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SOCIAL EQUITY IN THE BUILT ENVIRONMENT: AN INITIAL FRAMEWORK AND PROJECT EXAMPLES

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Heather Joy Rosenberg
Sustainability Consultant, Los Angeles, CA

Joel Ann Todd
Environmental Consultant, Cabin John, MD

GBIG



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Joel Ann Todd, Environmental Consultant, Cabin John, MD

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INTRODUCTION

Over the past two decades, certification programs like LEED have changed the way the building industry approaches environmental issues. The development, quantification and recognition of implementable strategies took what had been seen as fringe ideas into the mainstream, spawning new regulations, processes, products and services. The result is improvements in design, construction, and operation of the built environment, causing people to refer to green buildings as more “sustainable.”

However, sustainability is typically defined by the triple bottom line—projects that provide environmental, social and economic benefits. LEED and other green building rating systems have brought the environmental bottom line into focus, but have not clearly defined social and economic metrics. The impacts that projects have on people and communities have not been adequately assessed, while the number of people living without equal access to basic necessities such as affordable homes, education, health care, nutritious food, good jobs and thriving communities continues to grow.

To the extent that people face disadvantages that are defined and exacerbated by the very buildings where they live, work and learn, the built environment is an arena where issues of equity can be tackled. Community development corporations, public agencies and related organizations are working to address these issues, but the mainstream green building industry has not yet been leveraged to support those efforts or create new solutions. The Enterprise Green Communities Criteria, developed by Enterprise Community Partners, is an example of how a green building rating system can address social equity—as a system designed specifically for affordable housing, social equity is at the core of its mission. Just as Enterprise developed metrics to incorporate green measures into these social equity projects, the USGBC now has the opportunity—and challenge—of bringing social equity metrics to green building projects.

The LEED systems do address some social and health concerns, such as encouraging improvement of indoor environmental quality, but these strategies focus primarily on building occupants and are not comprehensive in nature. There is little clarity on key questions such as: what are the most important ways that buildings and the built environment affect social equity? What are the opportunities for addressing social equity issues with building projects? And how can metrics and targets be developed to make social equity strategies relevant and achievable by USGBC stakeholders?

The purpose of this paper is to explore how building projects can and are addressing social equity today, in order to further an understanding of these underlying issues, strategies and challenges. First, we explore the definition of social equity as it relates to the built environment, and outline a framework to propose how it may be applied in the US. Then, we present a collection of projects that have incorporated various strategies for addressing social equity. This collection of projects is housed in the Green Building Information Gateway², a database sponsored by the U.S. Green Building Council. Finally, the paper draws some conclusions about the state of the practice and suggestions for moving the field

² <http://www.gbgi.org>

forward. The goal of this paper is to explore the current status, identify sample projects, and encourage further dialogue, rather than to provide definitive answers.

The scope of this paper is limited – it includes a selection of green building projects in the United States³ that have written descriptions of social equity strategies that are accessible on-line.⁴ The list is intended to provide a variety of examples across a range of scales and project types, to begin a discussion rather than to provide an exhaustive account. Selected projects are those that specifically set out to address social equity issues in some way, rather than those that address them incidentally or indirectly. For example, it can be argued that projects taking steps to deal with climate change are tackling what may be the biggest threat to social equity globally. However, social equity issues are not typically the driver in those projects, and strategies to address climate change are being well explored elsewhere, and so will not be covered here. Because the focus here is on how projects in the built environment can address social equity issues, all of the case studies included are buildings or neighborhoods which could be eligible for one of the LEED rating systems (though not all are certified). Programs, policies, regulations and other non-building strategies are important tools but have not been included as examples in this paper.

Definitions of Social Equity

Although the green building movement is talking more about social equity, the term means different things to different people. The concept of “social equity” is used by a wide range of individuals and organizations that work to address disparities and inequitable distribution of goods, services and amenities. A few examples provide context. In 1996, the President's Council on Sustainable Development defined Social Equity as “equal opportunity, in a safe and healthy environment.”⁵ Other definitions include:

“The fair, just and equitable management of all institutions serving the public directly or by contract; the fair, just and equitable distribution of public services and implementation of public policy; and the commitment to promote fairness, justice, and equity in the formation of public policy.”

The National Academy of Public Administration

<http://www.napawash.org/fellows/standing-panels/standing-panel-on-social-equity-in-governance/>

“Social equity implies fair access to livelihood, education, and resources; full participation in the political and cultural life of the community; and self-determination in meeting fundamental needs. As Martin Luther King observed, “where there is injustice for one, there is injustice for all.”

Reliable Prosperity, a project of EcoTrust

http://www.reliableprosperity.net/social_equity.html

³ The focus on US-based projects is intended to set feasible boundaries for the research; it does not imply that social equity is only addressed in US-based projects or that projects in the US are more focused on social equity. Future research should address projects outside the US.

⁴ Projects that may incorporate social equity strategies but that do not have publically available on-line case studies are not included.

⁵ The President's Council on Sustainable Development, *Sustainable America: A New Consensus for Prosperity, Opportunity, and a Healthy Environment* (Washington, DC: Government Printing Office), 1996

USGBC Commitment

The USGBC has made a commitment to expand beyond a narrow environmental focus. In its 2013-2015 Strategic Plan, it defines its mission as: “To transform the way buildings and communities are designed, built and operated, enabling an environmentally and socially responsible, healthy, and prosperous environment that improves the quality of life for all.” Its Guiding Principles include promoting the triple bottom line and fostering social equity. Under its Strategic Goal, Cultivate Sustainable Cities and Communities, it includes “...align the tenets and practice of green building with social, environmental, and economic justice” and “establish a program to implement community-scale restorative strategies in vulnerable and underserved neighborhoods (neighborhoods characterized by long-term disinvestment in human, environmental, and physical capital as demonstrated by health disparities, chronic unemployment/underemployment, high incarceration rates, poor educational outcomes, disproportionate shares of environmental burdens and disinvested building stock).”¹ The USGBC and its LEED Steering Committee have developed a weighting process and goals for LEED that are now used to allocate points to LEED credits. LEED version 4 has transitioned from a weighting process based on “doing less damage” to a process based on positive goals, “what we want LEED projects to be good at.” The goals will also be used to assess gaps in LEED and to develop new credits. The goals are:

- Reverse contribution to climate change
- Enhance human health and well being
- Protect and restore water resources
- Protect biodiversity and ecosystem services
- Promote sustainable and regenerative resource cycles
- Enhance community, social equity, environmental justice, and quality of life
- Build a greener economy

While all of these goals can affect social equity, the second, sixth, and seventh address it explicitly. However, there is still a lack of credits that specifically address social equity issues, and therefore social equity continues to be underrepresented in LEED. A number of efforts are underway to explore ways to rectify the situation, both via potential pilot credits as well as through other USGBC products, services and initiatives.

Framework for Social Equity in the Built Environment

While these statements provide general definitions of social equity, they do not provide guidance on how the green building movement can address it. Important questions include: How does the built environment affect social equity? What impacts are most important – where is the built environment’s impact the greatest? And what are the opportunities for action? What strategies are effective?

Social Equity for Whom?

