ATTACHMENT 2

Memorandum

To: Jacob Sesker
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Subject: Incremental Costs to Achieve Incentive Density Under Commercial/ Residential Zoning

Date: August 25, 2009

The proposed Commercial/Residential (CR) zoning amendment is intended to encourage a mix of commercial and residential uses at varying densities and heights. The CR Zone Standard Method establishes a base Floor Area Ratio (FAR) of 0.5 as a matter of right. To build more densely, the developer may qualify for incentive density up to a maximum FAR and height established by the Sector Plan. Incentive density is earned by selecting among 37 public benefit options, which are organized in six categories:

- Transit Proximity;
- Connectivity & Mobility;
- Diversity;
- Design;
- Environment; and
- Building Lot Terminations.

The incentive density is calculated as a percentage of the potential optional method density, i.e., the difference between the maximum FAR under the standard and optional methods of development. The developer also may propose other public benefits as the basis for an increase in density. No more than 30 percent of the total incentive density may come from any of the connectivity, design, diversity or environmental categories. Table 1 on the following page presents the Incentive Zoning Table from the draft ordinance as of July 13, 2009. The July 13 draft ordinance appears in Appendix A; subsequent drafts of the zone may have included revisions not reflected in the analysis.

Partners for Economic Solutions has prepared the following analysis to quantify the likely costs of achieving each incentive density provision to help policy makers understand the relative costs of providing the desired public benefits and the potential response of the market to the incentives. Some of the provisions relate specifically to the project's location

(e.g., proximity to transit); the incremental costs of those locations were reflected in the purchase price of the land. This analysis does not attempt to estimate those land price differentials. Others depend on the specific characteristics of the property, e.g., historic resource protection, and cannot be estimated in the abstract. The zoning ordinance amendment leaves some decisions to the Planning Board's discretion in deciding whether the applicant qualifies for the maximum incentive density increase. In those cases, this analysis quantifies the cost of meeting the minimum incentive density increase.

Some of the incentives reward actions already being taken by the real estate industry, particularly with respect to environmental enhancements. With the appeal of long-term operational efficiencies and cost savings, better employee working conditions and better environmental stewardship, "green buildings" are becoming standard in the local market. In that case, the LEED incentive rewards good development practices at no incremental cost to the developer. Incentives for quality development also coincide with developer strategies to attract high-end users, again rewarding practices with no incremental cost.

The costs of providing the desired public benefits are expressed in terms of cost per square foot of total development under three maximum FARs of 4.0, 3.0 and 2.5 and the cost per square foot of bonus density achieved assuming an FAR of 2.5. The maximum FARs are those proposed in the White Flint Sector Plan for different subareas. The costs reflect the economics of land development in the White Flint area (e.g., market rents and sales prices). The cost analysis assumes a 2.5-acre site. For some incentives, costs per square foot would be higher for smaller sites because they would have fewer total square feet to support the incremental cost.

Table 1. Incentive Zoning Table			
	Percent of Incentive Density		Section
Public Benefit	Minimum	Maximum	Reference
Transit Proximity			
Adjacent or Confronting Transit Access	25	50	15.72
Transit Access within ¼ Mile	20	40	
Transit Access between ¼ and ½ Mile	15	30	
Transit Access between ½ and 1 Mile	10	20	
Connectivity & Mobility			
Community Connectivity	10	20	15.731
Community Garden	5	10	15.732
Parking at the Minimum	10	20	15.733
Pedestrian Through-Block Connection	5	10	15.734
Public Parking	20	30	15.735
Transit Access Improvement	10	20	15.736
Diversity			
Adaptive Buildings	15	30	15.741
Affordable Housing: MPDUs	See section reference		15.742
Affordable Housing: WFHUs	See section reference		
Care Center	10	20	15.743
Community Facility	10	20	15.744
Local Retail Preservation	10	20	15.745
Unit Mix and Size	5	10	15.746
Design			
Floor Plate Size	10	20	15.751
Historic Resource Protection	10	20	15.752
Parking Below Grade	10	20	15.753
Podium/Tower Setback	5	10	15.754
Public Art	10	20	15.755
Public Plaza/Open Space	5	10	15.756
Streetscape, Off-Site	5	10	15.757
Wow Factor	10	20	15.758
Environment			
Bio-retention and Stormwater Recharge	5	10	15.761
Conveyed Parkland	10	20	15.762
Dark Skies	5	10	15.763
Energy Efficiency and Generation	10	20	15.764
Green Wall	5	10	15.765
LEED Rating	10	30	15.766
Rainwater Reuse	5	10	15.767
Transferable Development Rights	10	30	15.768
Tree Canopy	10	20	15.769
Vegetated Area	5	10	15.761
Vegetated Roof	10	20	15.7611
Building Lot Terminations	0	50	15.77

Note: Value is not consistent with the text, which indicates a minimum incentive of 5 percent.
Source: Draft Zoning Ordinance Amendment, July 13, 2009.

Table 2 on the following page estimates cost impacts for those criteria that lend themselves to quantification.

Transit Proximity Incentives

The transit proximity incentives relate to distance from the site to a Metro or MARC station. No attempt is made to quantify the differential land costs associated with different distances from transit facilities.

Connectivity & Mobility Incentives

The connectivity and mobility incentives reward projects that "encourage pedestrian and other non-auto travel for short and multi-purpose trips" and that "facilitate social interaction, provide opportunities for healthier living, and stimulate local businesses."

Community Connectivity

This incentive provides a 10- to 20-percent incentive density bonus for locations within one-quarter to one-half mile of at least 10 different retail uses with direct pedestrian access. Most White Flint properties will qualify for this incentive given the concentration of existing retail uses if they have good pedestrian connections.

Community Garden

This incentive (5 to 10 percent) requires provision of community garden space at a rate of at least one space (minimum of 16 square feet) per 20 dwelling units with at least 10 percent of these spaces accessible according to ADA standards. The maximum bonus requires additional features such as a composting facility or doubling as a green roof. Creating the proper soil depth costs an average of $7 per square foot of garden space. On a rooftop, such as that created by a building stepback from the building's base, an additional cost is incurred to support the weight of humans as well as plants for a total incremental cost of $35 per square foot. The hard cost of compliance ranges from $0.10 per square foot of additional density for a garden on the ground and $0.24 for a rooftop community garden. However, the opportunity cost associated with gardening on the ground is substantially higher than on the roof.

Table 2. Unit Prices for Providing Incentivized Amenities								
		Cost per FAR Sq. Ft.			Bonus Density		Cost per Bonus Sq. Ft. (1)	
	Unit Price	4.0 FAR	3.0 FAR	2.5 FAR	Low	High	Low	High
Transit Proximity								
Adjacent or Confronting Transit Access	Function of location				25%	50%		
Transit Access Within 1/4 Mile	Function of location				20%	40%		
Transit Access Between 1/4 and 1/2 Mile	Function of location				15%	30%		
Transit Access Between 1/2 and 1 Mile	Function of location				10%	20%		
Connectivity & Mobility								
Community Connectivity	Function of location				10%	20%		
Community Garden (16 SF on roof per 20 units)	$35.00 per garden SF	$0.02	$0.02	$0.02	5%	10%	$0.10	$0.26
Parking at the Minimum	See spreadsheet				10%	20%		
Pedestrian Through-Block Connection (500 LF of concrete)	$105.00 per linear foot	$0.15	$0.20	$0.24	5%	10%	$6.03	
Public Parking (0.4 additional spaces per 1,000 SF) (2)	$32,200 per above-ground space	$3.67	$5.89	$9.38	20%	30%		$24.49
Transit Access Improvement	Specific to project				10%	20%		
Diversity								
Adaptive Buildings	$11.88 per SF	$11.88	$11.88	$11.88	15%	30%	$79.17	
MPDU Increase of 1 Percent - Apartments	See spreadsheet			-$2.25	10%	20%		-$27.04
MPDU Increase of 1 Percent - Condominiums	See spreadsheet			-$6.59	10%	20%		-$79.07
Workforce Housing Increase of 1 Percent - Apartments	See spreadsheet			-$0.18	20%	30%		-$9.89
Workforce Housing Increase of 1 Percent - Condominiums	See spreadsheet			-$0.63	20%	30%		-$35.35
Care Center - 2,000 SF at $10 PSF (triple net)	$760,400 lump sum			$2.89	10%	20%	$34.91	
Community Facility - 2,000 SF at $0 Rent	$949,400 lump sum			$3.60	10%	20%	$43.59	
Local Retail Preservation	Specific to project				10%	20%		
Unit Size and Mix	See spreadsheet				5%	10%	-$44.26	-$29.50
Design								
Floor Plate Size	$2 per SF	$2.00	$2.00	$2.00	10%	20%	$25.00	
Historic Resource Protection	Specific to project				10%	20%		
Parking Below Grade vs. Above-Grade with Liner Building								
Office/Retail Building	$12,060 per space	$32.00	$40.00	$47.00	10%	20%		$236.00
Residential/Retail Building	$12,060 per space	$22.00	$25.00	$28.00	10%	20%		$140.00
Podium/Tower Setback	$0.75 per SF	$0.75	$0.75	$0.75	5%	10%	$15.00	$15.00
Public Art - 1%-4% of Development Hard Costs	$1.10 per SF	$1.10	$1.10	$1.10	5%	20%	$27.50	$27.50
Public Plaza/Open Space - 2,500 SF	$50 per SF	$0.29	$0.38	$0.46	5%	10%	$11.48	
Streetscape, Off-Site - 17,642 SF (18% of net lot)	$37 per square foot	$1.51	$1.73	$2.42	5%	10%	$60.48	$60.48
Wow Factor - Exterior Enhancements, Higher Arch. Fee	Specific to project				10%	20%		
Environment								
Bio-Retention and Stormwater Recharge (25% of runoff)	$7,400 per 1,000 SF impervious	$1.67	$2.22	$2.66	5%	10%	$66.60	
Bio-Retention and Stormwater Recharge (50% of runoff)	$12,000 per 1,000 SF impervious	$2.70	$3.60	$4.32	5%	10%		$54.00
Conveyed Parkland (30% of gross lot area)	$50 per SF	$3.75	$5.00	$6.00	10%	20%	$37.50	$37.50
Dark Skies (5 fixtures per 1,000 SF)	$5,000 lump sum	$0.01	$0.02	$0.02	5%	10%		$0.23
Energy Efficiency and Generation (6-17 kW)	$10,000 per kilowatt	$0.39	$0.37	$0.37	10%	20%	$2.20	$1.84
Green Wall - 100' Wall for 3 Stories (3,600 SF)	$8 per SF	$0.07	$0.09	$0.11	5%	10%	$2.64	
LEED Rating - Silver (3)	0.5% of development costs	$1.60	$1.60	$1.60	10%		$20.00	
LEED Rating - Gold (3)	4.0% of development costs	$12.78	$12.78	$12.78	20%		$79.88	
LEED Rating - Platinum (3)	10.0% of development costs	$31.96	$31.96	$31.96		30%		$133.17
Rainwater Reuse (25% of runoff)	$4,800 per 1,000 SF impervious	$1.08	$1.44	$1.73	5%	10%	$43.20	
Rainwater Reuse (50% of runoff)	$7,250 per 1,000 SF impervious	$1.63	$2.18	$2.61	5%	10%		$32.63
Transferable Development Rights (10 TDRs for 20 units or 25,000 SF)	$20,000 per TDR	$0.46	$0.61	$0.73	10%	30%	$9.18	$9.18
Tree Canopy (50% coverage)	$167 per 1,000 SF open space	$0.004	$0.006	$0.007	10%	20%	$0.03	$0.03
Vegetated Area (5,000 SF)	$5,730 per 1,000 SF	$0.07	$0.09	$0.11	5%	10%	$2.63	
Vegetated Roof - 60% of roof area (52,300 SF)	$7 per SF	$0.84	$1.12	$1.34	10%	20%	$9.24	$8.40
Building Lot Terminations								
Building Lot Terminations (3.12 BLTs)	$200,000 per BLT	$2.48	$3.38	$2.29	0%	50%	$0.00	$5.73

Notes: Data in constant 2009 dollars.
Assumes a 2.5-acre site with a perimeter of 1,560 l.f. and development covering 90 percent of the site.
(1) Based on a bonus density of 2.0 FAR.
(2) Parking construction cost offset by revenues of $8.00 per space on weekdays (95% occupancy) and $3.00 on weekends (25% occupancy).
(3) Based on experience with previous version of LEED ratings.
Source: A. Morton Thomas & Associates; The Edgecombe Group; Partners for Economic Solutions, 2009.

