Fairfax County Federation of Citizens Associations

DRAFT RESOLUTION
Green Building Practices through the Comprehensive Plan

WHEREAS, increased land use density increases the demand for energy (whether from electricity, natural gas or other non-renewable sources), stormwater runoff mitigation, and wastewater treatment facilities; and

WHEREAS, green building standards minimize these demands;

WHEREAS, the County is responsible for regulating stormwater management facilities and for providing wastewater treatment facilities; and

WHEREAS, increased demand for energy requires greater need for power line and natural gas rights-of-ways and energy production and distribution facilities;

WHEREAS, increased demand for energy also contributes to ozone and particulate matter air pollution and emissions of climate-changing greenhouse gasses; and

WHEREAS, Northern Virginia, including Fairfax County is not in attainment of the National Ambient Air Quality Standards for ozone or fine particulate pollution; and

WHEREAS, the Board of Supervisors has adopted the goal of reducing greenhouse gas emissions by 80% by 2050; and

WHEREAS, it is estimated that over 50% of the CO_2 emissions in the United States comes from building heating, cooling, lighting or other electrical use associated with residential or office buildings; and

WHEREAS, the Policy Plan of the Comprehensive sets forth guiding policies and principles and the Area Plans provide specific guidance on specific land uses in the County; and

WHEREAS, the increased electricity and wastewater demand of increased density is not currently being accounted for in the development of the Comprehensive Plan; and

WHEREAS, green building standards such as the Leadership in Energy and Environmental Design® (LEED®) minimize energy and wastewater demand, and the requirements for stormwater mitigation measures.

WHEREAS, green building standards need to apply not only to internal building impacts on energy and resources, but on the energy and resource impact on the site itself, and

THEREFORE BE IT RESOLVED, that the Fairfax County Federation of Citizens Associations (the Federation) commends the Environmental Committee of the Board of Planning Commission for exploring ways to encourage use of green building techniques through the comprehensive planning process.

BE IT FURTHER RESOLVED, that the Federation believes that the goal of the policy to account for green building techniques in the Comprehensive Plan should be that increased density should not cause an increased demand for energy, wastewater facilities or stormwater mitigation measures; and

BE IT FURTHER RESOLVED, that the Federation would like to see an RZ and Site Plan process for County facilities at the least that requires a "green inventory" of natural resources on a parcel that takes into account existing trees, grade and type of soil, water features, maximizes southern exposure, etc. before a building or facility is sited and

BE IT FINALLY RESOLVED, that the Federation submits the attached specific comments to "Encouraging Green Building Practices through the Comprehensive Plan 'Strawman' Outline of a Possible Approach Presented for Discussion: September 6, 2007".

Comments on Specific Strawman Proposals

As indicated in the Resolution, the Fairfax County Federation of Citizens Associations (Federation) believes that the organizing principal for the incorporation of Green Building practices through the Comprehensive Plan should be no increase in energy demand, wastewater generation or stormwater runoff from what would be normal for by-right development. The energy demand for by-right development can be estimated based on total county carbon dioxide generation calculated based on energy use per square foot of habitable space (whether from electrical, natural gas or other non-renewable energy sources). The same approach could be used to estimate the by-right wastewater generation. Estimating the by-right stormwater runoff can be calculated based on climax forest runoff per acre degraded by the normal percentage of impervious surfaces common in by-right development.

Similarly, using the guiding principal outlined in the Resolution developers requiring rezoning should be required to provide a proffer equal to the 5-year cost of energy use as calculated for by-right development. The amount of bond released would then be based on the estimated 5-year cost of energy for the developed project released one year after the receipt of the occupancy permit using energy use data provided adjusted appropriately if the year for which the data was collected was abnormal. If the new development consumes no more energy than would be consumed by a by-right development, the full bond would be released. To the extent that the new development uses more energy than a by-right development, then only a portion of the bond would be released. For instance if the new development used 1.5 times as much energy than a by-right development only 1/1.5 (or 2/3) of the bond would be released.

For wastewater use the bond amount could be either based on the 5-year water costs or based on the incremental cost of wastewater treatment facilities (whichever is greater). In either case the amount of bond released could similarly be calculated as with the energy use discussed above.

Stormwater impacts could be calculated based on the cost of building new stormwater treatment facilities. These costs could be calculated based on the estimated costs for projects identified in the drainage basin plans. Estimating the amount of the bond that can be released will be more difficult to calculate, but could be based on stormwater runoff flow measurements and/or calculations.

The Federation believes any bonded funds that were forfeit should be used to address Environmental Improvement Program (EIP) projects. The funds could be segregated according to the type of bond. For instance forfeited energy use bond funds could be used for air pollution or energy reduction projects. Wastewater generation bond funds could be used for water projects either drinking water or wastewater projects. Stormwater funds made available could be further segregated by drainage basin or go to the highest priority projects for the County.

Applying these principals the “Strawman” Proposals:

1. **Do not pursue density/intensity "bonuses" at this time but instead consider application of bonus density/intensity opportunities through Area Plan reviews. At this time, pursue a Policy Plan amendment that would establish linkages between Area Plan density/intensity/use options, as well as Plan density/intensity ranges, for certain levels of green building performance.**

The Federation believes that it is important that the County encourage the use of Green Building techniques with all deliberate speed because of the slow turnover in building stocks. Incorporating the principals as discussed above will ensure that the County will be able to minimize the economic impacts to the County of new developments. We believe implementing a Green Building program in the manor we have outlined above is entirely consistent with the current comprehensive plan since energy use, water use and stormwater runoff are rarely considered in the development of the current comprehensive plan even though they should have been. Therefore a revision of the Policy Plan would be the simplest way to implement the program. Similarly the Federation believes that as Area Plans are revised the principals outlined here should be discussed and incorporated into the revised Plans as is appropriate for each proposed plan amendment.

