

## Preliminary Marshall Build Out Analysis

June, 2008

### Background:

A “build-out analysis” is an estimate of residential units and total square footage of commercial and industrial space that would be generated by a land use plan. The adopted Marshall Service District Plan Update (2003) contains the calculations and assumptions used for its build-out analysis. There is a summary of the analysis on page 20. The current Marshall Service District Land Use Plan estimates that once Marshall is built-out, it will contain approximately 2,574 residential units with 6,200 residents, a total of 1,700,000 square feet of commercial space, and a total of 1,190,000 square feet of industrial space.

The Marshall Service District Planning Committee requested that staff provide an overview of the existing Marshall build-out figures so that new proposals to the Plan could be studied in context. For reference, the acreages for each land use designation within the 2003 Marshall Service District Plan are listed in **Attachment A** and the acreage calculations for each zoning classification are listed in **Attachment B**.

### Key Points:

1. The residential build-out analysis for the 2003 Plan, based on land use designations, is 2,574 dwelling units. The existing zoning would permit 2,781 dwelling units.
2. The 2003 Plan estimates the total floor space that could be built under existing zoning regulations in commercially and industrially designated areas. Square footages were calculated with Floor Area Ratios (FARs) ranging from .18 to .25 percentage of the land area.
3. The 2003 Plan designates 168 acres of land as Mixed Use. The build-out figure included 300 projected residential units in the 99 acre Mixed-Use area along Main Street at an average of 3 dwelling units per acre.

### Changes in the Land Use Plan since 2003:

There have been two Comprehensive Plan Amendments in the Marshall Service District since 2003. The first amendment altered the western boundary and changed the designations along that boundary, resulting in the subtraction of approximately 31 acres of Low-Density designated land from the build-out calculations. The Mills Amendment and rezoning changed a 1.78-acre R-4 zoned parcel with a Low Density residential designation to C-2 zoning. Although the Mills parcel was designated Low-Density, there was no density assigned to this area in the build-out calculations. These two Plan Amendments reduced the residential build-out by approximately 62 units. (Net increase in planned units: - 62.)

### Proposed Changes in the Land Use Plan and Build-Out Calculations (2008):

Since meeting in early 2008, the Marshall Service District Planning Committee has generally agreed on a number of changes in the current Land Use Plan. These tentative changes and impacts to existing build-out calculations are outlined below:

1. Industrial Areas: The Marshall Service District Planning Committee has a draft recommendation under review that proposes industrial development instead of residential development in some of the eastern portion of the plan area. This would result in approximately 280 single family units subtracted from the total number of planned units.<sup>1</sup> (Net increase in planned units: - 258.)
2. Western Park Site: Approximately 27 acres on the Western end of Marshall could be changed from School Site to Low Density Residential. The existing park site could be changed to a school site. (Net increase in planned units: + 54.)
3. Form Based Code: Milt Herd's January, 2008 Form Based Code build-out figures assume complete new construction and full redevelopment on each site in the historic core area of Main Street:

The 9.2 acre Mixed Use Area along Main Street between Frost Street and Winchester Road currently contains approximately 166,000 total square feet of existing commercial floor space within the 400,000 square foot area, resulting in a 0.4 FAR. The 8.8 acre Mixed-Use Area along Main Street between the entrance to Marshall Manor and the Rescue Squad has approximately 56,000 total square feet of existing commercial floor space within the 385,000 square foot area, resulting in a .15 FAR.

A Form-Based Code that allows up to three stories and 80% lot coverage could potentially produce a total of 560,000 sq. feet of space (FAR .7) in these two areas, if all the parking is on site, and up to 1,920,000 total sq. feet of space (FAR 2.4) if the parking is off-site. (Since property owners committing to providing off-site parking areas and community storm water management areas will likely seek to retain existing zoning rights, there may not be a net reduction in density in the service district.)

(Net Increase: If 30 % of the Mixed-Use space in this 18 acre central area of Main Street is developed with 1,000 square foot residential units, the Form Based Code could produce 168 units at the low range and 576 units at the high range in this 18 acre area. The Mixed Use area is approximately nine times the size of the 18-acre core area and could conceivably result in 1,500 more residential units at the low range, and 5,184 more units at the high end of the range.)