Parking at the Minimum

To discourage reliance on auto travel, this incentive provides a 10-percent density bonus for sites of one acre or more and a 20-percent bonus for smaller sites that provide only the minimum required number of parking places. The provision of fewer parking spaces would reduce the cost of development. Table 3 illustrates the increase in residual land value associated with changes in parking requirements for an office/retail building. A minimal

decrease in requirements from 2.4 to 2.3 spaces for office space and from 4.9 to 4.8 spaces for retail space would increase the residual land value by $4 per land square foot, or $436,000 for a 2.5-acre site. Qualifying for this incentive would require parking at a significantly lower ratio than the current requirements. While allowing for reduced parking may significantly reduce development costs, it is unlikely that the market will support parking at levels low enough to qualify for the incentive bonus under current conditions.

The minimum parking standard under the proposed CR zoning provides for less than 0.5 parking spaces per 1,000 square feet of office space within one-quarter mile of a Metro station. In today's market, developers report that demand requires roughly 2.0 spaces per 1,000 square feet. With similar proximity to transit, retail space would be limited to 1.0 space per 1,000 square feet as opposed to the current requirement of 5.0 spaces and the demands from most chain retailers for 3.0 to 5.0 spaces. Parking demand will likely decline over time as the area develops a more integrated mix of uses with better pedestrian and bicycle connections. In the meantime, the financial investors are unlikely to finance projects with parking at the minimum standards.

Table 3. Impact of Parking on Office/Retail Residual Land Value (1)				
	CR2.5, C1.5, R2.0, H70 (2)			
	Above-Ground Parking		Below-Ground Parking	
Parking Spaces per 1,000 Square Feet	Residual Land Value per		Residual Land Value per	
	Land SF	FAR SF	Land SF	FAR SF
C2 Standard at 1.5 FAR				
Office at 2.4, Retail at 4.9 (3)	$92	$61	$68	$45
CR Zoning C2.5, C1.5, R2.0				
Office at 2.4, Retail at 4.9	$98	$65	$20	$14
Office at 2.3, Retail at 4.8	$102	$68	$27	$18
Office at 2.2, Retail at 4.7	$106	$71	$34	$22
Office at 2.1, Retail at 4.6	$111	$74	$41	$27
Office at 2.0, Retail at 4.5	$115	$77	$48	$32
Office at 2.0, Retail at 4.4	$116	$78	$49	$33
Office at 2.0, Retail at 4.3	$118	$78	$52	$34
Office at 2.0, Retail at 4.2	$119	$79	$53	$36
Office at 2.0, Retail at 4.1	$120	$80	$55	$37
Office at 2.0, Retail at 4.0	$121	$81	$57	$38
Office at 2.0, Retail at 3.9	$122	$82	$59	$39
Office at 2.0, Retail at 3.8	$123	$82	$61	$40
Office at 2.0, Retail at 3.7	$125	$83	$63	$42
Office at 2.0, Retail at 3.6	$126	$84	$65	$43
Office at 2.0, Retail at 3.5	$127	$85	$67	$44
Office at 1.9, Retail at 3.4	$132	$88	$74	$49
Office at 1.8, Retail at 3.3	$136	$91	$80	$54
Office at 1.7, Retail at 3.2	$140	$94	$88	$58
Office at 1.6, Retail at 3.1	$145	$96	$94	$63
Office at 1.5, Retail at 3.0	$149	$99	$101	$67

Note: (1) Assumes an average of $3 per retail parking space per day and $100 per month per office parking space.

(2) Assumes office/retail development at 1.5 FAR using incentives for Metro proximity and community connectivity. Office is 1.1 FAR with retail at 0.4 FAR.

(3) General retail at 5.0 spaces per 1,000 square feet and restaurants at 25.0 spaces per 1,000 square feet. Assumes 20 percent restaurant and 80 percent general retail. Adjusted to 4.9 spaces to reflect shared use.

Source: Partners for Economic Solutions, 2009.

Pedestrian Through-Block Connections

This incentive requires a pedestrian connection between two or more streets. The pathway must be at least 15 feet in width and be lined with glass on a minimum of 35 percent of the walls facing the pathway. Calculated as an open-air 15-foot-wide pathway for a length of 500 feet, this provision would cost at least $66,000 to achieve the minimum 5-percent bonus. This is equivalent to $6.03 per square foot of bonus density. This cost does not take into account the potential impact of inefficiencies imposed on building layout nor any

market premium that might be created by the inclusion of an attractive pedestrian amenity. Reaching the maximum 10-percent bonus could be much more expensive, requiring lining the path with retail space, increasing the width or integrating public art.

Public Parking

Providing publicly accessible parking spaces (the difference between the minimum and maximum number of allowed spaces) for free or at a market rate would qualify a project for a 20-percent bonus density. The maximum 30-percent bonus density requires constructing the parking underground or in a structure. For projects planning to provide the maximum number of allowed spaces, this incentive could have a minimal cost related to providing a system to collect parking fees. Most projects developed under the CR zone's optional method will be building parking structures rather than relying on surface parking. Projects taking advantage of the lower parking requirements will find this less enticing given that parking fees would not offset the cost of providing additional parking beyond that required for the immediate project. The incremental cost of providing the maximum parking (2.4 spaces per 1,000 square feet of office space) relative to providing what the market demands (2.0 spaces) would have a cost of $3,500,000 for a 2.5-acre site in a 2.5 FAR zone. Charging for parking through monthly passes for office employees and meters for retail patrons and office visitors could reduce the net cost of that provision. Assuming monthly passes of $100 for 70 percent of the incremental spaces above the minimum number of required spaces and $8 per day from short-term and all-day parking for 30 percent of the spaces on weekdays, parking revenues could offset roughly $1,900,000 of that cost, leaving a net cost of $24.49 per square foot of incentive density.

Transit Access Improvements

This incentive provides bonus density for transit access improvements within one-half mile of the development site or provision of mobile transit improvements (e.g., a bus shuttle). Satisfying this requirement will depend upon the specific property and the type of improvements provided.

Diversity Incentives

These incentives seek to increase the diversity of future residents and retailing.

Adaptive Buildings

To encourage buildings that can be adapted to a diversity of uses over time, this 15-percent incentive requires a minimum floor-to-floor dimension of 15 feet for all floors and an internal floor plan with a structural system that allows flexibility in the division of the floor plate to "any number of parceled volumes." To achieve the 30-percent maximum density bonus, the building must have additive capacity for any available density and height or an internal layout with a "flexible cellular system that allows for residential, retail, and office

uses to occupy any of the cells." These are very expensive requirements. Increasing the typical 10-foot to 11-foot floor-to-floor dimension to 15 feet would impose a cost of roughly $12 per square foot. The incremental cost per square foot of incentive density is estimated at $79.17. Some of that cost might be recouped by internal loft construction that increased the effective square footage, though that new space would be subject to the maximum FAR limits. In zones with lower maximum building heights, this provision also could result in losing an entire floor of development – a major opportunity cost. Given the high direct cost and potential opportunity costs, this incentive is unlikely to be used.

Affordable Housing - MPDUs

Provision of additional Moderately Priced Dwelling Units (MPDUs) above the minimum required 12.5 percent of non-workforce housing units would qualify the project for a bonus density up to 25 percent. Table 4 illustrates the incremental cost of providing additional MPDUs and workforce housing units as rental apartments. Table 5 provides the same analysis for a condominium development. The density incentive compensates fully for the inclusion of additional MPDUs as the value of the increased density provides returns in excess of the value lost by committing units to lower-rent tenants. However, there are less expensive means to achieve the same increase in incentive density.

Table 4. Incremental Cost of Providing MPDUs and WFHUs in Apartment/Retail Development Under CR Zoning				
	CR2.5, C1.5, R2.0			
	12.5% MPDU 0% WFHUs	12.5% MPDU 10% WFHUs	13.5% MPDU 10% WFHUs	12.5% MPDU 11% WFHUs
Development Characteristics				
Floor Area Ratio	1.80	2.20	2.40	2.24
Percent of Incentive Density	0%	20%	30%	22%
Incentive Density	-	0.40	0.60	0.44
Site Size (SF)	108,900	108,900	108,900	108,900
Public Use Space (SF)	6,534	6,534	6,534	6,534
Net Lot Area	102,366	102,366	102,366	102,366
Total Base Gross Square Feet	196,020	239,580	261,360	243,936
Net Total Building Square Feet	166,617	203,643	222,156	207,346
Residential Gross Leaseable Area	123,057	160,083	178,596	163,786
Number of Residential Units	124	164	184	168
Number of Market & MPDU Units	124	151	170	154
Average Net Square Feet per Unit	994	975	973	976
MPDUs	16	19	23	20
Workforce Housing Units	-	13	14	14
Retail Gross Leaseable Area (0.4 FAR)	43,560	43,560	43,560	43,560
Residential Parking Spaces (1)	127	155	173	159
Retail Parking Spaces (2)	152	152	152	152
Operations				
Market Apartment Monthly Rent per Unit	$2,196	$2,196	$2,196	$2,196
MPDU Monthly Rent per Unit	$1,396	$1,396	$1,396	$1,396
Workforce Housing Rent per Unit	$1,659	$1,659	$1,659	$1,659
Retail Rent per SF (triple net)	$45	$45	$45	$45
Occupancy Rate	95%	95%	95%	95%
Apartment Operating Expense per Unit	$5,000	$5,000	$5,000	$5,000
Apartment Monthly Parking Rate	$100	$100	$100	$100
Retail Average Daily Parking Fees (3)	$3.00	$3.00	$3.00	$3.00
Net Operating Income	**$4,499,400**	**$5,228,800**	**$5,610,600**	**$5,300,200**

Table 4. Incremental Cost of Providing MPDUs and WFHUs in Apartment/Retail Development Under CR Zoning (Continued)				
	CR2.5, C1.5, R2.0			
	12.5% MPDU 0% WFHUs	12.5% MPDU 10% WFHUs	13.5% MPDU 10% WFHUs	12.5% MPDU 11% WFHUs
Costs				
Site Improvement Costs	$435,600	$435,600	$435,600	$435,600
Public Use Space Costs	$249,900	$249,900	$249,900	$249,900
Building Hard Costs	$23,382,400	$28,578,500	$31,176,500	$29,098,100
Parking Hard Costs	$9,416,250	$10,361,250	$10,968,750	$10,496,250
Development Approval Process (months)	12	12	12	12
Construction Period (months)	24	24	24	24
Construction Financing (fees & interest)	$2,715,500	$3,177,400	$3,418,600	$3,226,700
Other Soft Costs (excluding exactions)	$8,371,000	$9,906,300	$10,707,700	$10,070,000
Tenant Improvements	$3,267,000	$3,267,000	$3,267,000	$3,267,000
Exactions	$1,955,500	$2,303,500	$2,519,100	$2,332,200
Total Non-Land Development Costs	**$49,793,200**	**$58,279,500**	**$62,743,200**	**$59,175,800**
Residual Land Value Analysis				
Net Operating Income	$4,499,400	$5,228,800	$5,610,600	$5,300,200
Capitalized Value	$64,277,100	$74,697,100	$80,151,400	$75,717,100
Less Non-Land Development Costs	$49,793,200	$58,279,500	$62,743,200	$59,175,800
Less Return on Investment (9%)	$4,481,400	$5,245,200	$5,646,900	$5,325,800
Land Residual Value (4)	**$10,002,500**	**$11,172,400**	**$11,761,300**	**$11,215,500**
Land Residual per Site SF	$92	$103	$108	$103
Land Residual per FAR SF	$51	$47	$45	$46
Incremental Cost of Providing MPDUs and WFHUs				
Total		**-$1,169,900**	**-$588,900**	**-$43,100**
Per Unit (5)		**-$7,125**	**-$3,208**	**-$257**
Per GSF (5)		**-$4.88**	**-$2.25**	**-$0.18**
Per Incentive Density SF		**-$26.86**	**-$27.04**	**-$9.89**

Notes: (1) Assumes site location within 1,600 feet of a transit station. Above-ground structure. Assumes 35 percent one-bedroom units and 65 percent two-bedroom units.

(2) Retail parking at 3.5 spaces per 1,000 square feet.

(3) Retail parking revenues calculated at $1.00 per hour with an average stay of two hours and a daily occupancy of 1.5 per space for developments with structured parking.

(4) Residual value is the amount a developer could pay for the land and still achieve the return required to attract investment.

(5) Calculated as cost per total number of units and total gross square feet.

Source: Partners for Economic Solutions, 2009.

Affordable Housing - WFHUs

Residential developments in the White Flint area are required to provide a minimum number of workforce housing units (WFHUs) equal to 10 percent of the market-rate (non-MPDU) units. This provision allows a 20-percent incentive density for that investment in workforce housing, whether required or voluntary, and two times the percentage of WFHU units to a maximum of 30 percent. Table 4 calculated the incremental cost of providing

WFHUs in an apartment development. Table 5 provides the same analysis for a condominium development. As with MPDUs, the incentive density fully compensates for the additional cost of providing WHFUs.