2. **Incorporate the concept of certification under an established green building program, where applicable, as a preferred means of third party verification of green building performance. However, recognize that other viable approaches may be suggested by applicants during the course of the zoning process and remain open to the pursuit of such approaches.**

If the Green Buildings are encouraged in the manor we have outlined, it would not be necessary to go to third party verification. As a convenience the County could designate specific levels of third party verification programs as being equivalent to specific reduction goals and in this way the bonded funds could be released based on third party certification rather than demonstrated performance.

3. **Identify LEED® as an acceptable green building rating system that can be linked to Comprehensive Plan options and density/intensity ranges, but recognize the ability to pursue alternative equivalent systems or approaches. Evaluate alternative systems and approaches as they are proposed by developers during the zoning process.**

LEED® may not be a perfect surrogate for demonstrated performance but it may be an expedient certification. The Federation notes that LEED® takes into consideration other externalities that the approach the Federation has outlined does not. For instance LEED® takes into consideration the way wood used in the building construction is harvested and the distance that construction materials must travel to reach the site. These externalities mean that a LEED® certified building that may not meet energy saving goals, but may still be able to demonstrate the equivalent greenhouse gas reduction due to the externalities that the LEED® program takes into consideration. It would be appropriate therefore to base the assumed energy savings of a LEED® certified construction based on the equivalent greenhouse gas reduction for the LEED® certified construction over a 5-year period as compared to the greenhouse gas generation for a traditionally constructed by-right building.

4. **Limit the application of LEED®-based (or equivalent) linkages to Plan options/density/intensity ranges to nonresidential development, mixed use development and multifamily residential development of four or more stories.**

Using the approach the Federation has outlined here, there would be no need to limit the program to nonresidential developments or to have to rely on programs such as "ENERGY STAR Qualified Homes". However, they could easily be added as the standards become more clearly determined.

5. **Limit the linkage of green building performance and Comprehensive Plan options and density/intensity ranges to transit station areas and other growth centers, at least initially until experience with these linkages can be gained. Evaluate the effectiveness and limitations of this approach after a certain period of time and modify the program as needed.**

The Federation believes that initially the linkage should be to by-right development not to any density/intensity range in the Comprehensive Plan. As Area Plans are revised linkages to the density/intensity ranges could be incorporated into the new Plans.

6. **Establish the LEED® Certified level (or equivalent) of green building performance as the expected level of performance, where applicable, linked to Plan options and densities. Seek additional commitments to the Silver or higher level of LEED® (or equivalent) performance and encourage commitments to attainment of LEED® credits that may be of particular local/regional importance.**

The approach suggested by the Federation would not preclude the use of LEED® certification as a surrogate for performance metrics and as such different levels of LEED® certification should be equivalent to different levels of performance.

7. **Consistent with other strawman proposals, apply the green building performance linkage for (a) Comprehensive Plan options in transit station areas and other growth centers; (b) Overlay levels of development where specified; and (c) the "high end" of the density/intensity range, with the top 40% of the nonresidential intensity range (with the by-right potential considered as the base of the range) to be considered for nonresidential development.**

As Area Plans are revised, different efficiency metrics could be incorporated into the plans, but initially the Policy Plan should set up a no net increase approach.

8. **Adopt Policy Plan text providing broad support for the application of green building practices and pursue commitments from developers to green building practices, even outside areas subject to the LEED®-based (or equivalent) linkage to Plan options or density/intensity ranges.**

If the approach outlined above were followed no linkage to density/intensity ranges would be necessary.

9. Where applicable, pursue commitments to the "Designed to earn the ENERGY STAR" program.

The "Energy Star" program can easily be incorporated if the approach we have outlined here is followed.

10. Establish an expectation that, for residential development within the high end of the Plan density range (the upper 40% of the Plan density range), eligible homes will qualify for the "ENERGY STAR Qualified Homes" designation.

The goal should be no net increase and as such it is not linked to the density range at all.

11. Retain flexibility to consider enforcement approaches that may be identified by applicants during the zoning process. Recognize the following as acceptable approaches: (1) linkage to issuance of occupancy permits; (2) linkage to refunds of project bonds; and (3) establishment of a green building bond linked to green building performance and to the value of the Plan option or density/intensity range (subject to further analysis and legal review).

The approach the Federation has proposed incorporates a bonding mechanism linked to energy use, wastewater generation and stormwater runoff from by-right construction. Since the Bond is tied to infrastructure impacts it should not conflict with the Dylan Rule.

12. Staff does not have a recommendation regarding a green building fund contribution concept at this time.

The Federation has outlined a bonding formula based on energy and water use per square foot of occupied space based on county-wide data. This approach could be administered either as a Bonding system as outlined, or by the use of a green building fund. It would be advantageous to develop a green building fund for use to encourage green building techniques for affordable housing units but the Federation does not have an opinion about whether the program should be based on a construction bond or whether it should be called a green building fund.