Social equity is about addressing the inequalities across a population that limit some members' ability to access resources, meet basic needs, maintain health and well-being, have economic opportunities and participate in public life. Not all sources of inequity in society can be tackled through focusing on the built environment, but significant improvements can be made in this arena. The layout and distribution of land uses and building types across a community often both reflect and intensify disparities. The starkest examples are in cases of environmental injustice, where disruptive, polluting or otherwise harmful land uses are located in areas where the population is already disenfranchised. Significant research has been done on the issue of environmental justice, and the green building movement has much to learn from this body of work.⁶ Similarly, the public health community has been working on issues related to indoor air quality, food access, walkability and other issues that are relevant to the green building movement.^{7,8}

The location of buildings and distribution of land uses is one of the biggest ways that the built environment impacts social equity. Smart Growth and New Urbanist strategies can play an important role in promoting social equity, but only if the projects specifically take measures to remedy inequalities and serve more than the highest income earners. Buildings that displace existing communities, push out residents or businesses with lower incomes, eliminate jobs or replace good jobs with substandard ones, or expose people to unhealthy conditions cannot really be said to be sustainable from a triple bottom line perspective, even if they are "high performance" in other ways. Similarly, buildings that house companies that exploit their workers or are made of materials manufactured by exploited laborers cannot genuinely be called green.

The effects of the built environment on social equity must therefore be viewed from the perspective of different types of stakeholders at different scales in relation to the project. A framework for addressing social equity in green buildings must enable projects to consider at least three types of stakeholders:

- People directly involved in the project, including the people living or working in the project, as well as the project team, contractors and construction workers.
- The local population surrounding the project.
- People living either upstream or downstream of the project, such as those involved in or impacted by production or disposal of resources or materials used in the project (including those directly involved with the supply chain, as well as those impacted indirectly by pollution, etc.).

While the overall goals surrounding social equity might be the same for each group, the strategies for addressing them at the various scales differ considerably.

⁶ <http://www.epa.gov/environmentaljustice/resources/index.html>

⁷ <http://www.epa.gov/iaq/pubs/index.html>

⁸ <http://www2.epa.gov/learn-issues/learn-about-health-and-safety>

At the present time, there are more examples of projects addressing the first two groups of stakeholders, as these groups are more easily identified and strategies are typically more readily implemented and measured. While some individual organizations are taking steps to ensure that their supply chains are socially responsible and that impacts are minimized for upstream and downstream stakeholders, there are few tools and data to support these efforts.⁹

Current Resources for a Social Equity Framework for the Built Environment

To outline a framework for defining social equity as it relates to the built environment for this paper, we reviewed the current activities by a variety of groups connected. We found several current efforts that informed our work:

- USGBC's Goals for LEED: Developed for LEED version 4, the seven goals for LEED listed above (See Box on USGBC Commitment) now include "enhance human health and well being; enhance community, social equity, environmental justice, and quality of life; and build a greener economy" in addition to environmental goals.
- LEED Steering Committee's Social Equity Working Group: Appointed by the LEED Steering Committee in 2010, this group explored if and how LEED should incorporate social equity into the rating system. The Working Group conducted interviews, reviewed reports and assessment/certification systems on social equity, and gathered information on projects. The group proposed a draft list of social equity goals for green building.¹⁰
- World Green Building Council and Green Building Council of South Africa's International Framework for Socio-Economic Factors for Green Building Rating Tools¹¹: A group of representatives from around the world collaborated on a framework for addressing socioeconomic factors in certification systems, starting with a framework for developing countries that has been adapted for use in South Africa; a pilot test was launched in October 2013.

We found surprising consistency among these approaches, as shown in Figure 1. There were three primary areas covered:

- Community/ quality of life: this area includes accessibility, affordability, equality, and quality of life. It also includes community engagement in the project planning and follow-up.
- Individual health and well-being: this area includes consideration for the health of building occupants, inhabitants and users, neighbors and surrounding community members, and workers, both onsite construction and offsite and supply chain (manufacturing, extraction, and other trades).

⁹ United Nations Environment Programme/ SETAC, Towards a Life Cycle Sustainability Assessment, 2011 and Social Hotspots Database, <http://socialhotspot.org/>.

¹⁰ Beyond the Building Edge: Building for People, Susan Kaplan, Heather Rosenberg, Joel Ann Todd, presented at Greenbuild 2012, San Francisco, CA, October 2012.

¹¹ World Green Building Council and South Africa Green Building Council, International Framework for Socio-Economic Factors for Green Building Rating Tools, Draft v5, February 1, 2013

- **Economy:** this area includes support for local jobs and businesses, job/ skills training, fairness in wages and benefits, and education. It also includes support for companies that provide green jobs and create green products and services through innovation.

Figure 1: Comparison of Frameworks for Social Equity

USGBC LEED Goals	LSC WG Goals	WGBC Framework (draft)
USGBC LEED Goal: Quality of Life <ul style="list-style-type: none"> Affordable, equitable neighborhoods Human rights and wellbeing Sense of place Resilience 	Accessibility: Green buildings are equally accessible to all people <ul style="list-style-type: none"> Affordable, high-quality housing and commercial space Access to jobs, resources, services, parks, infrastructure Universal design, anti-discrimination Access to nutritious, locally sourced food 	Equality <ul style="list-style-type: none"> Equal rights and opportunities Freedom from discrimination in employment and employment-related areas
	Community: Green buildings engage, respect, and contribute to the local community <ul style="list-style-type: none"> Community involvement, collaboration Diverse perspectives Public space enhancing safety and social interaction Human and pedestrian scale Prevent displacement Locally owned and operated businesses Minimal disruption to community 	Community engagement and benefit <ul style="list-style-type: none"> Involve citizens Improve responsiveness and accountability of decision making Consult broad array of individuals Identify and understand problems affecting the community.
	Quality of Life: Elevate the spirit for all <ul style="list-style-type: none"> Quality workspace and housing Biophilic design elements Features intended solely for human delight and the celebration of culture, spirit, and place 	
USGBC LEED Goal: Enhance Individual Human Health, Wellbeing and Vitality* <ul style="list-style-type: none"> Occupants/ inhabitants Local Global 	Human Health: Green buildings take responsibility for worker and other indirect health impacts beyond the building's edge <ul style="list-style-type: none"> Minimize negative health and quality of life effects for construction workers, laborers, building users, and the surrounding community Physical fitness through building design Accessibility to clean water 	Health and safety <ul style="list-style-type: none"> Better practice in construction safety Safe and healthy work environment Change attitudes and behaviors
USGBC LEED Goal: Build a Greener Economy <ul style="list-style-type: none"> Create Demand: education, awareness Create Supply: green products, green jobs, skilled workers, green financing Promote Innovation and Integration: new products, new technologies, new processes, greater efficiencies Support local workers and economies 	Jobs: Improve conditions for workers and stimulate the local economy <ul style="list-style-type: none"> Regional workforce for design, construction, operations Long-term job creation - training and apprenticeships Living/prevaling wage and benefits On-site space for "life skills" training Company commitment to social and environmental responsibility and to the health of all employees 	Employment and economic opportunity <ul style="list-style-type: none"> Employment creation to maximise employment. Stimulation of local economy through procurement of locally-sourced goods and services. Growth and development of business enterprises
		Education and skills development <ul style="list-style-type: none"> Education and skills development interventions that improve the ability of an individual to generate an income.