This incentive density provision differs from C2 zoning where the creation of workforce housing units entitles the developer to a commensurate increase in the project's FAR and height. Making this an automatic incentive density under CR zoning reduces the problems associated with securing community acceptance of the greater project size required to take advantage of the additional workforce housing FAR.

Table 5. Incremental Cost of Providing MPDUs and WFHUs in Condominium/Retail Development Under CR Zoning

	CR2.5, C1.5, R2.0			
	12.5% MPDU 0% WFHUs	12.5% MPDU 10% WFHUs	13.5% MPDU 10% WFHUs	12.5% MPDU 11% WFHUs
Development Characteristics				
Floor Area Ratio	1.80	2.20	2.40	2.24
Percent of Incentive Density	0%	20%	30%	22%
Incentive Density	-	0.40	0.60	0.44
Site Size (SF)	108,900	108,900	108,900	108,900
Public Use Space (SF)	6,534	6,534	6,534	6,534
Net Lot Area	102,366	102,366	102,366	102,366
Total Base Gross Square Feet	196,020	239,580	261,360	243,936
Net Base Building Square Feet	166,617	203,643	222,156	207,346
Residential Gross Leaseable Area	123,057	160,083	178,596	163,786
Number of Residential Units	131	172	192	176
Number of Market & MPDU Units	131	159	177	161
Average Net Square Feet per Unit	936	929	929	929
MPDUs	17	20	24	21
Workforce Housing Units	-	13	15	15
Retail Gross Leaseable Area (0.4 FAR)	43,560	43,560	43,560	43,560
Residential Parking Spaces (1)	134	163	180	166
Retail Parking Spaces (2)	152	152	152	152
Sales & Operations				
Market Sale Price per Square Foot	$475	$475	$475	$475
MPDU Sale Price per Unit	$203,300	$203,300	$203,300	$203,300
Workforce Sale Price per Unit	$298,400	$298,400	$298,400	$298,400
Cost of Sale	7.0%	7.0%	7.0%	7.0%
Condo Parking Sale Price	$40,000	$40,000	$40,000	$40,000
Net Sales Proceeds	**$55,530,300**	**$70,496,300**	**$78,185,400**	**$71,762,300**
Retail Rent per SF (triple net)	$45	$45	$45	$45
Retail Occupancy Rate	95%	95%	95%	95%
Retail Average Daily Parking Fees (3)	$3.00	$3.00	$3.00	$3.00
Net Retail Operating Income	**$2,020,300**	**$2,020,300**	**$2,020,300**	**$2,020,300**

Table 5. Incremental Cost of Providing MPDUs and WFHUs in Condominium/Retail Development Under CR Zoning (Continued)				
	CR2.5, C1.5, R2.0			
	12.5% MPDU 0% WFHUs	12.5% MPDU 10% WFHUs	13.5% MPDU 10% WFHUs	12.5% MPDU 11% WFHUs
Costs				
Site Improvement Costs	$435,600	$435,600	$435,600	$435,600
Public Use Space Costs	$249,900	$249,900	$249,900	$249,900
Building Hard Costs	$26,322,700	$32,172,200	$35,096,900	$32,757,100
Parking Hard Costs	$9,652,500	$10,631,250	$11,205,000	$10,732,500
Development Approval Process (months)	12	12	12	12
Construction Period (months)	24	24	24	24
Construction Financing (fees & interest)	$2,954,400	$3,468,100	$3,731,200	$3,519,700
Other Soft Costs (excluding exactions)	$9,165,200	$10,872,200	$11,746,900	$11,043,800
Tenant Improvements	$3,267,000	$3,267,000	$3,267,000	$3,267,000
Development Return (% of Net Revenues)	15%	15%	15%	15%
Exactions	$1,856,100	$2,166,900	$2,344,300	$2,179,700
Total Non-Land Development Costs	**$53,903,400**	**$63,263,200**	**$68,076,800**	**$64,185,300**
Residual Land Value Analysis				
Net Operating Income	$2,020,300	$2,020,300	$2,020,300	$2,020,300
Sales Revenue + Retail Capitalized Value	$82,467,600	$97,433,600	$105,122,700	$98,699,600
Less Non-Land Devel. Costs & Return	$62,232,900	$73,837,600	$79,804,600	$74,949,600
Land Residual Value (4)	**$20,234,700**	**$23,596,000**	**$25,318,100**	**$23,750,000**
Land Residual per Site SF	$186	$217	$232	$218
Land Residual per FAR SF	$103	$98	$97	$97
Incremental Cost of Providing MPDUs and WFHUs				
Total		**-$3,361,300**	**-$1,722,100**	**-$154,000**
Per Unit (5)		**-$19,506**	**-$8,958**	**-$873**
Per GSF (5)		**-$14.03**	**-$6.59**	**-$0.63**
Per Incentive Density SF		**-$77.16**	**-$79.07**	**-$35.35**

Notes: (1) Assumes site location within 1,600 feet of a transit station. Above-ground structure. Assumes 35 percent one-bedroom units and 65 percent two-bedroom units.

(2) Retail parking at 3.5 spaces per 1,000 square feet.

(3) Retail parking revenues calculated at $1.00 per hour with an average stay of two hours and a daily occupancy of 1.5 per space for developments with structured parking.

(4) Residual value is the amount a developer could pay for the land and still achieve the return required to attract investment.

(5) Calculated as cost per total number of units and total gross square feet.

Source: Partners for Economic Solutions, 2009.

Care Center

Child care centers and daytime adult care centers are an attractive amenity for a development, but they require special loading accommodations and playgrounds. More importantly, their economics do not allow them to pay full market rents for retail spaces. The cost of providing these spaces relates to the inherent rent subsidy required for center feasibility. This incentive allows a 10-percent density bonus for provision of at least 12

slots with at least one-quarter available to the general public. A 20-percent bonus is available for additional benefits such as additional total and/or public slots, a safe drop-off area, and extra recreation facilities. At the minimum level, a 2,000 square-foot child care center which pays a net rent of $10 per square foot would impose a cost of roughly $760,000 or $34.91 per square foot of additional density as shown in Table 6. This estimate makes no allowance for higher rents or occupancy resulting from the provision of on-site child or adult care.

A key factor in the cost of providing the space is the need for a high number of parking spaces. Standard zoning requires roughly 6.5 spaces per 1,000 square feet of space with no allowance for sharing spaces with other uses. However, the Planning Board does have discretion to reduce the number of parking spaces required, particularly if the center is expected to serve the development's residents and/or tenants.

Table 6. Incremental Cost of Providing Care Center and Community Facility in Apartment/Retail Development			
	CR2.5, C1.5, R2.0, H70 Zoning		
	No Care or Community Center	2,000-SF Care Center	2,000-SF Community Center
Development Characteristics			
Floor Area Ratio	2.40	2.42	2.42
Site Size (SF)	108,900	108,900	108,900
Public Use Space (SF)	6,534	6,534	6,534
Net Lot Area	102,366	102,366	102,366
Total Base Gross Square Feet	261,360	263,538	263,538
Net Base Building Square Feet	222,156	224,007	224,007
Residential Gross Leaseable Area	178,596	178,447	178,447
Number of Residential Units	192	192	192
Number of Market & MPDU Units	177	177	177
Average Net Square Feet per Unit	1,009	1,008	1,008
MPDUs	23	23	23
Workforce Housing Units	15	15	15
Care Center	-	2,000	-
Community Facility	-	-	2,000
Retail Gross Leaseable Area (0.4 FAR)	43,560	43,560	43,560
Residential Parking Spaces (1)	237	237	237
Retail Parking Spaces (2)	392	392	392
Care Center/Community Center Parking (3)	-	13	5
Operations			
Market Apartment Monthly Rent per Unit	$2,196	$2,196	$2,196
MPDU Monthly Rent per Unit	$1,396	$1,396	$1,396
Workforce Housing Rent per Unit	$1,659	$1,659	$1,659
Retail Rent per SF (triple net)	$45	$45	$45
Occupancy Rate	95%	95%	95%
Apartment Operating Expense per Unit	$5,000	$5,000	$5,000
Care Center Rent (triple net)	$10	$10	$10
Community Facility Expense per SF	$9	$9	$9
Apartment Monthly Parking Rate	$100	$100	$100
Retail Average Daily Parking Fees (4)	$3.00	$3.00	$3.00
Net Operating Income	**$6,083,900**	**$6,103,700**	**$6,066,700**
Costs			
Site Improvement Costs	$435,600	$435,600	$435,600
Public Use Space Costs	$249,900	$249,900	$249,900
Building Hard Costs	$31,176,500	$31,436,300	$31,436,300
Parking Hard Costs	$18,492,600	$18,874,800	$18,639,600
Development Approval Process (months)	12	12	12
Construction Period (months)	24	24	24
Construction Financing (fees & interest)	$3,984,500	$4,038,800	$4,021,200
Other Soft Costs (excluding exactions)	$12,588,700	$12,749,200	$12,690,400
Tenant Improvements (5)	$3,267,000	$3,367,000	$3,367,000
Exactions	$2,505,900	$2,506,200	$2,506,200
Total Non-Land Development Costs	**$72,700,700**	**$73,657,800**	**$73,346,200**

Table 6. Incremental Cost of Providing Care Center and Community Facility in Apartment/Retail Development (Continued)			
	CR2.5, C1.5, R2.0, H70 Zoning		
	No Care or Community Center	2,000-SF Care Center	2,000-SF Community Center
Residual Land Value Analysis			
Net Operating Income	$6,083,900	$6,103,700	$6,066,700
Capitalized Value	$86,912,900	$87,195,700	$86,667,100
Less Non-Land Development Costs	$72,700,700	$73,657,800	$73,346,200
Less Return on Investment (9%)	$6,543,100	$6,629,200	$6,601,200
Land Residual Value	**$7,669,100**	**$6,908,700**	**$6,719,700**
Land Residual per Site SF	$70	$63	$62
Land Residual per FAR SF	$29	$26	$25
Incremental Cost of Providing a Care Center or Community Center			
Total		**$760,400**	**$949,400**
Per Unit		**$3,959**	**$4,943**
Per GSF		**$2.89**	**$3.60**
Per Incentive Density SF		**$34.91**	**$43.59**

Notes: (1) Assumes site location within 1,600 feet of a transit station. Above-ground structure. Assumes 35 percent one-bedroom units and 65 percent two-bedroom units.

(2) Assumes 20 percent restaurant and 80 percent general retail. Adjusted for shared use.

(3) Care center parking based on one space per six children plus one space per staff. Assumes 50 square feet per child and one staff person per six children. Community facility requires 2.5 spaces per 1,000 square feet.

(4) Retail parking revenues calculated at $1.00 per hour with an average stay of two hours and a daily occupancy of 1.5 per space for developments with structured parking.

(5) Includes $50 per square foot in tenant improvements for the care center and community center.

Source: Partners for Economic Solutions, 2009.

Community Facility

This incentive encourages provision of a community facility recommended in the sector plan that helps meet the needs of residents or workers and is accepted for operation and use by an appropriate public or non-profit organization. Assuming that the community facility would pay no rent or expenses, the cost of providing a 2,000 square-foot space would equal roughly $949,000 or $43.59 per square foot of the additional 10-percent bonus density. (See Table 6 above.) The maximum 20-percent bonus requires design and/or other provisions without enough specificity to allow costing.

Local Retail Preservation

A 10-percent incentive density is provided for preservation of one to two small businesses with a 20-percent incentive density for preservation of three or more small businesses. The economics of this requirement will depend very much on the specific situation with each small business preserved, including its size and any special facility requirements. The

biggest cost is likely to come in the form of accepting a lower rent than might be achieved by renting in the open market. It is not possible to estimate these costs reliably without the project specifics.

Unit Mix and Size

This incentive provides a 10-percent density bonus for creating residential buildings that include at least 7.5 percent efficiency units and 5 percent three-bedroom units. The 20-percent density bonus requires at least 10 percent efficiencies and 7.5 percent three-bedroom units. It is intended to increase the diversity of housing products offered and the types of households that can be accommodated in new developments. Most residential apartment buildings will include efficiency, one- and two-bedroom units; few offer three-bedroom units, particularly in a high-rise configuration. Condominium developments typically limit the number of efficiencies due to lower market demand for a long-term commitment to a small unit. Many offer two-bedroom units with a den, so three-bedroom units could be attractive in the market to households seeking space for a home office. The supportable rents and prices for large units are typically lower on a per-square-foot basis than are those for smaller units. The ultimate impact depends upon the differential pricing by unit size and the unit sizes. Shown in Table 7, the impact of the differential pricing under one scenario is a net gain in profitability.

