TESTIMONY OF BRUCE BONCKE ON BEHALF OF THE NATIONAL ASSOCIATION OF HOME BUILDERS

IMPACT OF GREEN INFRASTRUCTURE AND LOW IMPACT DEVELOPMENT ON THE NATION'S WATER QUALITY, ECONOMY AND COMMUNITIES

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Chairman Johnson, Ranking Member Boozman, and members of the Subcommittee, thank you for the opportunity to testify on behalf of the National Association of Home Builders (NAHB), a Washington, D.C.-based trade association representing 175,000 members. I am currently the chief executive officer of BME Associates located in Rochester, New York. BME Associates (BME) provides site engineering, land planning, surveying, environmental services and construction services. We also develop functional design solutions for land planning and site development projects within the residential, commercial, institutional, office, recreational, municipal and mixed use industries. BME has earned a reputation for well-designed projects that balance environmental sustainability and what the developer wants to create.

My experiences with land development projects span nearly forty years. I was part of the team that originally developed the training program for the Monroe County, New York, Planning Council and have served on its faculty for over 20 years. I have trained program faculty for the New York Planning Federation, the Associations of Towns, the New York State Bar Association and the Rochester, State and National Home Builders Associations University of Housing. I am also the past President and Director of the New York Planning Federal and a past President of the Rochester Section of the American Society of Civil Engineers. I served as a member of the Lieutenant Governor's appointed New York State Quality Communities Task Force Advisory Committee. In 2004, as chair of the New York State Home Builders Association's Environmental Committee, I worked with the New York State Department of Environmental Conservation (NYDEC) to set up a Stormwater Working Group (Group) of stakeholders. The Group helped the NYDEC craft the Phase 1 Permit regulations and the components of that permit.

Building on my career experiences, I have also been very involved with NAHB. I currently serve on NAHB's Environmental Issues Committee and am a past member of the Land Development Committee. I represented NAHB on the American National Standards Institute (ANSI) Consensus Committee that developed the National Green

Building Standard (NGBS) for the home building industry. In 2008, I was NAHB's Green Developer Advocate of the Year.

As I stated above, I have been working with land development projects for many years. I have been in a position to see the transition from developers and home buyers wanting big developments on big tracts of land to communities focused on small lots and efficient use of the resources surrounding the development. In my testimony I will highlight the changes in land development over the years and where I think the process needs attention and possible course corrections.

THE GREEN BUILDING MOVEMENT

Home builders' experiences and support for voluntary energy efficiency and green predates many of the available green ratings systems today. Long before "green building" and "Low Impact Development" were part of the construction industry lexicon, BME and NAHB members alike were actively engaged in sustainable development as part of an organic process that has significantly reshaped residential construction.

In tracking the national trends, in the early 1990's, builders began focusing on sustainable residential construction that incorporates a flexible framework to accommodate geography, resources, and energy efficiency. As the movement grew, NAHB members became more engaged; and in 1998, NAHB established a special subcommittee at the national level to work specifically on green building issues. By 2004, the industry, including over sixty stakeholders, was developing a set of national guidelines to direct builders on how to incorporate ever-increasing sustainability benchmarks for compliance with green criteria. This became known as the National Green Home Building Guidelines. However, as the need to develop a more reliable verification methodology became apparent, the members of NAHB agreed to work collaboratively with the International Code Council (ICC) to undergo a rigorous standards-developing process that would ultimately produce the first standard submitted to ANSI for green residential construction and remodeling in the United States – the National Green Building Standard™ (NGBS).

The development of the NGBS is the most recent, and most robust, effort undertaken by the industry to set compliance markers for green building in the various aspects that comprise residential construction – single family, multifamily, remodeling, and land development. The process began in early 2007 when a group of 42 stakeholders, including myself as a representative of NAHB, convened in Washington, D.C. The group represented federal (U.S. EPA, DOE), state, and local governments, building code officials, design professionals, building supplier manufacturers, sustainable building interest groups (including the U.S. Green Building Council), utilities, builders, and energy efficiency consultants.