In addition to these resources, the U.S. Environmental Protection Agency introduced the concept of “equitable development” to describe strategies that combine smart growth with environmental justice in a recent report.¹² As the report notes:

“Without the appropriate engagement and planning, the implementation of smart growth strategies in low-income and minority communities can displace existing residents due to rising rents and other costs of living. This unintended consequence has caused some environmental justice and equity proponents to question smart growth’s inclusivity, and has contributed to a divide between smart growth and environmental justice. However, some communities have worked hard to bridge that divide, and have found that a wide range of tools and strategies can be used to engage community members in neighborhood planning and visioning, provide affordable homes and transportation choices, support local businesses, and minimize displacement in other ways.” (p.1).

[The report continues....]

“Environmental justice, smart growth, and equitable development goals and principles have fundamental areas of overlap. They all aim to create communities that are healthy, environmentally sustainable, and economically vibrant. They also seek to empower residents to shape development where they live...” (p 2).

It proposes the following strategies that further define the concept:

- Facilitate meaningful community engagement in planning and land use decisions
- Promote public health and a clean and safe environment
- Strengthen existing communities
- Provide housing choices
- Provide transportation options
- Improve access to opportunities and daily necessities
- Preserve and build on the features that make a community distinctive

This concept provides a useful focus for building projects and their interactions with surrounding communities, but it does not address all potential social equity issues, such as supply chain issues. Therefore, this paper goes beyond the equitable development concept to embrace all potential approaches and strategies of social equity.

Research and development on Working Environment Life Cycle Assessment and Social Life Cycle Assessment suggests metrics and strategies that identify supply chain issues that are not adequately addressed in other frameworks. These include¹³:

- Workers: freedom of association and collective bargaining, child labor, fair salary, working hours, forced labor, discrimination, health and safety, benefits.

¹² US Environmental Protection Agency, Creating Equitable, Healthy, and Sustainable Communities: Strategies for Advancing Smart Growth, Environmental Justice, and Equitable Development, EPA 231-K-10-005, February 2013

¹³ UNEP/ SETAC, *Guidelines for Social Life Cycle Assessment of Products*, 2009, p. 49.

- Consumers: health and safety, privacy, transparency, end-of-life responsibility.
- Local community: access to material and immaterial resources, delocalization and migration, cultural heritage, safe and healthy living conditions, indigenous rights, community engagement, local employment, secure living conditions.
- Society: public commitment to sustainability, economic development,, prevention and mitigation of armed conflicts, technology development, corruption.
- Value chain: fair competition, social responsibility, intellectual property rights.

Enterprise Community Partners, which addresses social equity through affordable housing and community development, defines its vision in its “Community Development 2020: Creating Opportunity for All¹⁴” by stating that: “One day, every person will have an affordable home in a vibrant community, filled with promise and the opportunity for a good life.” Enterprise has been involved with developing affordable housing for over 30 years, and their mission is “to create opportunity for low- and moderate income people through affordable housing in diverse, thriving communities.” Enterprise focuses not only on supporting development of affordable housing, but on connecting that housing to “supportive living environments with jobs, quality schools, child care, transportation, health care and support for seniors, with access to parks, community spaces and food and retail services that support a healthy lifestyle.”¹⁵ Their agenda for 2020 includes the following five priority actions:

- Connect Housing to Communities of Opportunity. Create access to opportunity through cross-sector, people-focused partnerships and collaborations.
- Ensure a Productive and Sustainable Housing Delivery System. Build a strong, flexible, and sustainable network of organizations to create long-term, scalable results.
- Diversify Our Capital Base and Maximize Connections to Capital Markets. Attract diverse sources of capital by leveraging all types of philanthropic resources, impact investors and public subsidies.
- Accelerate the Pace and Scale of Innovation. Deliberately innovate to serve more people and respond to a dynamic, more inter-connected world.
- Communicate Why Communities of Opportunity Matter. Build a compelling, data-driven case for communities of opportunity and conscious capitalism as central to our country’s prosperity.

In addition, Enterprise provides the Enterprise Green Communities Criteria, a comprehensive framework designed specifically for affordable housing. While similar in a number of ways to LEED for Homes, the Green Communities Criteria contains a greater number of mandatory measures, including requirements for integrative design, compact development and proximity to services. The categories include:

- Integrative Design
- Location and Neighborhood Fabric
- Site Improvements
- Water Conservation

¹⁴ Enterprise Community Partners, Inc., COMMUNITY DEVELOPMENT 2020: Creating Opportunity for All, 2012, p. 9.

¹⁵ <http://www.enterprisecommunity.com/about/mission-and-strategic-plan>

- Energy Efficiency
- Materials Beneficial to the Environment
- Healthy Living Environment
- Operations and Maintenance

Because the Green Communities Criteria provides metrics specifically targeted at affordable housing, all of its projects may be considered social equity projects. More information is available at: <http://www.enterprisecommunity.com/solutions-and-innovation/enterprise-green-communities>

The STAR Community Rating System is a voluntary framework for improving the sustainability of local communities. It was founded by ICLEI-Local Governments for Sustainability, the U.S. Green Building Council, and the Center for American Progress, and is targeted at local government. The Guiding Principles of the system are:

- Think and act systemically
- Instill resiliency
- Foster innovation
- Redefine progress
- Live within means
- Cultivate collaboration
- Ensure equity
- Embrace diversity
- Inspire leadership
- Continuously improve

Note that while equity is an explicit goal, many of the other guiding principles are also closely tied to social equity. Based on these principles, the program is organized into eight goal categories, including:

- **Built Environment:** Achieve livability, choice, and access for all where people live, work, and play
- **Climate & Energy:** Reduce climate impacts through adaptation and mitigation efforts and increase resource efficiency
- **Education, Arts & Community:** Empower vibrant, educated, connected, and diverse communities
- **Economy & Jobs:** Create equitably shared prosperity and access to quality jobs
- **Equity & Empowerment:** Ensure equity, inclusion, and access to opportunity for all citizens
- **Health & Safety:** Strengthen communities to be healthy, resilient and safe places for residents and businesses
- **Natural Systems:** Protect and restore the natural resource base upon which life depends
- **Innovation & Process:** Address issues that span all three pillars and includes exemplary performance, innovation, best practices and processes, and regional priority

Because STARS targets local governments, its goals and strategies are focused on the scale of municipal strategic plans and direct actions toward measures that are within local government's typical span of

control. While the categories of Education, Arts & Community; Economy & Jobs; Equity & Empowerment; and Health & Safety most directly address the issues of social equity, social equity criteria are in fact infused in all of the categories. More information is available at <http://www.starcommunities.org/>

Another program, SEED (Social Economic Environmental Design), provides a standard to guide, evaluate and measure the social, economic and environmental impact of design projects. The SEED® process guides professionals to work alongside locals who know their community and its needs. SEED's mission is to advance the right of every person to live in a socially, economically and environmentally healthy community. The SEED guiding principles are:

- Advocate with those who have a limited voice in public life
- Build structures for inclusion that engage stakeholders and allow communities to make decisions
- Promote social equality through discourse that reflects a range of values and social identities
- Generate ideas that grow from place and build local capacity
- Design to help conserve resources and minimize waste.