Table 7. Impact of Unit Mix Requirement on Condos with CR2.5 Zoning			
	Market Mix (1)	Unit Mix - Minimum Incentive (2)	Unit Mix- Maximum Incentive (3)
Development Characteristics			
Floor Area Ratio	2.4	2.4	2.4
Site Size (SF)	108,900	108,900	108,900
Public Use Space (SF)	6,534	6,534	6,534
Net Lot Area	102,366	102,366	102,366
Total Gross Square Feet Including Bonus	261,360	261,360	261,360
Total Base Gross Square Feet	261,360	261,360	261,360
Bonus Density for Workforce Units	-	-	-
Net Base Building Square Feet	222,156	222,156	222,156
Residential Gross Leaseable Area	178,596	178,596	178,596
Number of Residential Units	192	195	196
Number of Market & MPDU Units	177	180	181
Average Net Square Feet per Unit	930	916	911
MPDUs	23	23	23
Workforce Housing Units	15	15	15
Retail Gross Leaseable Area (0.4 FAR)	43,560	43,560	43,560
Office Gross Leaseable Area	-	-	-
Care Center Square Feet	-	-	-
Residential Parking Spaces (4)	181	184	185
Office Parking Spaces	-	-	-
Retail Parking Spaces (5)	152	152	152
Less Spaces Replaced by Shared Car Spaces	(14)	(14)	(14)
Total Parking Spaces	319	322	323
Sales & Operations			
Market Sale Price per Square Foot	$475	$475	$475
MPDU Sale Price per Unit	$220,100	$220,100	$220,100
Workforce Sale Price per Unit	$298,400	$297,200	$296,800
Cost of Sale	7.0%	7.0%	7.0%
Condo Parking Sale Price	$40,000	$40,000	$40,000
Net Sales Proceeds	**$79,143,400**	**$80,476,000**	**$80,920,200**
Office Rent per SF (full service)	$40	$40	$40
Office Operating Expenses per SF	$9	$9	$9
Retail Rent per SF (triple net)	$45	$45	$45
Commercial Occupancy Rate	95%	95%	95%
Monthly Office Parking Rate	$100	$100	$100
Hourly Retail Parking Rate	$1	$1	$1
Retail Average Parking Hours	2.0	2.0	2.0
Daily Turns on Retail Spaces	1.5	1.5	1.5
Retail Average Daily Parking Fees (6)	$3.00	$3.00	$3.00
Net Commercial Operating Income	**$2,004,300**	**$2,004,300**	**$2,004,300**

Table 7. Impact of Unit Mix Requirement on Condos with CR2.5 Zoning (Continued)			
	Market Mix (1)	Unit Mix - Minimum Incentive (2)	Unit Mix- Maximum Incentive (3)
Costs			
Site Improvement Costs	$435,600	$435,600	$435,600
Public Use Space Costs	$249,900	$249,900	$249,900
Building Hard Costs (7)	$38,844,600	$38,844,600	$38,844,600
Amenity Costs	$0	$0	$0
Parking Hard Costs	$10,722,600	$10,819,200	$10,851,400
Development Approval Process (months)	12	12	12
Construction Period (months)	24	24	24
Construction Financing (fees & interest)	$3,976,900	$3,984,100	$3,986,600
Other Soft Costs (excluding exactions)	$12,563,200	$12,587,300	$12,595,400
Tenant Improvements	$3,267,000	$3,267,000	$3,267,000
Development Return (% of Net Condo Revenues)	15%	15%	15%
Exactions	$2,505,900	$2,546,800	$2,560,400
Total Non-Land Development Costs	**$72,565,700**	**$72,734,500**	**$72,790,900**
Residual Land Value Analysis			
Net Operating Income	$2,004,300	$2,004,300	$2,004,300
Sales Revenue + Commercial Capitalized Value	$105,867,400	$107,200,000	$107,644,200
Less Non-Land Devel. Costs & Return	$84,437,200	$84,805,900	$84,928,900
Land Residual Value	**$21,430,200**	**$22,394,100**	**$22,715,300**
Land Value per Site SF	**$197**	**$206**	**$209**
Land Value per FAR SF	**$82**	**$86**	**$87**
Incremental Cost of Providing Unit Mix			
Total		**-$963,900**	**-$1,285,100**
Per Unit		**-$4,943**	**-$6,557**
Per GSF		**-$3.69**	**-$4.92**
Per Incentive Density SF		**-$44.26**	**-$29.50**

Notes: (1) "Market Mix" assumes 35 percent one-bedroom units and 65 percent two-bedroom units.

(2) Minimum Incentive assumes 7.5 percent efficiency units, 29 percent one-bedroom units, 58.5 percent two-bedroom units and 5 percent three-bedroom units.

(3) Maximum Incentive assumes 10 percent efficiency units, 27 percent one-bedroom units, 55.5 percent two-bedroom units and 7.55 percent three-bedroom units.

(4) Assumes site location within 1,600 feet of a transit station. Above-ground structure.

(5) Assumes 20 percent restaurant and 80 percent general retail. Adjusted for shared use.

(6) Retail parking revenues calculated at $1.000 per hour with an average stay of two hours and a daily occupancy of 1.5 per space.

(7) Includes incremental costs for podium/tower setback and LEED rating.

Sources: Partners for Economic Solutions, 2009.

However, a unit mix not currently supported by the market could adversely impact the project's lease-up or sales. Maintaining an inventory of unsold units for an extra year creates significant costs and risks.

Design Incentives

The design incentives encourage development of quality architecture in accordance with the design themes developed in the White Flint Sector Plan.

Floor Plate Size

Creating towers with smaller floor plates is intended to minimize their impact on views and shadows. The minimum incentive density increase of 10 percent requires that the floor area of any floor above the height of 120 feet "not exceed 10,000 square feet for residential uses, 19,000 square feet of non-residential uses, or 12,000 square feet of mixed-uses" and the exteriors of those floors must be 60-percent glass. This floor plate restriction increases the cost of providing perimeter walls relative to the total cost, estimated at $2 per FAR square foot. This indicates a cost of $25 per square foot of additional incentive density. The maximum incentive requires additional benefits that are not susceptible to accurate cost estimating.

This provision is very difficult to use in the CR2.5, C1.5, R2.0, H70 zone. The height limit constrains the ability to focus tower development into small floor plate buildings that still retain sufficient light and air. Forcing parking underground would be a very expensive approach to mitigating that impact of that floor plate requirement.

Another issue is the potential loss in building efficiency. The lobby space, which cannot be leased to residential tenants, becomes a higher proportion of the total building space when developed in multiple buildings as a result of limiting the floor plate size in a zone restricted to lower heights.

Historic Resource Protection

Protection of a historic resource designated in the Master Plan of Historic Preservation according to a preservation plan approved by the Historic Preservation Commission is required to achieve the 10-percent incentive density. Provision of other benefits is required to achieve the 20-percent incentive density. The costs associated with this incentive depend entirely upon the nature of the specific historic resource and the preservation approach. No cost estimate is provided for this incentive.

Podium/Tower Setback

This incentive requires that a tower be set back from the first floor building frontage least six feet at or below 72 feet in height for a five-percent incentive density. The maximum 10-percent increase requires that the tower setback start at or below 50 feet with a setback of at least 12 feet. The cost of meeting this requirement is estimated at $0.75 per FAR square

foot. That translates into an average cost of $15 per square foot of incentive density achieved at the minimum level.

Public Art

Enhancing the project with public art or paying a fee-in-lieu for public art qualifies a project for an incentive density of 5 to 20 percent. A fee equal to one percent of the development's project cost (assumed to be defined as non-land hard costs) provides a five-percent credit while a four-percent fee-in-lieu qualifies for a 20-percent incentive density. This analysis assumes that the direct investment in public art would be held to similar investment standards. This translates into a cost of $27.50 per square foot of incentive density.

Public Plaza/Open Space

The incentive allows a 5- to 10-percent incentive density for development of a public plaza accessible to the street, though no size requirement is imposed other than that the space must be in addition to any required public use space. The maximum incentive requires a plaza width of at least 50 feet and appropriate furnishings with facing walls of non-residential buildings having windows on at least 60 percent of the façade below 40 feet. This analysis assumes provision of a 2,500 square-foot plaza with an average cost of $50 per square foot. At the minimum incentive density, this represents an average cost of $11.48 per square foot of bonus density, not considering any impact on the building and parking configuration.

Streetscape, Off-Site

The incentive rewards streetscape improvements that "enhance the pedestrian experience and better connect buildings to the public spaces." The minimum five-percent incentive density requires improvements equal to 18 percent of the net lot. Improvements equivalent to 36 percent of the net lot area qualify for the maximum 10-percent incentive density. At an average cost of $37 per square foot for a brick walkway with trees and associated improvements, off-site streetscape for a 2.5-acre site would cost $650,000 to $1,300,000. That is equivalent to $60.48 per square foot of incentive density.

Wow Factor

To encourage excellence in architectural design, this incentive provides a 10- to 20-percent incentive density for creating innovative solutions to architectural context; creating a landmark; enhancing the public realm; adding to the diversity of the built realm; using design solutions to make "compact/infill living, working, and shopping environments pleasurable and desirable; and/or integrating environmentally sustainable solutions. Because these requirements have no distinct measures, it is not possible to accurately estimate the associated costs of compliance.

In addition, the incremental cost associated with achieving the Wow factor may be difficult to distinguish from the costs associated with satisfying the requirements associated with other CR Zone design incentives or with appealing to certain market segments. For example, the Wow factor is most likely to be used in association with trophy class office buildings and luxury residences, which to some degree already require a higher quality design.

Environment Incentives

This category of incentives focusing on sustainable and environmentally responsible solutions that reduce energy usage, provide green space, preserve agricultural land and reduce environmental impacts of development.

Bio-Retention and Stormwater Recharge

The use of bio-retention and recharge facilities to contain the stormwater outfall for a 10-year event and recharge it on site or within one-quarter mile of the site qualifies for a five-percent incentive density. A 10-percent incentive density is available for containing and recharging 50 percent of the projected stormwater. A. Morton Thomas and Associates estimated the cost of collecting rainwater in a bio-retention basin after pretreatment in a stone trench (3' deep by 2' by 10'). The bio-retention basin would store 1 feet of water on top with 3 feet of filter bed (sandy topsoil), 6 inches of sand and 2.5 feet of stone storage for groundwater recharge in accordance with the Maryland Department of the Environment (MDE) "Stormwater Design Manual". Capturing 25 percent of the runoff would cost $7,400 per 1,000 square feet of impervious surface with the cost increasing to $12,000 to capture 50 percent. For a 2.5-acre site, the total costs would range from $725,000 to $1,176,000 (assuming 90-percent of the site would be impervious) for a cost of $54.00 to $66.60 per square foot of incentive density.

Conveyed Parkland

Dedication of land for parkland, trail area or other master-planned parks' use qualifies for a 10- to 20-percent incentive density for property equivalent to 15 to 30 percent of the gross lot area. The cost of that land depends on its location, zoning and developability. This analysis assumes an average cost of $50 per square foot or a total cost of $817,000 to $1,634,000 for a 2.5-acre development site. That translates into $37.50 per square foot of incentive density.

Dark Skies

Dark skies-compliant projects built and maintained in conformance with the standards of the International Dark-Sky Association qualify for a five-percent incentive density. The maximum 10-percent incentive density also requires that the exterior lighting plan be integrated into an energy efficiency plan for the entire property. Meeting the dark skies

requirement entails both shielding of exterior lights and a building-wide system to extinguish interior lights at night. For any "smart" building with centralized controls, the cost of meeting these requirements is negligible. The cost of compliance is relatively small when designed into the development from the beginning. The incremental cost is estimated at $0.23 per square foot of incentive density. The key issue constraining use of this incentive is ensuring that tenants are and feel secure with different lighting arrangements. For some buildings, the dark skies incentive also would require foregoing up-lighting often used to highlight architectural features.

Energy Efficiency and Generation

Incentive densities of 10 to 20 percent are provided for the use of on-site renewable energy generation. New development must meet the "minimum efficiency standards of 17.5 percent for new buildings" and/or generate at least 1.5 percent of their energy cost on site for the minimum incentive. At the maximum, the project must provide additional benefits and generate at least 2.5 percent of energy cost on site. Solar roofs cost $8,000 to $10,000 per kilowatt. Typically, photovoltaics are a relatively expensive investment, depending on energy prices, so that most developers seek to use other less costly methods to achieve energy efficiencies and cost savings. The low thresholds for this incentive (1.5 to 2.5 percent of total energy) result in a cost of $1.84 to $2.20 per square foot of incentive density.

Green Walls

A green wall must cover a minimum of 30 percent of a south or west blank wall or parking garage facing a street or plaza and enhance the project's aesthetics and sustainability for the minimum five-percent incentive density. To achieve the maximum 10-percent incentive density, it must provide additional benefits. At the minimum level, the green wall itself is likely to cost about $8 per square foot or $29,000 for a 3,600 square-foot wall – $2.64 per square foot of incentive density.