**However,** local experience with mixed-use projects has shown that a 0.3 FAR is more realistic. Under a 0.3 FAR scenario, the Form Based Code would produce

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<sup>1</sup> These proposals would result in eliminating approximately 180 units of planned residential density on 90 acres in Section 29 of Figure 8, calculated at 2.0 du/acre. Similarly, 78 units would be re-planned to industrial development in Section 24 of Figure 8, calculated at 1.2 du/acre.

120,000 square feet of floor space in the 9.2 acre area of Main Street, and 115,500 of square feet of floor space in the 8.8 acre area, totaling 235,500 square feet of floor space in the 18 acre area. If 30% of the Mixed-Use space in this 18 acre central area of Main Street is developed with 1,000 square foot residential units, the Form Based Code could produce 70 units. If applied across all 168 acres of Mixed Use designated land, there could be up to 630 more residential units.

4. Marshall Gateway: The proposed Marshall Gateway Special District Rezoning and Comprehensive Plan Amendment for a mixed use development could potentially increase the number of planned and zoned residential units. The 2003 Plan build-out figures envision this as a commercially developed area so there are no residential units factored in the build-out calculation. Existing zoning would permit up to 4 units per acre on 25 acres. The proposed rezoning would allow up to 6 units per acre. (Net increase in zoned units: + 50 ; Net increase in planned units: +150.)

5. Residential Areas: The committee has discussed increasing the residential density in all of Marshall to 5.5 dwelling units per acre. The existing 2003 Plan identifies 752 acres of land for Low Density Residential at an average of 2 dwelling units per acre, totaling approximately 1,504 projected dwelling units. The build-out figure would increase to 4,136 units if these areas are re-planned at 5.5 dwelling units per acre. (Net increase in planned units: + 2,632.)

#### Utilities Issues:

The Preliminary Utilities Report, prepared by Community Development in March, 2008 indicates that the Marshall Treatment plant will be capped at .640 mgd.

The Fauquier County Water and Sewer Authority (WSA) and Department of Community Development have historically used a sewer generation rate of 260-300 gallons per day (gpd) for each single family dwelling, and 1,000 gpd for each acre of both commercial and industrial zoned land. WSA utilizes the same generation rate for single-family attached units (town homes), but a lower generation rate for apartments at 130-150 gpd.

Under existing circumstances with existing sewer generation rates, the planned and zoned build-out would exceed the .640 mgd. cap that is due to be in place by 2010. The Plains sewer demand will also need to be factored into the total demand.

#### Schools:

Fauquier County School Board estimates 1.1 students from each residential dwelling on the average, resulting in the need for several more schools to service the Marshall Service District population. The existing schools service students from the town and the surrounding rural neighborhoods.

ATTACHMENT A: Marshall Land Use ( 2003)

	AREA	
ALPHA		43560
Community Center	<b>450991.9688</b>	10.3533
Future School Site	<b>997304.8750</b>	22.8949
HDR 1-7 Units Per Acre	<b>3168331.5000</b>	72.73488
		0
Industrial	3744902.7500	
Industrial	2322020.2500	
Industrial	3187233.5000	
Industrial	1119782.5000	
	<b>10373939.0000</b>	238.1529
LDR 1-3 Units Per Acre	9608185.0000	
LDR 1-3 Units Per Acre	3692561.7500	
LDR 1-3 Units Per Acre	2224190.2500	
LDR 1-3 Units Per Acre	411135.0000	
LDR 1-3 Units Per Acre	1115996.8750	
LDR 1-3 Units Per Acre	349997.5313	
	<b>17402066.4063</b>	399.4965
LDR Less Than 2 Units Per Acre	1966417.2500	
LDR Less Than 2 Units Per Acre	2376630.7500	
LDR Less Than 2 Units Per Acre	635912.2500	
LDR Less Than 2 Units Per Acre	984736.6250	
LDR Less Than 2 Units Per Acre	4783128.5000	
LDR Less Than 2 Units Per Acre	237286.2813	
LDR Less Than 2 Units Per Acre	4411316.5000	
	<b>15395428.1563</b>	353.4304
Mixed Use	5768207.0000	
Mixed Use	909592.7500	
Mixed Use	287053.0938	
Mixed Use	133448.2188	
Mixed Use	48884.7188	
Mixed Use	198370.8438	
	<b>7345556.6252</b>	168.6308
Public Use/Preservation	3866179.5000	
Public Use/Preservation	643651.9375	
Public Use/Preservation	282331.7813	
Public Use/Preservation	830121.7500	
Public Use/Preservation	1165538.2500	
Public Use/Preservation	114259.1875	
Public Use/Preservation	102771.0625	
Public Use/Preservation	206023.5313	
Public Use/Preservation	73907.0000	
Public Use/Preservation	55022.5625	
Public Use/Preservation	3312246.5000	
Public Use/Preservation	322699.0313	
Public Use/Preservation	386904.6563	
Public Use/Preservation	167406.5938	
Public Use/Preservation	256166.0313	
Public Use/Preservation	127776.2500	
Public Use/Preservation	9966.4688	
Public Use/Preservation	255309.7813	
Public Use/Preservation	158595.0313	