The SEED Network connects likeminded practitioners who have pledged to support these guiding principles, and projects that involve community outreach and design to support the triple bottom line can receive certification. Goals and benchmarks are established by the project and reviewed by SEED mentors. More information is available at <http://www.seed-network.org/>

The Living Building Challenge is a green building certification system whose aim is to certify the world's "greenest" projects. It includes seven performance areas, known as "petals," including a newly added Equity Petal in its most recent version. The intent of the Equity Petal is to correlate the impacts of design and development to its ability to foster a sense of community. The Equity Petal has three Imperatives:

- Human Scale + Humane Places
- Democracy + Social Justice
- Rights to Nature

The metrics under these Imperatives involve pedestrian-friendly land use metrics, accessibility and access to fresh air, sunlight and waterways. For more information, see <http://living-future.org/node/209>

Proposed Framework

The framework used in this paper to define, identify, and explore projects and social equity strategies is drawn from the various work cited in this section and is presented in Figure 2. This broad scope can be refined in the future as we learn more about what can be accomplished.

Figure 2: Key Components of Social Equity in the Built Environment

Enhance Community and Quality of Life

Accessibility: projects are accessible to all and increase access to necessities and amenities for all

Community: projects engage, respect, and contribute to local community

Human Rights: respects basic human rights for all people

Quality of Life: projects elevate the spirit for all

Human Health, Well-Being, and Vitality

Environmental Justice: projects address disparities in environmental burdens

Health promotion and disease prevention: projects address disparities in access to health care and provide opportunities for health promotion for all

Build a Greener Economy

Local economy: projects stimulate the local economy

Working conditions: projects provide/ support safe, healthy and fair working conditions

PROJECTS

This section presents examples of building projects that have explicitly included social equity strategies; the paper focuses on projects related to design, construction, and/ or operation of buildings or neighborhoods, rather than on programs, policies or organizations. As noted in the Introduction, they are all US-based; future work should include projects from other countries. Only projects that have existing on-line case studies have been included, so that readers can pursue examples for additional information. Each brief project narrative includes: location, a web link for more details on the project, an overall description, and highlights of strategies. Photographs and additional information for each project are contained in the accompanying links.

1. Enterprise Green Communities

<http://www.enterprisecommunity.com/solutions-and-innovation/enterprise-green-communities>

Description: Quality affordable housing is a key component of social equity. The Enterprise Green Communities program exists to not only support the development and retention of affordable housing units, but to make sure those units are healthy and green. The Enterprise Green Communities Criteria program is the comprehensive framework most directly addressing the triple bottom line of any program in the country. Therefore we have included the entire group of certified projects in this project list.

Strategies: Green Communities is designed to help developers, investors, builders and policymakers make the transition to a greener future for affordable housing. Enterprise provides funds and technical expertise to enable developers and property owners to build, rehabilitate and operate homes that are healthier, more energy efficient, and better for the environment — without compromising affordability. Enterprise also assists state and local governments to ensure their housing and economic development policies are smart and sustainable. The program also provides a certification pathway comprised of mandatory and voluntary criteria that are designed to be achievable, cost effective, technically sound,

verifiable, and result in real social, environmental and economic benefits. The criteria have been developed to apply to any type of affordable housing project including new construction and rehabilitation in multifamily as well as single-family buildings located in any part of the country and any type of setting.

2. New Holly Neighborhood Campus

7050 32nd Avenue South, Seattle, WA 98118 USA

<http://www.newhollycampus.org/>

Description: New Holly provides almost 1400 units of housing to households with a wide range of incomes and backgrounds, including 620 low-income units managed by the Seattle Housing Authority. It also provides essential community services through a group of non-profit partners, noting that “it takes more than new housing to create a livable neighborhood.” Built in the 1940s to house veterans and defense workers, it was converted to housing for low-income families in 1953, and by the 1980s it was failing beyond repair. In 1995, the Seattle Housing Authority received a grant that enabled them to demolish and rebuild.

Strategies: Services include a learning center, public library branch, community college classrooms, Head Start, a pre-school, tutoring, ESL and literacy programs, programs for teens, exercise and fitness programs, and employment programs that help residents obtain and secure living wage jobs. There are also multicultural resources and translation services available. There are opportunities for residents to grow food for themselves and earn income from selling it. New Holly renewed links with the surrounding community and is sparking other community development nearby.

The New Holly Neighborhood Campus was created to provide these services for New Holly and the community at large. Community-based service providers work together at the campus, meeting regularly to collaborate, strategize, and implement services at New Holly.

3. The Cooperative Building

2 Main Street, Brattleboro, VT 05301 USA

http://www.epa.gov/smartgrowth/awards/sg_awards_publication_2012.htm#corridor

Description: The Brattleboro Food Co-op is Brattleboro’s only downtown grocery store, one of the anchor stores in the city; as a cooperative, it is owned and operated by members. It had outgrown its space and members decided to redevelop the site rather than move to a new site outside of town in order to maintain pedestrian and transit access. The redevelopment transformed the site from a strip mall surrounded by parking lots into a street-facing, mixed use development with commercial space, offices, and affordable apartments. This enabled the co-op to stay within walking distance of the town’s primary transit hub and support the local economy as an important employer in the city. The apartments were included in response to community concerns about the lack of affordable rental units close to jobs and services downtown. Partners of the Brattleboro Food Co-op included the Windham & Windsor Housing Trust and Housing Vermont. The project was a 2012 Winner of EPA’s National Award for Smart Growth Achievement in the Main Street or Corridor Revitalization category.

Strategies: The project includes the co-op on the ground floor, commercial space on the second floor and 24 mixed-income apartments on the two top floors. The construction project created about 400 jobs for local workers with a variety of skill levels in addition to the co-op’s ongoing workforce of 200. The co-op buys from local organic growers, provides health education in local schools, and has

established a demonstration kitchen where residents can learn about nutrition and healthy eating. The project also focused on environmental goals: for example, it cleaned up a former contaminated dry-cleaning site; permeable pavers were used and a green buffer was added; energy efficiency measures were included as well as a green roof and energy costs were reduced by about 50%; and local materials were used on the building exterior.

Community members were the true champions for this project, insisting on a downtown location and integrating mixed-income housing into the project. As one co-op employee and Cooperative Building resident said, "This project was always so much more than just a grocery store. I grew up in this town. For me, it was about helping to create a livable community and something we could all be proud of."

4. The Mariposa District

10th Avenue and Osage Street, Denver, CO 80205

http://www.epa.gov/smartgrowth/awards/sg_awards_publication_2012.htm#equitable

<http://www.denverhousing.org/development/SouthLincoln/Pages/default.aspx>

Description: An extensive public engagement process resulted in a Master Plan for the new Mariposa District, a revitalization of a 17.5 acre public housing site southwest of downtown Denver. The plan calls for an economically diverse neighborhood that preserves affordable housing while adding middle income and market-rate homes as well as a complete walkable neighborhood with health care and recreational facilities and transit access to downtown Denver. The project was a Winner of the EPA's 2012 National Award for Smart Growth Achievement in the Equitable Development category.

Strategies: During the community engagement process, residents expressed concerns about being priced out of their community and about health issues. In response to concerns about displacement, the housing authority ensured that no public housing residents would be displaced against their will, even during construction. In response to health concerns, the Mariposa Healthy Living Initiative was developed. Sidewalks, walkways, bicycle lanes, bikeshare stations, and secure bike parking were added. In addition, education programs and community gardens were developed to teach healthy eating and cooking. Job training is available for young people in health-related fields. The plan also includes environmental elements, including green buildings, infrastructure and transportation. Phase-one Tapiz Apartments, a 100-unit LEED-Platinum building was completed in 2012. The Mariposa project has six phases, and is slated for completion in 2016.