LEED Rating

The CR zoning rewards environmentally sustainable buildings certified by the Leadership in Energy and Environmental Design (LEED) Green Building Rating System of the U.S. Green Building Council. Under the Green Building regulations, Montgomery County requires all new private buildings of 10,000 square feet or more to be LEED-certified. This incentive provides a 10-percent density bonus for a LEED Silver certification, 20 percent for LEED Gold and 30 percent for LEED Platinum. The cost of achieving these certification levels varies widely depending on the location, use, site characteristics and the choice of which points to pursue in the LEED certification process. Extensive research[1] on development costs suggests that the incremental cost of achieving LEED Silver certification

[1] Lisa Matthiessen, Peter Morris and Davis Langdon, "The Cost of Green Revisited: Reexamining the Feasibility and Cost Impact of Sustainable Design in the Light of Increased Market Adoption, 2007, http://www.davislangdon.com/USA/Research/ResearchFinder/2007-The-Cost-of-Green-Revisted

as compared with traditional development is 1-2 percent, noting that many projects have no or very low cost premiums and some have larger premiums up to 10 percent. Presumably, the incremental cost of advancing from LEED certification to LEED Silver would be even smaller. This analysis assumes a 0.5-percent cost premium to reach LEED Silver or roughly $1.60 per gross square foot. A 0.5-percent premium translates into an estimated $20 per square foot of incentive density at the minimum level. Some of that cost burden would be eliminated by the market rent and price premium resulting from the designation as a green building as well as the long-term operating cost savings. Only anecdotal evidence is available as to the likely cost premium for LEED Gold or LEED Platinum. For this analysis, the incremental cost of moving from LEED certified to LEED Gold is estimated at 4.0 percent with the incremental cost of achieving LEED Platinum at 10.0 percent. Those incremental costs equate to $80 to $133 per square foot of incentive density. As noted earlier, however, developers of major new projects are already adopting green building techniques in response to market demand and are required to develop to LEED certified or equivalent under existing County legislation, so the incremental costs are negligible for many.

Rainwater Reuse

This provision provides a minimum five-percent incentive density for collection of 25 percent of projected rainwater for a 10-year event and reuse for on-site irrigation, grey-water use or filtration for reuse. Collection and reuse of 50 percent of the projected rainwater would result in the maximum 10-percent incentive density. Rainwater from impervious surfaces would be collected in an underground storage structure and pumped to supply water for an irrigation system. The system would cost $4,800 per 1,000 square feet of impervious surface to collect 25 percent of projected rainwater and $7,400 to collect 50 percent. This is equivalent to $33 to $43 per square foot of incentive density.

Transferable Development Rights

To encourage preservation of agricultural land, the CR zoning provides incentives for transferable development rights (TDRs). The TDRs must be purchased in groups of 10 and executed and recorded. The incentive density increase is 10 percent for every 10 TDRs to a maximum of 30 percent. TDR pricing varies with market supply and demand. Historically, the value of TDRs has varied between $11,000 and $40,000. Assuming a cost of $20,000 per TDR, the cost of 10 TDRs would be $200,000, or $9.18 per incentive density square foot.

Tree Canopy

Providing tree canopy coverage of at least 25 percent of the on-site open space at 15 years growth qualifies a project for the minimum 10-percent incentive density. The 20-percent incentive density is available with coverage of at least 50 percent of the on-site open space. Given an average cost of $400 per tree, this is equivalent to $0.03 per square foot of incentive density.

Vegetated Area

This incentive requires vegetated area in addition to any required on-site open space or any vegetated roof incentive and must replace at least 5,000 square feet of impervious area with a minimum of 12 inches of soil depth and well-maintained vegetation for a five-percent incentive density. The maximum incentive density increase is provided for larger area, greater soil depth or other additional benefits. Vegetated area development costs an estimated $5,730 per 1,000 square feet or $2.63 per square foot of incentive density.

Vegetated Roof

A 10- to 20-percent incentive density bonus is awarded for a vegetated roof that covers a minimum of 33 percent of the building roof with a soil depth of at least four inches. The maximum increase requires coverage of a minimum of 60 percent of the roof area. At an average cost of $7 per square foot of roof area for a roof structure(s) that covers 80 percent of the 2.5-acre site, the cost would range from $8.40 to $9.24 per square foot of incentive density.

Building Lot Termination Incentive

This incentive allows the purchase of building lot termination (BLT) easements to qualify for one-half of the incentive density increase. BLTs must be purchased at the rate of 12.5 percent of the incentive density FAR with an assumed price of $200,000 per BLT. One BLT is required for each 7,500 square feet of non-residential floor area and each 9,000 square feet of residential floor area. For a 2.5-acre site developed at a 2.5 FAR with 228,000 square feet of residential uses and 44,000 square feet of retail uses, a project would require 3.12 BLTs for a total cost of $624,000 or $5.73 per incentive density square foot.

Appendix A. Draft Zoning Ordinance Amendment, July 13, 2009

Monday, July 13, 2009

Ordinance No:
Zoning Text Amendment No: 09-
Concerning: Commercial/Residential (CR) Zones Establishment
Draft No. & Date: 1 -6/16/09
Introduced:
Public Hearing:
Adopted:
Effective:

COUNTY COUNCIL FOR MONTGOMERY COUNTY, MARYLAND SITTING AS THE DISTRICT COUNCIL FOR THAT PORTION OF THE MARYLAND-WASHINGTON REGIONAL DISTRICT WITHIN MONTGOMERY COUNTY, MARYLAND

By: District Council at Request of the Planning Board

AN AMENDMENT to the Montgomery County Zoning Ordinance to:

- Establish a group of Commercial/Residential (CR) zones; and
- Establish intents, allowed land uses, development methods, general requirements, development standards, density incentive provisions, and approval procedures for development under the Commercial/Residential zones.

By amending the following section of the Montgomery County Zoning Ordinance, Chapter 59 of the Montgomery County Code:

By adding the following Division to the Montgomery County Zoning Ordinance, Chapter 59 of the Montgomery County Code:

DIVISION 59-C-15 "COMMERCIAL/RESIDENTIAL ZONES"
Sections 59-C-15.1 through 59-C-15.8

EXPLANATION:
Boldface *indicates a heading or a defined term.*
Underlining indicates text that is added to existing laws by the original text amendment.
[Single boldface brackets] indicate text that is deleted from existing law by the original text amendment.
Double underlining indicates text that is added to the text amendment by amendment.
[[Double boldface brackets]] indicate text that is deleted from the text amendment by amendment.
** * * indicates existing law unaffected by the text amendment.*

OPINION

ORDINANCE

The County Council for Montgomery County, Maryland, sitting as the District Council for that portion of the Maryland-Washington Regional District in Montgomery County, Maryland, approves the following ordinance:

Sec. 1. Division 59-C- is amended as follows:

* * *

DIVISION 59-C-15. COMMERCIAL/RESIDENTIAL (CR) ZONES

59-C-15.1. Zones Established.

59-C-15.11. The Commercial/Residential (CR) zones are established, respectively, as combinations of a sequence of four factors: maximum total floor area ratio (FAR), maximum non-residential FAR, maximum residential FAR, and maximum building height. These zones are identified by a sequence of symbols: CR, C, R, and H each followed by a number where,

- The number following the symbol "CR-" is the maximum total FAR,
- The number following the symbol "C" is the maximum non-residential FAR,
- The number following the symbol "R" is the maximum residential FAR, and
- The number following the "H" is the maximum building height in feet.

Each unique sequence of these symbols is a zone.

59-C-15.12. Any sequence of CR, C, R, and H is established as a zone according to the following rules:

a) The maximum total FAR must be an increment of 0.5 from 0.5 up to 8.0;
b) The maximum non-residential and residential FAR must be an increment of 0.5 from 0.5 up to 7.5; and
c) The maximum height must be an increment of 5 feet up to 300 feet.
d) The Commercial/Residential (CR) zones are Euclidean zones.

Examples:

- An area zoned CR-2.0, C1.0, R1.0, H80 allows a total FAR of 2.0, with maximum non-residential and residential FARs of 1.0, thereby requiring an equal mix of uses to obtain the total FAR allowed. The height for any building in this zone is limited to 80 feet.
- An area zoned CR-6.0, C3.0, R5.0, H200 allows a residential FAR up to of 5.0, whereas commercial density is only allowed up to an FAR of 3.0 and a mix of the two uses could yield a total FAR of 6.0. This combination allows for flexibility in the market and shifts in the surrounding context. The height for any building in this zone is limited to 200 feet.
- An area zoned CR-4.0, C4.0, R4.0, H160 allows the ultimate flexibility in the mix of uses and even buildings with no mix because the maximum allowed non-residential and residential FARs are both equivalent to the total maximum FAR allowed. The height for any building in this zone is limited to 160 feet.

59-C-15.2. Description and Intents of the CR Zones.

The CR zones permit a mix of commercial and residential uses at varying densities and heights. The zones promote economically, environmentally, and socially sustainable development patterns where people can live, work, and have access to services and amenities while minimizing the need for automobile use. CR zones are appropriate where ecological impacts can be moderated by co-locating housing, jobs, and services. The objectives of the CR zones are to:

a) Implement the policy recommendations of applicable master and sector plans;
b) Target opportunities for redevelopment of single-use areas and surface parking lots with a mix of uses;
c) Reduce dependence on the automobile by encouraging development that integrates a combination of housing types, mobility options, commercial services, and public facilities and amenities;
d) Encourage an appropriate balance of employment and housing opportunities and compatible relationships with adjoining neighborhoods;
e) Establish the maximum densities and building height for each zone, while retaining appropriate development flexibility within those limits; and
f) Standardize optional method development by establishing minimum requirements for the provision of the public benefits that will support and accommodate density above the standard method limit.

59-C-15.3. Methods of Development and Approval Procedures.

Two methods of development are available under the CR zones.

59-C-15.31. Standard Method.

Standard method development must comply with the general requirements and development standards of the CR zones. A site plan submission under Section 59-D-3 is required for a standard method development project only if:

a) The gross floor area exceeds 10,000 square feet;
b) Any building or group of buildings contains 10 or more dwelling units; or
c) The proposed development generates 30 or more new peak-hour trips.

59-C-15.32. Optional Method.

Optional method development must comply with the general requirements and development standards of the CR zones and must provide public benefits according to Section 59-C-15.7 to obtain the full densities and height allowed by the zone. A sketch plan and site plan are required for any development using the optional method. A sketch plan must be filed under the provisions below; a site plan must be filed under Section 59-D-3. Any required preliminary subdivision plan must be submitted concurrently with the site plan.

a) Contents of a sketch plan.
   a. Justification statement for optional method development addressing the requirements and standards of this Article.
   b. Conceptual uses and maximum densities per use.
   c. Building massing and height.
   d. General vehicular, pedestrian, and cyclist circulation.
   e. Table of proposed public benefits and incentive density requested per each benefit.

b) Procedure for a sketch plan.
   a. Before an application for review of a sketch plan, notice of the pending submission of the sketch plan, a public meeting to present and discuss the sketch plan, and site posting of the submission must comply with Section 4 of the Adopted and Approved Manual for Development Review Procedures for Montgomery County (Manual), as amended.
   b. Review procedure and fees for a sketch plan are the same as for a pre-application submission under Section 50-33A(a).

59-C-15.4. Land Uses.

No use is allowed except as indicated below:

- *Permitted Uses* are designated by the letter "P" and are permitted subject to all applicable regulations.
- *Special Exception Uses* are designated by the letters "SE" and may be authorized as special exceptions under Article 59-G.

a) Agricultural	
Farmer's markets	P

Farming, limited to vegetables, herbs, and ornamental plants	P
Nurseries	P
Seasonal outdoor sales	P
b) Residential	
Dwellings	P
Group homes, small or large	P
Hospice care facilities	P
Housing and related facilities for senior adults or persons with disabilities	P
Life care facilities	P
Live/Work units	P
Personal living quarters	P
c) Commercial Sales and Service	
Ambulances or rescue squads	P
Animal boarding places	SE
Automobile filling stations	SE
Automobile rental services, excluding storage of vehicles and supplies	P
Automobile repair and service	P
Automobile sales	P
Conference centers	P
Entertainment and spectator sports facilities such as cultural centers; art, athletic, and other events; theaters and cinemas; meeting/banquet halls	P
Health clubs and gyms	P
Home occupations, major	SE
Home occupations, registered and no-impact	P
Hotels and motels	P
Laboratories	P
Laundry or dry-cleaning services	P
Medical clinics	P
Offices	P
Recreational facilities, participatory, indoor	P
Recreational facilities, participatory, outdoor	SE
Research, development, and related activities	P
Restaurants	P
Retail sales and service, general	P
Self-storage facilities	SE
Veterinary hospitals	SE
Warehousing, not including self-storage, less than 10,000 square feet	P
d) Institutional & Civic	
Charitable and philanthropic institutions	P
Cultural and art exhibits, libraries and museums	P
Day care facilities and centers	P
Educational institutions, private	P
Hospitals	P
Parks and playgrounds, private	P

Private clubs	P
Publicly owned or operated uses	P
Religious institutions	P
e) Industrial	
Manufacturing and production, artisanal	P
Manufacturing and packaging related to biotechnical research and development	P
f) Other	
Accessory buildings and uses	P
Bus terminals, private	P
Parking garages, automobile	P
Public utility buildings, structures, and underground facilities	P
Radio and television broadcast studios	P
Rooftop mounted antennas and related unmanned equipment buildings, cabinets, or rooms	P

59-C-15.5. General Requirements.