The stakeholders worked together for over a year to develop rigorous, environmentally-sound, and defensible criteria for green residential construction incorporating the seven primary principles of sustainability: energy efficiency, water efficiency, resource efficiency, lot and site development, indoor environmental quality, global impact, and home owner education. The standard was published and approved in January 2009 after a full year review by the ANSI. To date the NGBS is the only residential green standard to carry the ANSI approval and is thus compliant with the Federal government's National Technology Transfer and Advancement (NTTA) Act of 1996 (PL 104-113), requiring federal agencies to recognize and incorporate existing public consensus standards whenever possible. In addition to its approval by ANSI, the credibility of the NGBS can be attributed in large part to the diversity of the groups involved in its creation including: the Department of Energy (DOE); the Environmental Protection Agency; the U.S. Navy; Building Code Officials, the U.S. Green Building Council (creators of the LEED program), Sustainable Building Industry Council and the Green Building Institute (creators of the Green Globes program, which just received ANSI approval for green commercial construction). The criteria developed through this process were included as an appendix to the NAHB Green Building Guidelines, which has been used by home builders and developers for many years.

I believe the most significant achievement of my involvement was to get the land development criteria into the body of the NGBS, in two chapters; one for overall site design and one for individual lot design and construction. These chapters cover such

issues as: site selection, project team, site design, resource conservation, solar orientation, slope disturbance, stormwater, density, mixed uses, construction activity and innovative practices. In sum, I was able to use my experiences and things I have learned through my career to help craft a set of standards that is useful, realistic and based on the general concept of continually building on our understanding of land use.

NAHB, and those of us involved with the development of the NGBS, understood the importance of providing a viable, rigorous, and consensus-based alternative to the plethora of privately developed green rating systems flooding the market, and NAHB believes the federal government similarly understands the importance of this concept. Therefore, we point to the NGBS as a very sound basis for building and development standards.

GREEN DEVELOPMENT IN PRACTICE

Although NAHB, its members, and BME, are invested in the approach taken in the development and outcome of the NGBS, each state and region has their own approach to sustainable development. As such, I will highlight some successful efforts to bring together all the stakeholders in a community – the builder/developer, the elected official and the citizens. I will also outline some of the problems that can arise when builders try to incorporate certain green building techniques, especially Low Impact Development (LID).

Successful Partnerships

First, I would like to highlight the progress that BME has made in the Rochester, New York, and in Monroe County generally. For over 20 years, staff from BME has provided training in land use, site planning, stormwater management, and sustainable design practices to municipal officials throughout New York State. This includes training programs for planning and zoning board members, code enforcement officers and municipal planners.

The training programs focus on providing real life examples to the principles of planning and design that they must apply to fulfill their duties. BME's goal is for the trainees to receive a base understanding of the constantly evolving regulatory

environment and the latest information regarding sustainable planning practices. BME believes an educated municipal board is critical to successful planning and land use development.

For site planning and sustainable design, we structure our training to show municipal board members how sustainable practices such as conservation subdivision design or “coving/clustering” can protect natural features of a property, result in less infrastructure for municipal maintenance, and yield development densities that make economic sense. What usually results are communities that have higher property values than typical conventional subdivision design. Additionally, application of these principles results in a smaller development footprint and reduced impacts from stormwater runoff and impervious areas. The key of the training is to demonstrate that by modifying the typically outdated municipal codes and standards, and applying sustainable design principles, the community will be better equipped to move into the future. We have found that the municipal officials that participate in these training programs come away energized to implement these planning principles and look to modify their local codes to adopt the appropriate ordinances.

Often local zoning ordinances lag behind new and innovative planning principles. Sustainable design requires a change in the approach to land development, and the local government’s involvement is imperative in managing this change. Thus if these officials do not totally understand the ins and outs of site planning and design, it becomes more difficult, more time consuming and more expensive, and thus less enticing to implement these creative design practices.

For example, over the past the decade, there have been significant changes to the regulation of stormwater runoff from construction activities from land development. These regulations began at the federal level and have been passed down from the states to the local municipal level. The result is local officials being charged with implementing a federal regulation program; a program that requires them to have a base knowledge of stormwater runoff principles in order for them to understand the regulations they need to enforce.