The community was engaged extensively in the master planning. To develop the master plan, the Housing Authority conducted a "cultural audit." It held more than 120 meetings and planners conducted door-to-door interviews. Outreach materials were translated into three languages and training sessions were held with public housing residents. Surveys were conducted to reach traditionally underrepresented groups. The community-led development team conducted a health impact assessment for the projects and partnered with a hospital to set targets for the plan. The team worked with the local Boys and Girls Club to complete a Pedestrian Environmental Quality Index to determine walkability and identify areas for improvement. Partners with the Denver Housing Authority include City of Denver, Colorado Housing Finance Authority, Colorado Department of Local Affairs, Governor's Energy Office, Regional Transportation District, Denver Health, Denver Public School District, The Partnership for Sustainable Communities, National Renewable Energy Lab, Denver ARTS and Venues, Art District on Santa Fe, Federal Home Loan Bank of San Francisco, Citibank, Enterprise Community Partners, and The Richman Group.

5. Northwest Gardens

500 W. Sunrise Blvd, Fort Lauderdale, Florida 33311

http://www.epa.gov/smartgrowth/awards/sg_awards_publication_2012.htm#equitable

Description: Northwest Gardens in Fort Lauderdale addresses high levels of crime, poverty, and unemployment by providing residents with more affordable homes and opportunities. The 30 acre redesigned community was one of the first in the US to receive LEED for Neighborhood Development certification and also received Honorable Mention in EPA's 2012 National Award for Smart Growth Achievement in the Equitable Development category and other awards.

Strategies: Northwest Gardens has more than 550 LEED-certified affordable homes. It also has safer streets and social support, job training and education programs. The housing authority's Step-Up Apprenticeship Program provides local youth with on-site construction training as they complete their GEDs and many participants found full-time positions. There are community gardens as well as a 7000 sq ft urban farm that generates \$1000 worth of vegetables each week and sells food to local restaurants and residents. Bus lines and a community shuttle provide transit access to the city. There is also a social entrepreneurship program and direct support for grandparents taking care of grandchildren. Partners with the Housing Authority of the City of Fort Lauderdale include Carlisle Development Group and Step-Up.

6. Kensington High School for the Creative and Performing Arts

1901 North Front St., Philadelphia, PA 19125 USA

<http://www.aiatopen.org/node/48>

Description: This school in a distressed neighborhood achieved both environmental and social goals and was selected as one of the AIA Top Ten in 2012 as well as achieving LEED Platinum. Located on a long narrow site bordered by a noisy elevated transit line, the property was viewed by surrounding neighbors as a "demilitarized zone" between two disparate communities and a haven for homeless people, drug dealers, and wild dogs. 90% of the students qualify for free or reduced lunch. Youth for Change, an activist group of local teenagers, advocated for a smaller high school that would encourage students to graduate rather than drop out. They also wanted a green school to provide a healthy learning environment.

Strategies: The 88,500 sq ft school was designed to be inviting and transparent to encourage local families to send their children to it and to support their accomplishments. Families could see into the school and views from the school included urban agriculture, green roofs, and mural art. As a gesture of good faith and connection to the community, the site was not fenced to encourage community use and pride. A large urban agriculture project was created to teach healthier eating and to introduce the site's agrarian history as an opportunity for future employment; almost 70% of the site is green space in a neighborhood where there is very little. Students in this community had high rates of asthma, so all materials were carefully selected to reduce emissions; special procedures were taken to prevent formation of mold. The project included green strategies for stormwater management, energy efficiency, daylighting in 98% of spaces and views to the outdoors from 100%, and many other strategies.

Since the move to the new school building, school "incidents" (crime and violence) have dropped 66%, truancy has dropped 25%, tests scores have quadrupled, and graduation has gone from 30% to 67%. For the first time in the history of the school it has made AYP – Adequate Yearly Progress. On Earth Day

2011, more than 1/3 of the students volunteered to plant an organic vegetable garden and paint a mural celebrating their new school, the native plants growing there and poetry about how it has changed their lives. As one student wrote: "I was born into poverty, I am poor now, but I am no longer without hope." Meetings were held with parents and faculty to get their input and Youth for Change continued to be involved. Partnership with the New Kensington Community Development Corporation led to use of the theater and gym for community greening events on rainwater barrel construction, weatherstripping, and recycling.

7. Mercy Corps

43 SW Naito Parkway, Portland, OR 97204 USA

<http://www.aiatopten.org/node/51>

Description: The new headquarters of this global relief organization restored and added onto a 42,000 sq ft neglected historical landmark in a challenging urban district. Mercy Corps' mission to foster sustainable economic development through collaboration and empowerment was demonstrated in the egalitarian layout and environmental features as well as efforts to revitalize the neighborhood. Ground floor community meeting facilities and an Action Center featuring interactive educational exhibits for visitors extend the facility's role in the community. The building achieved LEED Platinum and was chosen as one of AIA's Top Ten for 2012.

Strategies: The project renovated a historic building and redeveloped a major brownfield site in the city and adopted many other green strategies. Energy was an important focus and the project achieved an Energy Use Index of 36, better than the predicted 43. One factor in choice of furniture was that Herman Miller is committed to sustainable practices in its factory and materials as well as taking back these systems at the end of their life and recycling most of the components. The project team viewed the effort as a collaboration between the design team, client and community. There were regular meetings throughout the design process to focus on sustainability opportunities.

8. Greensburg Schools/ Kiowa County Schools

Greensburg, Kansas

<http://www.aiatopten.org/node/98>

Description: Following the devastating tornado that destroyed its town and schools, Unified School District (USD) 422 chose a bold strategy to combine its schools into a single K–12 facility that would retain a distinct identity for each school function: elementary, middle and high school.

Strategies: The design reinforces this rural community's sustainable comprehensive master plan by placing the school's front door along Main Street. The building is organized around a courtyard gathering space for all ages. The north wing houses the high school and gymnasiums. The south wing houses the lower-school curricula, which are zoned to identify their unique characteristics. The plan maximizes daylight and natural ventilation to positively impact student performance. The new school serves as a major community focal point, a catalyst for future buildings, and a tool to promote student health, productivity and enhanced learning. The school itself serves as an active teaching tool and has been integrated into the curriculum. The school is targeting a LEED Platinum rating.

The school has a variety of community-use spaces to encourage social involvement. Fitness and athletic spaces meet the larger community's social and recreational needs. Spaces that accommodate adult education and senior citizens' activities are included as well. The program is fully optimized beyond

school hours because it connects this small rural community by serving as a centralized community meeting place.

During the school design process, the town was implementing a community-wide comprehensive master plan that heavily informed the school master plan. The new school's site was selected as part of an initiative to strengthen Greensburg's density and the fabric of development along Main Street. Other criteria served as even stronger influences: the ability to safely walk and bicycle between home and school; the availability of basic services within walking distance of the school; and the ability to share theater, meeting spaces, athletic fields, and other facilities with the larger community. The master plan served as an invaluable tool in helping both the school and larger community to reach its full potential and goals.