Any development in the CR zone must comply with the following requirements.

59-C-15.51. Master Plan and Design Guidelines Conformance.

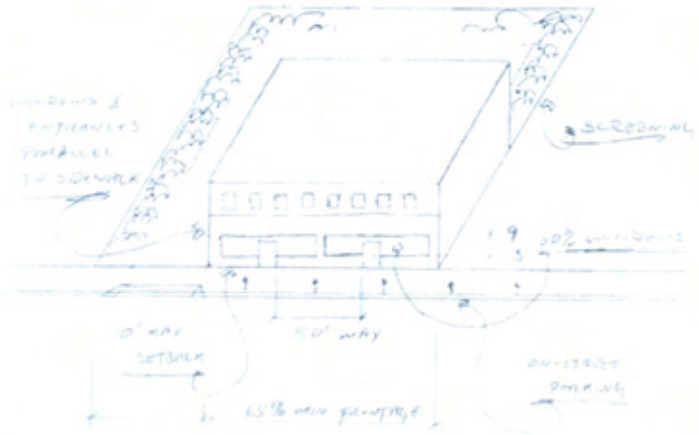
Site plans must be consistent with the applicable master or sector plan and design guidelines.

59-C-15.52. Priority Retail Street Frontages.

Any building that requires a site plan and is located on a street defined as a priority retail street frontage must provide the following:

a) On-street parallel parking, unless specifically denied by the agency maintaining the right-of-way;
b) Majority of display windows and entrances arranged between zero and 45 degrees to the sidewalk;
c) Shop entrances not more than 50 feet apart within the same development;
d) Building façade along a minimum of 65% of the aggregate length of the front street right-of-way;
e) Front building wall no farther than 10 feet from the public right-of-way or 5 feet if no public utility/improvement easement (PUE or PIE) is required; and
f) Windows on 60% of the building façade between 3 and 9 feet above sidewalk grade.

These provisions may be modified or waived by the Planning Board during the review of a site plan if found to be unreasonably burdensome to a proposed development due conditions such as unusual lot size, topography, limited frontage, or other atypical circumstance.



Priority Retail Building Requirements Illustrative (Place Holder)

59-C-15.53. Streetscape.

Streetscape improvements must satisfy the recommendations of the applicable approved and adopted master or sector plan.

59-C-15.54. Bicycle Parking Spaces and Commuter Shower/Change Facility.

a) Bicycle parking facilities must be free of charge, secure, and accessible to all residents or employees of the proposed development.
b) The number of bicycle parking spaces and shower/change facilities required is shown in the following table (calculations must be rounded to the higher whole number):

Bicycle and Shower/Change Facilities Required	
Use	Requirement
Residential	
In a building containing less than 20 dwelling units.	A minimum of 4 bicycle parking spaces.
In a building containing 20 or more dwelling units.	A minimum of 0.5 bicycle parking spaces per dwelling unit, not to be less than 4 spaces and up to a maximum of 100 required spaces.
In any group living arrangement expressly for senior citizens.	A minimum of 0.1 bicycle parking spaces per unit, not to be less than 2 spaces up to a maximum of 100 required spaces.

Non-Residential	
In a building with a total non-residential floor area of 1,000 to 9,999 square feet.	A minimum of 2 bicycle parking spaces.
In a building with a total non-residential floor area of 10,000 to 99,999 square feet.	One bicycle parking space per 10,000 square feet up to a maximum of 100 required spaces.
In a building with a total non-residential floor area of 100,000 square feet or greater.	One bicycle parking space per 10,000 square feet up to a maximum of 100 required spaces. One shower/change facility for each gender.

59-C-15.55. Parking.

a) The maximum number of parking spaces provided on site must not exceed the number established under Article 59-E.

b) The minimum number of parking spaces required is based on transit proximity as defined under 59-C-15.9 and calculated according to the following table:

Minimum Parking Requirements				
	Transit Proximity (Level 1 or 2)			
	¼ mile from transit	¼ to ½ mile from transit	½ mile to 1 mile from transit	>1 mile from transit
Commercial: calculate required spaces according to Article 59-E and multiply by the following factor:	0.20	0.40	0.60	0.80
Residential Uses: calculate required spaces according to Article 59-E and multiply by the following factor:	0.60	0.70	0.80	0.90

c) Parking requirements must be met by any of the following:
- Providing the spaces on site,
- Constructing on-street parking, or
- Entering into an agreement for shared parking spaces in a facility within 1,000 feet of the subject lot provided that the off-site parking facility is not in an agricultural, planned unit development, or residential zone.

d) Every "car-share" space provided reduces the total minimum number of required spaces by six spaces for non-residential use or three spaces for residential use.

Example: A site requiring a minimum of 100 spaces according to Article 59-E would be required to provide a maximum of 100 spaces on site. If that site was within ¼ to ½ mile of a transit station, the minimum requirement for parking would be 40 spaces (100 x 0.40 = 40). If two car-share spaces were provided, that requirement would be 28 for non-residential use or 34 for residential use.

e) The design of surface parking facilities must comply with the following:
   1) A parking facility at or above grade must not be located between the street and the main front wall of the building or the side wall of a building on a corner lot unless the Planning Board finds that safe and efficient circulation would be better served by a different arrangement;
   2) When a site is adjacent to an alley, the primary vehicular access to the parking facility must be from that alley; and
   3) Curb cuts must be kept to a minimum and shared by common ingress/egress easements whenever possible.

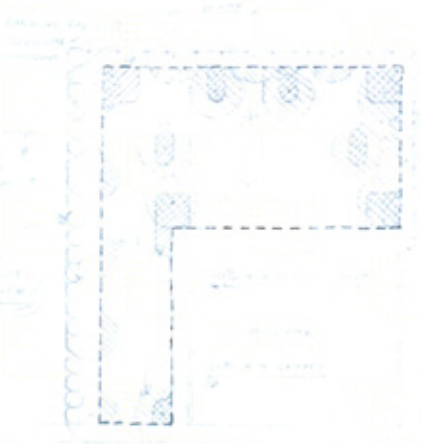
f) The design of parking facilities with drive-through services must comply with the following:
   1) The driveway must not be located between the street and the main front wall of a building or the side wall of a building on a corner lot unless the Planning Board finds that safe and efficient circulation would be better served by a different arrangement;
   2) The drive-through service window must be located on the rear wall of the building; and
   3) Curb cuts to a street must be minimized to one drive aisle of no more than 20 feet in width for two-way traffic or two drive aisles each of no more than 10 feet in width for one-way traffic unless the Planning Board finds that safe and efficient circulation would be better served by a different arrangement.

g) Landscaping for surface parking facilities must satisfy the following requirements:

Minimum Landscape Standards for Surface Parking

Subject	Requirement
Right-of-Way Screening	6-foot width of continuous soil panel or stormwater management recharge facility (not including any PUE or PIE) with groundcover, planting bed, or lawn; a minimum 3-foot high continuous evergreen hedge or fence; and one deciduous tree per 30 feet of street frontage or

	per the applicable streetscape standards.
Adjacent to a Property in any Commercial, Industrial, or Mixed-Use Zone	4-foot width continuous soil panel or stormwater management recharge facility with groundcover, planting bed, or lawn; one deciduous tree per 30 feet of frontage.
Adjacent to a Property in an Agricultural or Residential District	10-foot width continuous soil panel or stormwater management recharge facility with groundcover, planting bed, or lawn; 6-foot high continuous evergreen hedge or fence; and one deciduous tree per 30 feet of frontage.
Internal Pervious Area	10% of the parking facility area comprised of individual areas of at least 100 square feet each.
Tree Canopy Coverage	30% of the parking facility area (at 15 years growth).



Surface Parking Requirements Illustrative (Place Holder)

59-C-15.6. Development Standards.

The following development standards must be met by any development in the CR zones.

59-C-15.61. Density.

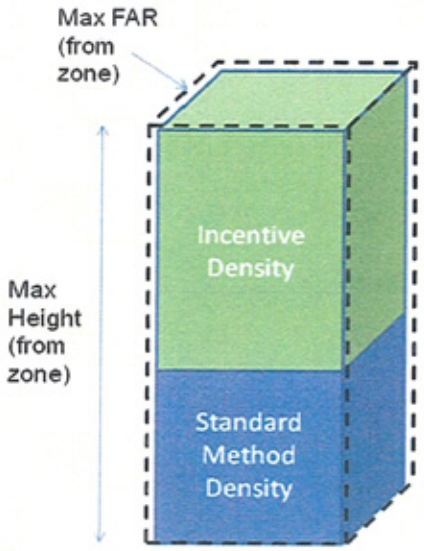
a) The maximum density for any standard method project is 0.5 FAR, which may be entirely commercial, residential, or a combination of both.

b) The maximum total density and mix of maximum non-residential and residential density for any project using the optional method of development is specified by the zone. The difference between the standard method density and optional method density is defined as "incentive density" and is allowed under the incentive density provisions of 59-C-15.7.

59-C-15.62. Height.

a) The maximum height for any standard method project is 40 feet.

b) The maximum height for any optional method project is specified by the zone.

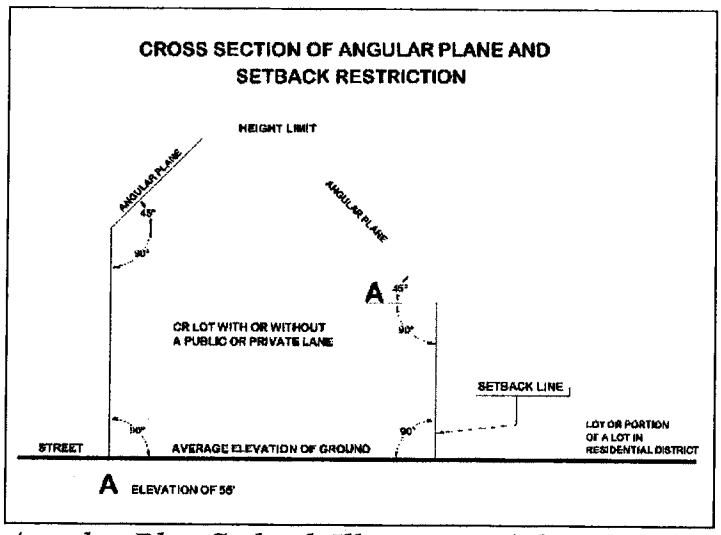


Incentive Density Illustration (Place Holder)

59-C-15.63. Setbacks.

A building must not be any closer to a lot line of an agricultural (59-C-9) or residential (59-C-1) zone than:

a) 25 feet or the setback required by the adjacent lot, whichever is greater, and
b) The building must not project beyond a 45 degree angular plane projecting over the lot measured from a height of 55 feet at the setback determined above, with the exception of those features exempt from height and setback restrictions under Section 59-B-1.



Angular Plan Setback Illustration (Place Holder)

59-C-15.64. Public Use Space.

a) The minimum public use space for any standard method project is 10%.

b) Projects using the optional method of development, must provide public use space as follows:

Minimum Required Public Open Space				
Acres	Street Frontages			
	1	2	3	4+
< ½	0	0	4%	6%
½ - 1.00	0	4%	6%	8%
1.01 - 3.00	4%	6%	8%	10%
3.01 – 6.00	6%	8%	10%	10%
6.01 +	8%	10%	10%	10%

c) Public use space must be:

1) Calculated on the net lot area of the site;
2) Rounded to the next highest 100 square feet;
3) Easily and readily accessible to the public;
4) Placed under a public access easement in perpetuity; and
5) Contain amenities such as seating options, shade, landscaping, or other similar public benefits.

d) In lieu of providing on-site public use space, for any site of 3 acres or less, a development may propose the following alternatives, subject to Planning Board approval:

1) Public use space improvements to an area equal in size within ¼ mile of the subject site; or
2) A payment in part or in full to the Public Amenity Fund equal to the average cost of required site improvements added to the current square foot market value of the area required as public use space.