ATTACHMENT A: Marshall Land Use ( 2003)

School Site	<b>12336876.9067</b>	283.215
School Site	1669080.5000	
School Site	956511.8750	
Wastewater Treatment Facility	<b>2625592.3750</b>	60.2753
	<b>244766.0000</b>	5.619
	<b>70340853.8133</b>	1614 acres.

2,574 units

ALPHA AREA

43560.00 Acres

C-1	46500.5000	1.07	1.067505
C-1	2241370.7500	51.45	51.45479
C-1	20736.0625	0.48	0.476034
C-1	38040.6250	0.87	0.873293
C-1	54040.5000	1.24	1.240599
C-1	55941.4375	1.28	1.284239
C-1	48053.2188	1.10	1.10315
C-1	12843.6250	0.29	0.294849
C-1	31157.0000	0.72	0.715266
C-1	88264.3125	2.03	2.02627
C-1	24981.2188	0.57	0.57349
C-1	32027.8438	0.74	0.735258
C-1	54724.9375	1.26	1.256312
C-1	57074.8750	1.31	1.310259
C-1	98630.2500	2.26	2.264239
C-1	521074.6250	11.96	11.96223
			<b>78.63778</b>
C-2	101085.0938	2.32	2.320594
C-2	854343.0625	19.61	19.61302
C-2	329638.0625	7.57	7.567449
C-2	171993.5313	3.95	3.948428
C-2	174818.9063	4.01	4.01329
C-2	1201299.7500	27.58	27.57805
C-2	794658.0000	18.24	18.24284
C-2	457181.7188	10.50	10.49545
C-2	72811.3750	1.67	1.671519
C-2	71093.5625	1.63	1.632084
			<b>97.08271</b>
C-3	1171914.2500	26.90	26.90345
C-3	163300.7813	3.75	3.74887
			<b>30.65232</b>
TH	28144.3125	0.65	0.646105
TH	1981760.2500	45.49	45.49496
			<b>46.14106</b>
R-4	30858.0000	0.71	0.708402
R-4	946445.6250	21.73	21.7274
R-4	29388.8750	0.67	0.674676
R-4	31223.0313	0.72	0.716782
R-4	7759171.5000	178.13	178.1261
R-4	83707.8125	1.92	1.921667
R-4	1563916.7500	35.90	35.90259
R-4	1370418.3750	31.46	31.46048
			<b>271.2381</b>
R-1	9028387.0000	207.26	207.2632
R-1	448044.0938	10.29	10.28568
R-1	518903.7188	11.91	11.91239
R-1	14645671.0000	336.22	336.2183
R-1	7007131.5000	160.86	160.8616
R-1	1002211.8750	23.01	23.00762
R-1	169214.8750	3.88	3.884639

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1084

R-2	1474387.2500	33.85	<b>753.4335</b>	753
R-2	22431046.0000	33.84727	514.95	
		514.946	<b>548.7932</b>	1096
I-1	7592486.5000	174.30	174.2995	
I-1	2276503.0000	52.26	52.26132	
			<b>226.5608</b>	
I-2	10508365.0000	241.24	<b>241.2389</b>	
	99916986.2193			