Engaging the community, students and faculty in the full design process through large-scale workshops meant that there was buy-in from the very beginning. The design team and the school district worked with a child development specialist to help better understand the learning and play opportunities for the outdoor spaces of the school. The entire collaborative process produced a building that not only meets the needs of the children, faculty, staff and community, but is also a huge source of pride and is the heartbeat of the community.

9. The Village at Market Creek

Address: Market Creek Plaza--310 Euclid Ave. San Diego, CA 92114

<http://thevillageatmarketcreek.com/>

Description: The Village at Market Creek is a mixed use redevelopment project in San Diego that is being designed, built and owned by community members. The 60 acre site, which included brownfields and underutilized or untended land uses, is being revitalized into a community that will include nearly 1,000 affordable homes and over 1.7 million square feet of new construction, and will restore nearly 5,500 linear feet of wetlands.

Strategies: The project is estimated to bring more than \$300 million in construction contracts to the community, attracting over 250 new businesses and creating 2,000 jobs. The project includes a village center, a major grocery store (the first in the area in 30 years), commercial and light industrial uses, residences, public amenities, arts and cultural resources, parks and open space, and a mixed use transit hub. The project achieved LEED ND Silver Certification in 2012, and a Gold Level California Catalyst Community award from the California Department of Housing and Community Development.

Local community members were involved in the early phases of project visioning and planning of the project and focused on ways to revitalize the area while bringing maximum value for local residents and minimizing displacement. The project leverages a diverse partnership of public, private, non-profit and community based stakeholders. The Jacobs Family Foundation (JFF), a philanthropic organization focused on "strengthening under-invested neighborhoods by making grants and other investments that support innovative, practical strategies for community change" in the San Diego area was able to leverage initial investments and grants in order to raise capital for the project, and is serving as the project developer. A development company and management company were each established to manage and construct the project and create community ownership mechanisms, while at the same time providing jobs training and channeling resources into the local community.

10. Los Vecinos

1501 Broadway, Chula Vista, CA 91911

http://www.globalgreen.org/i/file/Green%20Urbanism/GGUSA_CaseStudy_LosVecinos.pdf

<http://www.energy.ca.gov/2011publications/CEC-500-2011-TB/CEC-500-2011-TB-001.pdf>

Description: Los Vecinos is a Zero Net Energy (ZNE) 42 unit affordable housing project in Chula Vista, CA. The project is located in a walkable, transit connected community, and replaced a motel/shooting gallery that was the number one site for police calls in the area. It includes a 93 kW photovoltaic solar array that, when combined with the other energy efficiency measures of the project, meets nearly all of the project's electricity demand. Residents receive the benefits through direct savings on energy bills.

Strategies: The project serves as a demonstration project to show both the possibilities and barriers to developing ZNE affordable housing. In addition to the fully integrated passive and active energy systems and the solar array, residents are engaged in energy efficiency through a training program on resource efficiency and green living. The project also focuses on resident health through IEQ measures, and providing green cleaning materials as well as folding shopping carts to encourage walking to the nearby grocery store. The project received LEED Platinum and was recognized as the USGBC Multifamily Project of the Year.

In order to achieve the ZNE performance level, the project used an integrated design process to focus on passive strategies, energy efficiency and on-site generation, as well as operations and resident behavior. The project was funded via public-private partnerships, with additional funds for ZNE coming from the California Energy Commission (CEC). Detailed case studies and analysis of opportunities, challenges and measured operational results have also been supported by the CEC to increase technical understanding and implementation of ZNE strategies in affordable housing projects.

11. Elmer Avenue

Elmer Avenue between Satcoy and Strathern streets in Pacoima, CA ([Map](#))

<http://www.treepeople.org/sun-valley-watershed#Elmer>

http://latimesblogs.latimes.com/home_blog/2010/07/elmer-avenue-sun-valley.html

Description: Elmer Avenue, a severely flood-prone street in Northeast Los Angeles, became the site of an integrated eco-system enhancement project that also built community and respect for the commons. Instead of the typical approach of stormwater management, which includes installation of stormdrains that channel water to the ocean, the project uses an integrated approach to watershed management that treats all aspects of the place as resources—including the water, the public street, the private homes and the community itself.

Strategies: Elmer Avenue, located in a part of the city that was built without storm drains, had for decades experienced extreme flooding from only a few inches of rain. In order to address this, the residents, city agencies and non-profits came together to design a system for stormwater retention and rainwater harvesting that also adds beauty, reduces pollution, creates habitat and increases walkability. The system includes bioswales, native landscaping, rainwater catchment and new sidewalks, as well as solar powered street lights that make the community more pedestrian friendly.

The success of the Elmer Avenue project is due largely to the enthusiastic participation of the residents. The local community was actively engaged in the planning and implementation of the project, and worked closely with city agencies and non-profits to design a system that added value and could serve

as an example to other communities. The project was a collaboration between Los Angeles and San Gabriel Rivers Watershed Council, multiple agencies within the the City of Los Angeles, and the urban forest focused nonprofit TreePeople, with funding provided by the U.S. Bureau of Reclamation, the California Department of Water Resources, the County of Los Angeles Department of Public Works, the Metropolitan Water District of California, the Water Replenishment District of Southern California, LA Department of Water and Power and the City of Santa Monica.

12. Hollywood and Vine

Hollywood Boulevard and Vine Street, Los Angeles, CA 90028

<http://communitybenefits.blogspot.com/2008/05/hollywood-vine-cba.html>

Description: The corner of Hollywood and Vine in Los Angeles, located along the iconic “Walk of Fame,” and up the street from the Kodak Theater (where the Oscars are held), Capital Records and other landmarks of Hollywood’s golden era, had fallen into neglect and distress by the early 2000s. Under the leadership of the LA City Council and local nonprofits, the area was targeted for redevelopment that would both leverage the significance of the site and provide value to the community. The 4.6 acre, \$326 million mixed-use, transit oriented redevelopment includes a 300-room hotel, about 500 housing units, 67,000 square feet of retail space and more than 1,000 parking spaces. It was developed by Legacy Partners and Gatehouse Capital and is governed by a Community Benefits Agreement with a coalition of community groups to ensure that the project provides good jobs with living wages, jobs training, and affordable housing. The project was awarded the Green Building Environmental Leadership Award by Global Green USA, and the W Hotel received LEED Silver.

Strategies: The Hollywood and Vine project combines uses that support the tourism industry and also serve the local residents to develop careers in that industry. The Community Benefits Agreement requires that the developers provide:

- Living wages for all construction workers as well as all on-going building staff
- First source hiring program to hire local people
- 20% affordable housing
- \$100,000 for a career training in culinary arts
- \$500,000 for arts at Hollywood High School
- \$30,000 to sign employees and neighbors up for low cost healthcare
- Hotel agreement with workers union

The success of this project was due to a combination of leadership from the LA City Council and grass roots organizing by a wide coalition of community groups, which worked in close partnership with the developers and other city agencies and the Community Redevelopment Agency and the ground lessor, Metropolitan Transportation Authority. The community coalition included the Los Angeles Alliance for a New Economy and other nonprofits, faith based organizations, local residents and businesses, and the hotel workers union.

