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**Introduction:** In Robert Goudie's presentation of the Town Center Sub-Committee Report, Robert stated that a 1:1 ratio of GFA residential to GFA non-residential was the desired goal for the Town Center, in part because this is the ratio of the Rosslyn-Ballston corridor today. To keep traffic theoretically the same as it is today, the ratio for the three Reston station areas combined should be 2.5:1, as derived from 1000 sq. ft. per household, 1.6 workers per household, and 250 sq. ft. per job ( $1000/(1.6*250) = 2.5$ )<sup>1</sup>.

The purpose of this report is to answer the question: If Reston Parkway has 1:1, what must the ratio be for the other two stations?

The analysis reported herein is based on the data in the GMU forecast<sup>2</sup>, which differed insignificantly from the data in GMU's preliminary report.

**Summary:** The answer to the question is: If Reston Town Center is built with a 1:1 ratio, even if all new construction at the other two stations is 100% residential, the goal of 2.5 will not be met. Even with new construction being 100% residential at the other stations, the ratio would only be 1.246 in 2050. Because the ratio is less than 2.5, traffic from outside of the Dulles Corridor will surely increase.

If the other stations have new construction that is 100% residential, traffic will increase by a ratio 1.40 on streets that carry only intra-Reston traffic. On roads such as Reston Parkway, which carries 33% through traffic, the increase will be by a factor of 1.27. If the GFA ratio is also 1:1 at other stations, the traffic ratios are 1.59 and 1.40, respectively. We must plan for these increases in traffic. For example, Reston Parkway will need another lane (current 2 lanes \* 1.27 = 2.54 lanes). Fairfax Parkway may also need another lane. Colts Neck will need another lane, because it carries intra-Reston traffic (current 2 lanes \* 1.40 = 2.8 lanes).

Gridded streets do not give the needed additional capacity. After much research on gridded streets, I found only one advantage: left turns can be eliminated. To realize this advantage, left turns must be forbidden, being replaced by three right turns and a crossing. The serious disadvantages are the loss of land and the multiplicity of intersections, with the potential for a multiplicity of traffic signals. Connectivity can be obtained with nice walkways. Full streets are not required. Traditional cities had many store fronts along the gridded streets, with customers coming as weather permits. Current retailers form more compact clusters in air-conditioned malls, thereby attracting more customers.

Of course, we can always hypothesize that old and new Restonians who now drive will walk, ride bicycles, and ride buses so that there is room on the road for outside commuters. Absent some sort of justifying marketing analysis, complete with a cost and revenue analysis (i.e., a business plan), we should probably not use such an hypothesis.

**Discussion:** First, we ask, "What happened in the Ballston-Rosslyn corridor?"

Over the past 20 years, new construction in the Ballston-Rosslyn corridor, which consists of 49% of what is currently standing, has averaged 1.67 GFA of residential to 1.0 GFA of non-residential. This high ratio has

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<sup>1</sup> If John Carter's parameters are used, the ratio is 2.91; if GMU's, 2.49.

<sup>2</sup> Lisa Sturtevant and John McClain: Forecasts for the Reston/Dulles Rail Corridor and Route 28 Corridor 2010 to 2050. George Mason University Center for Regional Analysis (July 26, 2010)

brought the existing as-built ratio to approximately 1.0. Averaging 1.67 has reduced traffic in the corridor substantially, compared to 1970, when the GFA as-built ratio was only 0.30.

Arlington’s Bob Brosnan presented to the Reston Task Force on July 8, 2010, some key concepts to the successful development of the Ballston-Rosslyn corridor, among them was the way density changes were made. Although the Comprehensive Plan indicated high densities, re-zoning for high densities was done when individual project proposals were approved. (See, for example, Slide 24 of the presentation.) Bob also stated that residential buildings had to be built prior to or simultaneously with commercial so that the GFA ratio for new construction was kept nearly constant. By-right values are set by zoning, not by the Comprehensive Plan.

Because developers usually prefer commercial development to residential, the Arlington Comprehensive Plan softens the requirement by allowing larger FARs for residential than for commercial<sup>3</sup> (e.g., 3.8 vs 4.8).

Next, we ask, “What is the basis for the numbers presented in the Summary?” The following table shows the computations for the case in which 100% of the GFA is residential at the Herndon-Monroe and Wiehle stations. The values in the second column are based on the GMU parameters; in the third, the John Carter parameters.

<b>Increase in traffic</b>		
<i>Parameters</i>	GMU parameters	Carter parameters
GFA residential/GFA non-residential	1.246	1.285
GFA residential per worker	935	781
GFA non-residential per worker	376	269
<i>Current values in the DTR corridor</i>		
Fraction of traffic currently driving through	0.33	0.33
Jobs in the corridor	77200	77200
Local workers, living in corridor	5200	5200
External workers, living outside corridor	72000	72000
Through traffic if in SOV	35463	35463
<i>Increases in the DTR corridor</i>		
Increase in jobs	57200	57200
Increase in GFA non-residential	21,487,002	15,360,722
Increase in GFA residential	26,769,412	19,733,716
Increase in local workers	28644	25259
Increase in external workers	28556	31941
<i>Ratio of new traffic to current traffic</i>		
Roads not currently carrying thru traffic	1.40	1.44
Roads carrying thru traffic	1.27	1.30

<sup>3</sup> [http://www.arlingtonva.us/departments/CPHD/planning/zoning/pdfs/Ordinance\\_Section25b.pdf](http://www.arlingtonva.us/departments/CPHD/planning/zoning/pdfs/Ordinance_Section25b.pdf), Pg 2