions are subtracted. The net usable space for commercial real estate would generally not subtract non-supporting interior dividing walls.*

*In a survey conducted near the end of 2009 and tabulated and published in 2010, IFMA received 424 completed responses detailing space use for different types of organizations. Using the IFMA definitions of space, Plannable Gross or RBA (Note: Rentable Building Area, or **Leasable**) was 93.8% of the Interior Gross. So as of 2009, landlords lost on average 6.2% of the building from rentable space, because of vertical penetrations and encroachments. When we go from RBA to “Plannable,” also called “Usable Space,” tenants lose 16.2% off of the RBA based on the facilities managers’ calculations. When you go to “assignable” space adjusted for interior encroachments IFMA ends up at 75.6% of the RBA. This means that the tenant might consider themselves as having 250 square feet per worker (using the usable definition of IFMA) while a landlord might calculate this out at 298 square feet. This helps explain how the corporate facilities managers might have smaller figures per worker than real estate people who are relying on RBA definitions. (p. 3)*

The first and last sentences of this excerpt are particularly important in understanding why estimates of space per office worker vary so much. BOMA and other corporate real estate interests want to maximize the space available for lease and, by implication, the space per worker and use definitions and calculations that serve that purpose. On the other hand, IFMA, which represents “facility managers”—the people who actually have to maintain commercial real estate, have an interest in knowing with a reasonable degree of accuracy the actual dimensions of the spaces they must maintain so they can minimize operating costs. While both perspectives could be subject to distortion to suit their particular purposes, the risk of exaggeration from the real estate industry appear far greater than the risk of minimizing

So where does that leave us? Adding a generous six percent to the IFMA calculation of “Interior Gross” to account for an office building’s *outside walls* to complete the GSF number, my calculation of the relationship among the three key spatial elements in a slightly simplified form is as follows:

Type of Space	Share of GSF	Multiple of Usable Space
<b>Gross Square Feet</b>	100%	150%
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In a hypothetical example, an office building with 100,000 square feet of usable office square feet derives from about 132,000 leasable square feet and 149,000 gross square feet of office space. Conversely, a 200,000 GSF building would have 176,000 leasable square feet and 134,000 usable square feet of space. We would expect new high-rise office buildings to be even more space-efficient, maximizing the leasable and usable space to gross square footage ratio, as a means of increasing their profitability. And recent articles indicate that office building owners are increasingly retrofitting their spaces for a more open working environment—and a higher percentage of leasable space.