13. Centro Agricola Community Agricultural Center

329 Main St Holyoke, MA 01040

<http://www.nuestras-raices.org/>

<http://www.livable.org/livability-resources/best-practices/103-nuestras-raices->

Description: The Centro Agricola Community Agricultural Center in Holyoke, MA transformed an abandoned building and vacant lot into a community resource center focused on local agriculture, economic development and community pride. It is a project of the grass-roots organization Nuestras Raíces, which was formed to support the Puerto Rican community of Holyoke after it suffered a major economic downturn following the collapse of its paper mill industry. The Center responds to and leverages the deep agricultural heritage of the Puerto Rican community living in Holyoke.

Strategies: The Centro Agricola Community Agricultural Center is designed to create economic opportunity and jobs, train community members in agricultural and entrepreneurial skills, support community heritage and pride, and provide healthy, locally grown, culturally appropriate food. The renovated abandoned building and site now includes a greenhouse, community kitchen, café, bilingual environmental and agricultural resource library, El Jardin bakery, meeting space, and plaza.

The project was created through a community-based design process to ensure that it responded to specific community needs. The largest part of the group's income and funding comes from private foundations, including the Ford Foundation and W. K. Kellogg Foundation. Nuestras Raíces also receives funding from various federal (USDA, EPA, CDBG) and state (Massachusetts Environmental Trust, Massachusetts Cultural Council) agencies. Earned income from the El Jardin Bakery and from space rental also comprises a substantial portion of the group's budget.

14. Thai Community Development Center Public Market

6376 Yucca St Los Angeles, CA 90028

http://development.thaicdc.org/?page_id=703

<http://thaicdc.org/cms/public-markets/>

Description: Thai Community Development Center Public Market is a community economic development project in the nation's only Thai Town. Located in East Hollywood, the area suffers from high rates of unemployment but is rich in cultural diversity, with large numbers of Thai, Armenian, Latino and other immigrants. The goal of the project is to provide immigrant entrepreneurs with a low cost entry point for starting self-sufficient businesses, to provide job training and long term retail jobs for local workers, to provide access to nutritious and culturally appropriate foods, to support local pride and boost tourism along the transit corridor, and to keep capital cycling within the community.

Strategies: Located above a Metro center and below a multi-family affordable housing project, the Market functions as a retail operation and business incubator for immigrant entrepreneurs, and is creating new opportunities for up to 18 start-up businesses and generating 40 permanent, retail-oriented jobs selling ethnic foods and artisan crafts. The project includes individual stalls for the small businesses along with shared support infrastructure and indoor and outdoor seating, as well as connection to an outdoor farmers market.

The Thai Community Development Center partnered with the UCLA School of Public Affairs with support from UCLA's Center for Community Partnerships to assess how public markets can serve as catalysts for economic and community development. The partnership conducted studies of other public markets and

how they functioned to support immigrant and low income communities, and conducted outreach into the local community. Thai Town was designated a 'Preserve America' community, making it eligible for \$250,000 in funds, and the Thai Community Development Center was awarded a federal grant of \$468,821 in October 2006 to by the Office of Community Services under the U.S. Department of Health and Human Services Administration for Children and Families.

15. Artists For Humanity EpiCenter

100 West 2nd. Street, Boston, MA 02127

<http://afhboston.org/sustain.php>

Description: The Artists For Humanity EpiCenter building in Boston, MA houses an innovative organization that uses art to support and train young people. Artists for Humanity's mission is to bridge economic, racial and social divisions by providing under-resourced youth with the keys to self-sufficiency through paid employment in the arts. The organization partners teens with adult artists to create projects for hire using painting, photography, screen printing and digital media. The EpiCenter project includes studios as well as public gathering spaces and gallery space, which are rented out to supplement the organization's income and provide a venue for student art.

Strategies: Artists for Humanity selected a project site that is easily reachable by public transportation from all areas of Boston in order to be accessible to teens without cars. The decision to make the EpiCenter green came from the students it serves, and students were intimately involved in all stages of the design process, working closely with the architects and attending classes in architectural design given by a design team member. The construction process was also leveraged as education for students. The project was designed to be simple, flexible, iconic and affordable. It is a LEED Platinum building, was designated as one of AIA's Top 10 Green Projects in 2007, and was nominated for the Harleston Parker Medal as one of Boston's "Most Beautiful" projects completed in the last 10 years.

CONCLUSIONS

In this review of projects, we observed several patterns of how social equity strategies get incorporated into building projects and why examples are challenging to find. Below we will discuss these patterns, and suggest next steps for exploration and expansion of the research scope.

Case Studies Are Lacking

Few building projects have well-documented descriptions of social equity efforts and strategies. This does not mean that there are no projects doing social equity, but it does suggest that strategies and lessons learned are not being captured in a way that is readily available to most USGBC stakeholders. Because LEED and most other green building rating systems have not explicitly included credits or criteria on social equity, projects typically do not document social equity elements in their written narratives that are published online or in project databases. For example, projects like Dockside Green in British Columbia and Battery Park in New York City are both cited for their efforts to address local needs and their processes to engage the community, and had explicit social equity goals, but neither has provided well-developed case studies that describe those efforts and processes. The case study

narratives that do exist focus on technical green attributes of the projects, and highlight measures such as energy efficiency, indoor environmental quality and access to transit, rather than the process and strategies that were used to address community needs and concerns. Case studies are particularly lacking for existing buildings, commercial interiors, and individual commercial buildings; most case studies describe housing or housing-related projects and mission-driven organizations that provide some form of social, economic or human health service. The exception to this is the case studies provided by Enterprise Community Partners, since their system of criteria explicitly addresses social equity, and Living Building Challenge projects that have certified under the most recent version of the system that includes an Equity Petal.

This lack of case studies makes it difficult to conduct a detailed survey of practices, and prevents other projects from learning by example. Incorporation of specific social equity strategies into rating systems and credits, and a clear template for documenting case studies would enable the issue to be more fully explored and implemented more broadly.

Who is Addressing Social Equity in Building Projects?

Analogous to the early days of the green building movement itself, social equity strategies in building projects are largely being implemented by early adopters and mission-driven organizations, and those that are high profile enough to warrant outside political pressure to do so. Organizations with social equity or human focused missions are, predictably, more likely to address these issues in their building projects. Community development corporations and related organizations play a significant role in ensuring that community interests are addressed in revitalization and development projects. Some localities have enacted policies that require development projects to address specific social equity issues such as local hiring and job training for community members.

- Affordable housing is the most common type of social equity project. Whether the project is initiated as affordable housing from the beginning or affordable housing is a requirement imposed as a condition of a broader development project, the purpose is to ensure that people with lower incomes have quality places to live. The examples included in this paper are those that go above and beyond providing basic housing units and focus in addition on other aspects of quality of life, such as healthy and efficient green building, access to specific services, access to healthy food, or creation of quality jobs and jobs training.
- Organizations with missions that focus explicitly on social equity are, of course, most likely to incorporate social equity principles into their building projects. Community development corporations, which typically target specific locations or neighborhoods and move forward projects designed to promote social equity and economic redevelopment, are the most common example. Other examples include some schools, religious organizations, and community advocacy groups.
- High profile projects that have significant community impact and that receive significant public funding can galvanize a community to respond to ensure that the project meets the needs of

locals. For example, when redevelopment of major sections of historic Hollywood Boulevard was undertaken city government and non-profits were able to negotiate a community benefits agreement with the developers to require that the projects provide good jobs and job training and other investments in the local population.