BME has provided training for local municipal officials in basic stormwater runoff to provide them an understanding of basic terms and principles, and how these apply to land development projects. The training is structured so the officials learn what to look for on plans and in reports, including the basics of how to read grading plans and define drainage patterns. Once they have a basic understanding of stormwater runoff issues, we then provide training on the stormwater regulations. We have increased the scope of this training as the regulations have been constantly updated to encompass more areas of stormwater management. We educate the municipalities on the current regulations, the responsibilities of the municipality in enforcing the regulations, and the responsibility of the developer and land owner in implementing their stormwater management plan.

Those of us at BME believe it is important for the local government officials to receive this training because we have found that successful compliance with the regulations is the mutual responsibility of both the local government and the land owner. We have worked closely with state and county stormwater officials to develop our training program to ensure we are presenting the most current philosophies of stormwater management regulation. We also provide feedback to the county and state officials on what we are seeing at the local level from both a municipal regulatory standpoint and from a construction implementation view. Through this process we identify those portions of the regulations that are a challenge to apply, and in turn begin to work towards actual solutions to the challenges.

For example, recent training sessions have demonstrated that portions of the new regulations, specifically those dealing with green infrastructure design, are not compatible with local codes. As a result, the municipalities realize they have a responsibility to update their local codes so that design initiatives contained in the new regulations can be actually be implemented in developments within their communities. Ultimately, we find it is much easier to move forward with a project when there is education on the front end before any disagreements arise. BME's experiences have taught us that once the contentious situation arises, there is no chance to educate and possibly come to a concurrence. For this reason, BME places a tremendous amount of

importance on these training sessions. In fact, I am just arriving from teaching a program on behalf of the New York Planning Federation.

Another state that tried to use a collaborative process in regard to regulations is Maryland. Although the state's activities are outside my expertise, I wanted to highlight this state to reinforce the need for regulators to work with communities when establishing limits on development. As you may know, over the past decade, Maryland has been focused on new and stricter building standards. In turn, home builders in the state have taken proactive steps to be part of the solution to restore and maintain the Chesapeake Bay. In 2002, the Alliance for the Chesapeake Bay, the Center for Watershed Protection, and the National Association of Home Builders launched "Builders for the Bay", a new partnership encouraging the use of Bay-friendly site design principles that reduce the environmental effects of residential and commercial development. Because many local codes and ordinances are out of date and/or do not incorporate the lessons learned over the last 25 years, the heart of this program was working with local governments and developers to assess the current codes and ordinances and provide a platform for change so that the "new" environmentally sensitive design principles and practices could be used.

Through this process, the Builders for the Bay program was ultimately able to identify and remove impediments, such as mandates for wider streets and sidewalks on both sides of the road, and facilitate the use of practices and principles that reduce environmental stresses on the watershed. Since 2002, the Builders for the Bay program is responsible for getting these principles adopted in six municipal or county jurisdictions in the Chesapeake Bay watershed. Unfortunately, funding challenges have put a hold on any further activity, but the program clearly succeeded in creating a lasting effect on how developments are regulated at the local level in certain areas of the watershed.

Challenges with Green Building Techniques

Although the home building industry, specifically BME and NAHB's other members, is invested in the NGBS and green building generally, problems often arise with green development and LID. I will outline three specific challenges:

1. Data Collection

Stormwater management technologies continue to evolve and grow. Often there is an effort to contain all of the stormwater runoff on a construction site because in theory, fewer pollutants will leave the site; however, there is little data available regarding the effectiveness of most LID devices that contain stormwater in such a way. Most builders and developers want scientifically-based information as to the effectiveness of various LID devices. We believe the more information builders and developers have, the more likely they will incorporate green building techniques into their projects. Because of the performance differences associated with various soil types, topography, rainfall, etc., it is extremely difficult to find specific techniques that will work universally across the country. NAHB members have expressed concern that LID is not always less expensive than traditional stormwater controls, especially not for small building projects.

2. Impact of Site Location

LID does not work on every site. To successfully implement LID, a property needs the right kinds of natural features, such as soils and topography, and must have enough land area to accommodate the various LID devices. Each development site is examined to integrate site planning with techniques that conserve the existing natural systems and hydrological functions of the site. Common LID controls include bioretention devices such as rain gardens, permeable pavers, green roofs, rain catchment devices such as barrels or underground chambers, “reverse slope sidewalks” which drain away from the road into vegetated areas, and many other techniques. Because the effectiveness of these methods depends on the soils, hydrology, and slope of the site, properties that have impermeable soils, high water tables, or steep slopes are not good candidates for LID.