59-C-15.65. Residential Amenity Space.

a) Any building containing 20 or more dwelling units must provide amenity space for its residents as follows:

Required Residential Amenity Space	
Type of Amenity Space	Area of Amenity Space
Indoor space in a multi-purpose room, fitness room, or other common community rooms, at least one of which must contain a kitchen and bathroom.	20 square feet per dwelling unit up to 5,000 square feet.
Passive or active outdoor recreational space.	20 square feet per dwelling unit, of which a minimum of 400 square feet must adjoin or be directly accessible from the indoor amenity space.

b) The amenity space is not required for Moderately Priced Dwelling Units (MPDUs) on a site within a metro station policy area or where the Planning Board finds that there is adequate recreation and open space within a ½ mile radius of the subject site.
c) The amenity space requirement may be reduced by ½ for Workforce Housing Units (WFHUs) located within a metro station policy area or if the minimum public open space requirement is satisfied on site.
d) The provision of residential amenity space may be counted towards meeting the required recreation calculations under the M-NCPPC Recreation Guidelines, as amended.

59-C-15.7. Special Regulations for the Optional Method of Development

59-C-15.71. Incentive Density Provisions.

This section provides incentives for optional method projects to provide public benefits in return for increases in density and height, consistent with the applicable master or sector plan, up to the maximum permitted by the zone.

a) The incentive density approved for each proposed public benefit is calculated as a percentage of the incentive density, which is the incremental difference between the standard method maximum FAR (0.5) and the maximum FAR in the zone;
b) The minimum and maximum incentive density percentage increases for each public benefit are established in Section 59-C-15.71(f).
c) The Planning Board may accept, reject, or modify the requested percentage above the minimum of incentive density established up to the maximum established. Except for those benefits with specific standards, in approving incentive densities above the minimum, the Planning Board must consider:
    i. The size and configuration of the parcel;
    ii. The policy objectives and priorities of the applicable master or sector plan;
    iii. The applicable design guidelines;
    iv. The relationship of the site to adjacent properties;
    v. The presence or lack of similar benefits nearby; and
    vi. Quantitative and qualitative enhancements provided exceeding the delineated minimum incentive density standards.
d) In addition to the public benefits set forth below, an Applicant may propose other public benefits that will further the goals and objectives of the subject master or sector plan for the purpose of obtaining an incentive density increase.
e) The Planning Board may grant no more than 30% of the total incentive density for the connectivity, design, diversity, or environment incentive categories under (f) below or any public benefit approved under (d) above;

Example: A development in a zone with a maximum FAR of 5.5 would base all public benefit calculations on the incentive density of 5.0 FAR (5.5-0.5). Thus, being on a site adjacent to a metro station would yield an automatic incentive density of 2.5 FAR (5.0x.50) and full density would be allowed by providing public benefits equal to an additional 50 percent.

e) Provision for inspections, maintenance, and enforcement of public benefits provided in return for incentive density must be established in a Site Plan Enforcement Agreement approved by the Department of Permitting Services

and by resolution of the Planning Board prior to the certification of a site plan.

f) Table of density incentives:

Incentive Zoning Table			
Public Benefit	**Percent of Incentive Density**		**Section Reference**
	Minimum	**Maximum**	
Transit Proximity			
Adjacent or Confronting Transit Access	25	50	15.72
Transit Access within ¼ Mile	20	40	
Transit Access between ¼ and ½ Mile	15	30	
Transit Access between ½ and 1 Mile	10	20	
Connectivity & Mobility			
Community Connectivity	10	20	15.731
Community Garden	5	10	15.732
Parking at the Minimum	10	20	15.733
Pedestrian Through-Block Connection	5	10	15.734
Public Parking	20	30	15.735
Transit Access Improvement	10	20	15.736
Diversity			
Adaptive Buildings	15	30	15.741
Affordable Housing: MPDUs	See section reference		15.742
Affordable Housing: WFHUs	See section reference		
Care Center	10	20	15.743
Community Facility	10	20	15.744
Local Retail Preservation	10	20	15.745
Unit Mix and Size	5	10	15.746
Design			
Floor Plate Size	10	20	15.751
Historic Resource Protection	10	20	15.752
Parking Below Grade	10	20	15.753
Podium/Tower Setback	5	10	15.754
Public Art	10	20	15.755
Public Plaza/Open Space	5	10	15.756
Streetscape, Off-Site	5	10	15.757
Wow Factor	10	20	15.758
Environment			
Bio-retention and Stormwater Recharge	5	10	15.761
Conveyed Parkland	10	20	15.762
Dark Skies	5	10	15.763
Energy Efficiency and Generation	10	20	15.764
Green Wall	5	10	15.765
LEED Rating	10	30	15.766
Rainwater Reuse	5	10	15.767
Transferable Development Rights	10	30	15.768
Tree Canopy	10	20	15.769
Vegetated Area	5	10	15.7610
Vegetated Roof	10	20	15.7611
Building Lot Terminations	-	50	15.77

59-C-15.72. Transit Proximity Incentives.

Development close to transit encourages greater transit use and reduces vehicle miles travelled, congestion, and carbon emissions. Transit proximity is defined under 59-C-15.9 and incentive density is provided as follows:

Proximity	Level 1 Transit	Level 2 Transit
Adjacent or confronting	50%	25%
Within ¼ mile	40%	20%
Between ¼ and ½ mile	30%	15%
Between ½ and 1 mile	20%	10%

59-C-15.73. Connectivity and Mobility Incentives.

Projects that enhance connectivity and mobility encourage pedestrian and other non-auto travel for short and multi-purpose trips as well as for commuting. They facilitate social interaction, provide opportunities for healthier living, and stimulate local businesses.

59-C-15.731. Community Connectivity.

The minimum incentive density increase for a building that enhances community connectivity by locating near existing retail uses and/or providing retail uses requires that:

a) at least ten different existing or proposed retail uses with direct pedestrian access are within 1/2 mile and
b) a minimum of 35% of those uses have a maximum floor area of 5,000 square feet and that any newly provided retail uses remain at or below that area for a period of at least 4 years after the initial use-and-occupancy permit is issued for that use.

The maximum increase requires additional benefits such as a large diversity of retail, a greater number of retail shops, provision of services associated with live-work units, or that the required number of retail uses are within ¼ mile.

59-C-15.732 Community Garden.

Community gardens allow residents to grow their own produce, reduce automobile reliance, increase water and air quality, and foster social interaction. The minimum incentive density increase requires that the garden:

a) Is located on the subject site or within 500 feet of the subject site;
b) Provides all garden spaces with a minimum of 12" of soil depth and access to water; and
c)

Provides community garden space at a rate equivalent to one space per 20 dwelling units. Each space must be at least 16 square feet. At least one out of each ten spaces must be accessible according to ADA standards.

The maximum increase requires additional features such as a composting facility, additional garden space, seating areas, doubling as a green roof, or additional accessible garden plots.

59-C-15.733. Parking at the Minimum.

a) The minimum incentive density increase requires that sites of one acre or more provide on-site only the minimum required number of parking spaces.
b) The maximum increase requires that sites of less than one acre provide on-site only the minimum required number of parking spaces.

59-C-15.734. Pedestrian Through-Block Connections.

Through-block connections enhance pedestrian mobility and help to create a variety of open spaces, particularly on larger blocks. The minimum incentive density increase for a pedestrian through-block connection requires that:

a) The pedestrian connection must provide direct access between two or more streets;
b) The minimum width of the pedestrian connection must be 15 feet;
c) A minimum of 35 percent of the walls facing the interior pedestrian connection below a height of 8 feet must have clear, unobstructed windows unless an alternative design is found to be at least equally safe;
d) The pedestrian connection must be open to the public between sunrise and sunset and, where it leads to a transit facility or publicly-accessible

parking facility within ½ mile, for the hours of operation of the transit and/or parking facility; and

e) New retail uses fronting both a pedestrian connection and a street, must maintain operable doors from both unless not required by the Planning Board during site plan review.

The maximum increase requires additional benefits such as direct connection to parks, transit facilities, or public buildings; the pedestrian connection is animated by retail uses along a majority of its length; the connection is increased in width; or public artworks are integrated into the walk.

59-C-15.735. Public Parking.

The minimum increase requires providing on-site the difference between the minimum number of required parking spaces and the maximum number of allowed parking spaces as publicly accessible spaces for free or at a market rate.

The maximum increase requires providing public parking spaces as required above in combination with additional improvements such as constructing those spaces underground or in a structure.

59-C-15.736. Transit Access Improvement.

The minimum incentive density increase for transit access improvements requires that:

a) The improvements are located within 1/2 mile of the proposed development site or, in the case of mobile transit improvements such as a bus shuttle, that provide regular access for passengers within 1/2 mile and

b) The improvements are built to current ADA accessibility standards.

The maximum increase requires additional benefits such as closer access, new access easements, connecting walkways, mezzanines, seating areas, structures for wind/rain protection, or concourse areas.

59-C-15.74. Diversity Incentives.

59-C-15.741. Adaptive Buildings.

Adaptive buildings can adjust to a diversity of uses over time, which makes them more accommodating of mixed uses, more sustainable, and more embedded in the pattern of a community. The minimum incentive density increase for an adaptive building requires that:

a) The minimum floor to floor dimension is 15 feet for all floors and
b) The internal floor plan is based on a structural system allowing flexibility of volumes divisible from one open floor plate to any number of parceled volumes.

The maximum increase requires additional benefits such as that the structural system has additive capacity for any available density and height that is not used by the building without demolition of the structure or the internal layout is built with a flexible cellular system that allows for residential, retail, and office uses to occupy any of the cells.

59-C-15.742. Affordable Housing.

All development must comply with the requirements of Chapters 25A and 25B for the provision of Moderately Priced Dwelling Units (MPDUs) and Workforce Housing Units (WFHUs).

Provision of MPDUs above the minimum required grants an incentive density increase providing the following standards are met:

a) The increase in density is calculated on the incentive density as required by Chapters 25A;
b) The MPDUs must be reasonably distributed throughout the project; and
c) Any dwelling units built under this section must be controlled as either MPDUs for a minimum period of 99 years.

Example: Provision of 14.5% MPDUs achieves an incentive density increase of 20% (25-A-5(c)(3)). In the case of a CR4.5, that would equal 0.20 x 4.0 (the incentive density), which is 0.8 FAR.

Provision of WFHUs grants an incentive density increase at the following rate: 2 times the percentage of units provided as WFHUs up to 30%.

Example: Provision of 5% WFHUs achieves an incentive density increase of 10%; provision of 12% WFHUs achieves an incentive density increase of 24%.

59-C-15.743. Care Center.

The minimum incentive density increase for a center for daytime adult or child care requires that at least 12 slots are provided and a minimum of 25 percent of the available slots in the care center is available to the general public.

The maximum increase requires additional benefits such as additional slots, a safe drop-off area, an increase in slots available to the general public, and recreation facilities provided above those required by law.

59-C-15.744. Community Facility.

The minimum incentive density increase for a community facility that helps meet the needs of residents and workers requires that:

a) The community facility is recommended in the appropriate master plan or sector plan and
b) Is accepted for operation and use by an appropriate public agency, community association, or nonprofit organization;

The maximum increase requires further benefits such as an entrance to the facility directly on the street, location of the building within 10 feet of a public sidewalk, associated outdoor open space, or integration into an area with a minimum residential FAR of 2.0 or greater (or 30 dwelling units per acre).

59-C-15.745. Local Retail Preservation.

Preservation of locally-owned small businesses on site, as determined by the Small Business Administration's Table of Small Business Size Standards (SBA Table) is eligible for incentive density according to the following:

a) Preservation of up to 2 small businesses: 10% and
b) Preservation of 3 or more small businesses: 20%.

59-C-15.746. Unit Mix and Size.

The minimum incentive density increase for creating residential buildings with a minimum mix of dwelling unit types (calculated by rounding to the next higher whole number) requires provision of at least:

a) 7.5 percent as efficiency dwelling units,
b) 8 percent as one-bedroom dwelling units,
c) 8 percent as two-bedroom dwelling units, and
d) 5 percent as three-bedroom dwelling units.

The maximum increase requires provision of at least (rounded to the next higher whole number):

a) 10 percent as efficiency dwelling units,
b) 10 percent as one-bedroom units,
c) 10 percent as two-bedroom units, and
d) 7.5 percent as three-bedroom units.

59-C-15.75. Design Incentives.

59-C-15.751. Floor Plate Size.

The minimum incentive density increase for the provision of floor plate restrictions requires that:

a) The floor area of any floor above a height of 120 feet does not exceed 10,000 square feet for residential uses or 19,000 square feet of non-residential uses, or 12,000 square feet of mixed-uses (provided that not more than 60 percent of a mixed- use floor is used for any single use); and
b) The exterior of the building facing any street or public open space has a minimum of 60 percent glass on the floors with the reduced floor plate.