- Communities responding to specific crises are often able to create new and integrated opportunities in the process of rebuilding. Responses to natural disasters such as Hurricane Katrina and tornados in Greensburg, Kansas or economic disasters such as the collapse of a particular industry can generate creativity to reassess a community's needs and resources in an integrated way. These communities are then able to leverage recovery funds or grants to support development of resources such as economic incubators that enable small culturally appropriate businesses to start up and provide jobs and jobs training.

What's Missing and Why?

Organizations that are not mission-driven are less likely to have social equity on their radar or to address it in their projects. Metrics are not provided in green building programs such as LEED, and there are many barriers that discourage projects from incorporating social equity. For example, strategies for projects other than affordable housing are not clearly defined and documented so projects lack a clear road map of where to start. In addition, many of the strategies require an investment of time or resources without a clearly documented payback for the project, particularly for strategies that focus on the community beyond the building occupants; it can be difficult for an owner or developer to recognize a benefit, other than altruism.

Controversial projects or projects that require zoning variances or significant public resources sometimes use social equity measures to overcome opposition to the project, particularly when community groups or public officials are able to effectively leverage the opportunity. However, the process of identifying community leaders who can negotiate with legitimacy can be time consuming and may not be in a project owner's skill set. Project teams might not be aware of community development and other advocacy organizations that could provide assistance. For smaller or less controversial projects, such opportunities may be even less obvious. And, finally, since this is a "new" focus for green buildings, it simply might not occur to the project team that social equity is a relevant topic to consider in their project discussions.

There is a strong need for case studies that demonstrate how social equity strategies can be applied in a broader range of contexts. Projects that do include social equity strategies need to be encouraged to clearly document what they did and how. In addition, new case studies are needed to demonstrate:

- Links between existing building O&M or retrofits and green job creation, living wages, training programs or other social equity goals
- Social equity aspects of the supply chain in materials selection
- Incorporation of social equity criteria into Corporate Social Responsibility reporting for corporate building projects

- Incorporation of social equity criteria into commercial office buildings or commercial interior projects.

Examples of this type may exist, but because criteria are not well specified, case studies and project information is currently extremely limited. It is also important for green building certification systems, such as LEED, to explore how they can encourage project teams to explore and incorporate social equity strategies in their projects.

Scale is Important

The type of social equity issues that can be addressed depends largely on the scale of the project. Community scale projects that address land use and planning can do more, for example, than commercial interiors projects. This difference in scale is reflected in LEED-ND, which includes more social equity related criteria than the other LEED rating systems.

Larger projects typically have more stakeholders, longer time horizons, and many more opportunities at their disposal – they might be able to affect the layout of road networks, the design of transit systems, the locations of food, agriculture and other resources, and the participation of the public and non-profit sectors. Because their impacts are bigger, the role of an organized and empowered local community is particularly important. In fact, a coherent community can be the deciding factor on whether a development project brings sprawl, gentrification, and displacement or meaningful revitalization and transformation for all. As a result, the vast majority of examples included in this paper involve strategies operating at the land use and planning scale, rather than the individual building scale.

One particularly powerful tool in a community's efforts to influence development projects is a community benefits agreement. These are written and binding agreements between the developer and the community, as represented by local organizations and/or the local government agencies to provide direct resources to the population, including community supported land uses such as schools, food suppliers, open space, etc. as well as both construction and on-going jobs and jobs training.

This does not mean that smaller scale projects cannot also focus on social equity. But, the options for smaller scale projects may be more limited, particularly on projects where social equity is not a core mission of the owner, and less is known about appropriate strategies.

Partnerships are Critical

For a project to be successful in addressing social equity needs in the community, community stakeholders must have a voice at the table. No one group can represent the interests of all, and one of the biggest challenges is finding spokespeople who can represent different aspects of the community and help negotiate. Community group coalitions can be extremely diverse, incorporating members from faith-based organizations, workers and unions, local businesses, residents of different income and education levels, and these groups can have very different interests and abilities.

The Role of the Public Sector

Since we are talking about social good, the public sector has a critical role to play. In the majority of projects reviewed in this paper, public agencies were critical in facilitating funding or otherwise supporting social equity efforts. Because so much of the social impact of a project occurs at the land-use scale, many aspects of social equity really are policy issues, more than individual project issues. Therefore development agreements, land-use plans, zoning ordinances and other policy mechanisms are critical tools. Local governments around the country are implementing policies that encourage or require social equity strategies at both the land use and building scale. The public sector also can play a role by setting an example, incorporating social equity strategies in its own projects, much as it did in the early days of green building.

Most Projects Address Project Users and Community Stakeholders; Few Address Supply Chains

Although upstream and downstream environmental impacts are addressed in LEED and other certification systems, upstream and downstream social and economic impacts are not addressed well or at all by these systems. One reason for this is lack of data. Environmental life cycle assessment is a well-established methodology with associated databases. There are efforts underway to create similar supply chain databases related to social equity and methods for analyzing the information, but these efforts are still in formative stages. In addition, some manufacturers are making an effort to address their supply chains to ensure that at least minimal worker health and safety standards are in place. Until more tools and resources are in place, it is difficult for a project to identify and implement appropriate strategies. In addition to the LCA-based tools, Corporate Social Responsibility reporting is being explored as an approach to this problem.

Integrative Design Provides a Foundation

Projects that address social equity most effectively are almost always projects that consider the community and context as a system. Rather than starting with a list of strategies, these projects look closely at the concerns of the targeted communities and identify innovative ways to meet needs and create value for all stakeholders.

This systems-based approach is also the foundation of integrative design. In fact, when integrative design experts were interviewed regarding their projects for this paper, they stated that they were not separating social equity projects from the rest of their work, but rather saw these goals as emergent from the project process. In other words, defining to the needs and resources of a particular community was inherent in the process of understanding a project's site and circumstances, and the strategies for responding to them emerged as part of a holistic set of solutions for the project overall. When a project's site, surroundings and community are fully considered in the early stages of a project as an integrated system, and all three aspects of the sustainability triple bottom line are considered as part of the project's core goals, then social equity strategies are most likely to be incorporated.

For example, providing affordable housing is in itself a social equity goal, but only when a systems based approach is used is it typically effective in creating change in a community or addressing disparities

across a population. Affordable housing projects that are able to be transformative fully consider the needs and resources of the residents and surrounding community to not only provide housing but to also provide related support services and avenues for opportunity. Residents are often included in the design process in meaningful ways, and resources such as healthcare, education, access to jobs or nutrition are integrated into projects in creative ways to support community empowerment.

Recognizing the importance of an integrated approach, the Enterprise Green Communities program includes a category for Integrative Design, rewarding projects that employ an integrative design process, and they offer a grant for projects to implement Green Charrettes. This support for integration is a key ingredient to making Enterprise Green Communities projects successful, and why they have been included in this collection.

Next Steps

While this paper outlines a framework and highlights examples of projects that have implemented social equity goals and strategies, the incorporation of social equity into green buildings is lagging behind other aspects of the triple bottom line of sustainability. The green building movement has much to learn and incorporate from the other areas, such as environmental justice, public health and social responsibility reporting, and at the same time can offer processes for integrated solutions back to these areas. Specific criteria are needed to outline how to address social equity in different project types and owner types and for different types of stakeholders and incentives are needed to encourage project action. Venues are needed for facilitating deeper dialogue on the topic, and for sharing case studies of successful projects.