For example, the experiences of my colleagues in Maryland offer a cautionary tale for the one-size-fits-all approach to regulating land

development. LID is a tenet underlying Maryland's regulations to lessen the impact of construction and new infrastructure on the Chesapeake Bay. LID is incorporated into stormwater management. These controls that can prove to be beneficial in other parts of the country are proving difficult in for NAHB members working in Maryland because they have found that LID does not work on every site. The right kinds of soils, and in many cases, low density development are needed for successful LID. The home building industry in Maryland has not had an opportunity to provide input on their experiences with LID and yet there are efforts to move forward with certain aspects of LID at the state level, especially in regards to improving the water quality in the Chesapeake Bay. Builders and developers in the Chesapeake Bay region are cognizant of the problems with the Bay, but by not heeding the cautions from the builders actually developing land in the region, Maryland may be on track to promulgate regulations that are unobtainable.

3. Urban Challenges

Increasingly, LID is the preferred means of managing stormwater runoff from new and redevelopment projects. Local, state, and federal regulations are encouraging or requiring LID approaches, but the requirements vary considerably across the nation. In many of those regulations, redevelopment projects are required to reduce the amount of imperviousness by as much as 50%. The concern is that there are so many limitations associated with urban infill and redevelopment (i.e., existing land use, limited land area, potential to damage nearby building footings and/or underground infrastructure or flooding to nearby basements or other structures), many of these regulations will discourage redevelopment in urban areas. Additionally, the requirements could raise the costs substantially, making LID difficult, if not impossible, to implement.

As demonstrated with the successful efforts in Monroe County, partnerships and education are very useful in implementing sustainable development. The ability of green infrastructure and LID to effectively reduce stormwater flows and pollutant

loadings is dependent on a number of physical and regulatory factors including site conditions, adjacent land use, amount of space available for best management practices, zoning and subdivision requirements, and public acceptance. These factors will differ greatly from region to region and is one of the main reasons for highlighting two particular parts of the country in my testimony. Regulations need to reflect the capabilities of an individual region – whether it is soil, population density needs or general demand for types of housing. I point to the problems in Maryland, and other parts of the country struggling with LID techniques, as support for collaborative efforts that address all stakeholders and consider the feasibility of regulations that are most effective to make the progress needed to implement sustainable development.

Conclusion

To conclude, the home building industry is a steward of the environment and most of NAHB's members, BME in particular, have been implementing "green building" techniques for many years – before the techniques were even classified as sustainable development. Now, when BME, and similar companies throughout the country, sit down with potential clients, there is an effort to instill in our clients the mindset that the developer will be using more land for storm water controls compared with five years ago. However, I am also able to demonstrate to them through our knowledge of sustainable development, it probably won't be an additional cost to protect the environment and they may actually recoup some of their cost by being environmentally focused.

In moving forward, I urge Congress to support regulations, especially in the area of green building, that are flexible enough to allow for adjustments based on a region's unique characteristics (physical properties of the land, housing needs of the population, etc), and to avoid the pitfalls with attempting to implement a style of development that is not possible in a particular region. I encourage municipalities to learn from the collaborative approach used in Monroe County, New York, where BME Associates has the opportunity to share its expertise and demonstrate what it has learned over the years to new planners coming into the community. I point out that accurate data needs

to be collected on the effectiveness of LID, different characteristics of a region will impact the effectiveness of some green development techniques, and urban areas have difficulty implementing LID in urban areas. In turn, I encourage Congress to use entities like BME for the wealth of information they have gleaned over the years from continually striving to improve their development techniques to better situate a development in its planned location. I also urge Congress to provide for stakeholder input, specifically the building and development industry, when proposing legislation that will have an impact on the industry.

All in all, one of the most satisfying things I have seen in Monroe County is that although communities may struggle with updating their regulations to better implement some of the green initiatives, I see the silver lining to the problem: forcing communities and the home building industry to work together to move a community into the future. This collaborative approach can only serve the industry – and the environment – as we all continue to work towards sustainable developments.