The maximum increase requires additional benefits, such as providing the reduced floor plates in conjunction with the Wow Factor, providing smaller floor plates, combining this incentive with the tower setback, providing a larger percentage of glass, or integrating sustainable technologies into the architecture.

59-C-15.752. Historic Resource Protection.

The minimum incentive density increase for the protection of a historic resource as designated in the Master Plan of Historic Preservation requires that a preservation plan for the resource is approved by the Historic Preservation Commission.

The maximum increase requires that other benefits are provided, such as interpretive signs/exhibits, integration and construction of context-appropriate landscapes and settings, or protection of important viewsheds.

59-C-15.753. Parking Below Grade.

The minimum incentive density increase requires that sites of one acre or more provide all on-site parking spaces below the average grade of the primary street frontage.

The maximum increase requires that sites of less than one acre provide all on-site parking spaces below the average grade of the primary street frontage.

59-C-15.754. Podium/Tower Setback.

The minimum incentive density increase for the provision of a tower setback requires that the tower must be set back from the first floor building frontage at or below 72 feet and the setback must be a minimum of 6 feet.

The maximum increase requires that the tower setback be at or below 50 feet and that the setback be a minimum of 12 feet.

59-C-15.755. Public Art.

Public art is considered a public benefit because it enhances the quality of place and creates a sense of identity in a community. The minimum incentive density increase for public art requires that:

a) It enhances the general or specific cultural objectives of the applicable master or sector plan;
b) It is approved by the Public Arts Trust Steering Committee.

The maximum increase requires that, in addition to the above requirements, the artwork fulfill a minimum of five of the eight goals enumerated in the

report by the Study Committee on Artwork in the Optional Method Projects report that was approved by the Planning Board, as amended.

A fee-in-lieu for public art may be made according to the following provisions:

a) The minimum fee is calculated on 1% of the development's projected cost;
b) The fee is paid to the Public Arts Trust Steering Committee;
c) The fee is used for installation, management, and maintenance of public art in the policy area where the proposed development is located; and
d) The incentive density is equal to a 5% increase for every 1% of projected development cost paid to the Steering Committee up to 20%

59-C-15.756. Public Plaza/Open Space.

Plazas are important public amenities and create interesting spaces and active gathering areas. The minimum incentive density increase for any plaza requires that:

a) The plaza is directly accessible to a street;
b) The plaza must be open to the public at a minimum between sunrise and sunset;
c) No proposed loading or parking facilities should be visible below a height of the fourth floor; and
d) The plaza must be in addition to any public use space required by the development standards or other minimum open space requirement of this Article.

The maximum increase requires that the above requirements are met in addition to the following:

a) The minimum width of the plaza must be 50 feet;
b) Where the plaza is provided as part of a redevelopment, buildings facing the plaza must be designed so that:
    1) The walls of any non-residential floor area facing the plaza must have windows on a minimum of 60 percent of the façade below a height of 40 feet and
    2) The main entry to any dwelling units is from a wall facing the plaza;

c) The plaza should contain seating, trash receptacles, landscaping, and other amenities such as water features, kiosks, and passive recreation areas.

59-C-15.757. Streetscape, Off-Site.

Streetscape improvements enhance the pedestrian experience and better connect buildings to the public spaces. The minimum incentive density increase for streetscape improvements requires that the following criteria are met:

a) The improvements must be located within 1/2 mile of the subject site and
b) The improvements are equal to 18 percent of the net lot.

The maximum increase requires that the improvements be equal to a minimum of 36 percent of the net lot area.

59-C-15.758. Wow Factor.

The minimum incentive density increase for high-quality site and architectural design requires that at least three of the following criteria are met. The maximum density increase requires that a least five of the following criteria are met.

a) Provides innovate solutions in response to the architectural context and surrounding landscape, for example by rotating floor plates for views or reconciling offset street-walls;
b) Creates a sense of place that will serve as a landmark in the community, for example by creating a distinguishing element that is visible from an important view or at a gateway to an area;
c) Enhances the public realm in a distinct and original manner, for example by using existing materials and forms in new ways to provide continuity and contrast;
d) Adds to the diversity of the built realm within the community, for example by introducing new materials, building methods, or design styles;
e) Uses design solutions to make compact/infill living, working, and shopping environments pleasurable and desirable, for example by retrofitting surface parking lots and single-use retail malls or creating

multi-use, pedestrian-dominated realms in previous auto-oriented areas; and

f) Integrates environmentally sustainable solutions, for example by using bmp stormwater management facilities in an apparent and observable way or integrating passive solar features into the visible structure of a building or site.

59-C-15.76. Environment Incentives.

59-C-15.761. Bio-retention and Stormwater Recharge.

The minimum incentive density increase for the use of bio-retention and recharge facilities requires that a minimum of 25% of projected stormwater outfall for a 10-year event be contained and recharged on site or within ¼ mile of the site.

The maximum increase requires that a minimum of 50% of projected stormwater for a 10-year event be contained and recharged.

59-C-15.762. Conveyed Parkland.

The minimum incentive density increase for land conveyed to the M-NCPPC Department of Parks for inclusion in or provision of parkland, trail area, or other master-planned Parks' use requires conveyance of at least of 15% of the gross lot area. The maximum increase requires conveyance of at least 30% of the gross lot area.

59-C-15.763. Dark Skies.

The minimum incentive density increase for dark skies-compliant projects requires that they be built and maintained in conformance with the standards established by the International Dark-Sky Association (http://docs.darksky.org/Codes/LightingCodeHandbook.pdf).

The maximum increase requires that the exterior lighting plan be integrated into an energy efficiency plan for the entire property submitted and approved by the Planning Board with a site plan application.

59-C-15.764. Energy Efficiency and Generation.

The minimum density incentive increase for the use of on-site renewable energy generation requires that buildings must meet the minimum energy efficiency standards of 17.5% for new buildings or 10.5% for existing buildings and/or generate a minimum of 1.5% of their energy cost on site energy generation.

The maximum increase requires additional benefits such as greater energy efficiency and the generation of a minimum of 2.5% of energy cost on site.

59-C-15.765. Green Walls

The minimum incentive density increase for a green wall requires that:

a) It must be designed, installed, and maintained to cover a minimum of 30% of the area of a blank wall or parking garage facing a street or plaza;
b) It must be found to add to the aesthetic quality and environmental sustainability of the project; and
c) It should be on the south or west facades of the building to achieve maximum energy savings.

The maximum increase requires additional benefits such as a greater percent of coverage, the use of plants with varying flowering seasons, or integration into an overall energy or environmental site design program.

59-C-15.766. LEED Rating.

A LEED-rated (or County-approved equivalent) building or site is eligible for an incentive density increase provided it meets any continuing requirements necessary to maintain that status. (http://www.usgbc.org/Default.aspx) The amount of incentive density increase is equal to the following:

a) LEED Silver: 10%
b) LEED Gold: 20%
c) LEED Platinum: 30%

59-C-15.767. Rainwater Reuse.

The minimum incentive density increase for the collection of rainwater for on-site irrigation, grey-water use, or filtration for re-use, requires that a minimum of 25% of projected rainwater for a 10-year event be collected and used on-site or within ¼ mile of the site.

The maximum increase requires that a minimum of 50% of projected rainwater for a 10-year event be collected and used.

59-C-15.768. Transferable Development Rights

The incentive density increase for the purchase of transferable development rights (TDRs) must meet the following:

a) The purchase must be executed and recorded prior to approval of a record plat;
b) The use of this incentive must be for development on land recommended as a TDR receiving area in an approved and adopted master or sector plan;
c) TDRs must be purchased in groups of 10; and
d) The incentive density increase is equal to 10% for every 10 TDRs purchased up to 30%.

59-C-15.769. Tree Canopy.

The minimum incentive density increase for the provision of tree canopy requires coverage of at least 25% of the on-site open space at 15 years growth.

The maximum increase requires coverage of at least 50% of the on-site open space at 15 years growth.

59-C-15.7610. Vegetated Area.

The minimum incentive density increase for a vegetated area requires that the following criteria are met:

a) The area must be in addition to any required on-site open space or any vegetated roof incentive;
b) The area must replace at least 5,000 square feet of impervious area;
c) The area provides a minimum of 12 inches of soil depth; and

d) The area is planted with well-maintained vegetation.

The maximum increase requires additional benefits such as larger area or greater soil depth.

59-C-15.7611. Vegetated Roof.

The minimum incentive density increase for a vegetated roof requires that:

a) The vegetated roof must cover a minimum of 33% of the roof of the building, excluding any space occupied by mechanical equipment and
b) The soil or media depth must be a minimum of 4 inches.

The maximum increase requires coverage of a minimum of 60% of the roof area.

59-C-15.77. Special Regulations for Use of a Building Lot Termination (BLT) Development Right.

Building lot termination easements may be purchased for incentive density according to the following provisions:

a) BLT easements must be purchased or a contribution must be made to the Agricultural Land Preservation Fund under Chapter 2B equal to 12.5 percent of the incentive density FAR;
b) One BLT is required for every 7,500 square feet of non-residential floor area of the 12.5% incentive density area calculated in (a);
c) One BLT is required for every 9,000 square feet of residential floor area of the 12.5% incentive density area calculated in (a);
d) When a BLT easement cannot be purchased or the amount of floor area attributed to a building lot termination easement is a fraction of the floor area equivalent, payment must be made to the Ag Land Preservation Fund according to the rate set annually by executive regulation; and
e) The maximum incentive density increase is 50%.

59-C-15.8. Existing Approvals.

a) A lawfully existing building or structure and the uses therein, which predates the applicable sectional map amendment, is a conforming structure or use, and may be continued, renovated, reconstructed to the same size and configuration,

or enlarged up to 10 percent above the existing floor areas or 7,500 square feet, whichever is less and does not require a site plan. A larger addition requires compliance with the full provisions of this division.

b) A project that received an approved development plan under 59-D-1 or 59-H-2.5 prior to the enactment of the CR zones may proceed according to the binding elements of the development plan and will thereafter be treated as a lawfully existing building under section a) above. Any increase in the total floor area, height, or reduction of setbacks approved by the development plan requires compliance with the full provisions of this division.

c) A project which has had a preliminary or site plan approved prior to the applicable sectional map amendment may be built or altered at any time subject to either the full provisions of the previous zone or this division at the option of the owner. If built in accordance with the provisions of the previous approval, it shall thereafter be treated as a lawfully existing building under section a) above.

59-C-15.9. Definitions Specific to the CR Zones.

Car share space: A parking space that serves as the location of an actively in-service vehicle used by a vehicle-sharing service.

Live/Work unit: Buildings or spaces within buildings that are used jointly for commercial and residential purposes where the residential use of the space is secondary or accessory to the primary use as a place of work.

Priority retail street frontage: Frontage along a right-of-way identified in a Master or Sector Plan to be developed with street-oriented retail to encourage pedestrian activity along the.

Public owned or operated uses: Activities that are located on land owned by or leased and developed or operated by a local, county, state, or federal body or agency.

Recreational facilities, participatory, indoor: Provision of sports or recreation by and for participants for uses conducted within an enclosed building. Spectators would be incidental on a nonrecurring basis. Typical uses include bowling alleys, billiard parlors, indoor tennis and handball courts, and health clubs.

Recreational facilities, participatory, outdoor: Provision of sports or recreation by and for participants for uses conducted outside of an enclosed building. Spectators would be incidental on a nonrecurring basis. Typical uses include

driving ranges, miniature golf courses, swimming pools, and outdoor ice skating rinks.

Retail sales and service, general: Commercial establishments engaged in selling merchandise to the general public and services incidental to the sale of merchandise. These establishments include, for example, antique shops, drug stores, dry-cleaning pick up stations, duplicating services, florists, grocery stores, health clubs, newsstands, photographic studios, shoe repair shops, specialty shops, and tailoring shops, among many others.

Transit proximity: Level 1 proximity is based on location within one mile of a Metrorail Station. Level 2 proximity is based on location within one mile of a Marc Station or a transportation corridor with fixed route bus service where service intervals are no longer than 15 minute during peak commute hours. A project shall be considered to be within one mile of transit if all parcels within the project have no more than 25% of their area farther than one mile from a transit stop or corridor and if not more than 10% of the residential units in the project are father than one mile from the stop or corridor. A planned transit stop or corridor is one that is funded for construction within the first four years of the Consolidated Transportation Program and/or the Capital Improvement Program.

Sec. 2. Effective date. This ordinance becomes effective 20 days after the date of Council adoption.

This is a correct copy of Council action.

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Linda M. Lauer, Clerk of the Council