



CITY of NOVI CITY COUNCIL

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Agenda Item 2
September 24, 2007

SUBJECT: Consideration and adoption of Green Building policies and resolutions

SUBMITTING DEPARTMENT: Community Development Department – Planning

CITY MANAGER APPROVAL: 

BACKGROUND INFORMATION:

Earlier this year, staff presented the City Council with a set of policies and suggestions regarding the promotion of green building and LEED certification in the City of Novi, both for private investment and future public investments. The City Council postponed the matter, asking for additional input as to other communities' experiences as well as review and comment by the development community in Novi. Additional information was provided for City Council's consideration in an off-week packet in June.

Since that time, staff has researched green development policies in other communities, both in Southeast Michigan and throughout the Country. None of the surveyed metropolitan Detroit communities have a green building policy in place, except Auburn Hills, although several more communities have had recent discussion regarding this topic. Western Michigan continues to lead the State in registered and certified projects. Wyoming, Michigan is home to five projects that are registered and the remaining Grand Rapids area is home to scores more. Troy has a Gold certified building and another building pursuing certification and Auburn Hills has a building that is registered. Ann Arbor leads our peer group with four registered projects and one Gold certified building. Attached is information collected by the Community Development Department on this topic.

A copy of the current LEED registered project list is also included, covering the State of Michigan. The first step in certification is to be registered. This gives the applicant access to point interpretation information, which are needed to qualify for certain points under the LEED checklist, and other information vital to securing certification. It should be noted that this is not a complete list of certified projects. A number of projects choose to remain confidential for a variety of reasons and are simply listed as a project, with no identifying information. This would include the A. Alfred Taubman Center at Lawrence Technological University, which has achieved Silver Certification, but continues to be listed as confidential.

Staff contacted six corporate citizens for comment from the development community on this topic: Amson Dembs, Northern Equities Group, The Taubman Company, Singh Development, and jointly JPRA and Whitehall Real Estate. Responses have been received from all of the groups, except Singh Development. (It should be noted that LEED certification has very little impact at this point on single-family home construction.) The responses from Northern Equities and JPRA/Whitehall are attached. Taubman's representatives indicated verbally that the policies are good first steps, and recommended taking the concepts further to include storm water and revised landscaping provisions. Please note, since that time, the Engineering division has been working to establish low impact development provisions to the storm water management provisions of the ordinance. Amson Dembs spoke with staff at length and generally supported the idea, due to potential long-term cost savings, but had not seriously researched the idea at this time. Amson Dembs did offer pricing assistance and other technical research assistance, should the City ever have the need.

Staff now recommends a number of policies, ordinances, and general practices for City Council's review to allow Novi to become a more "green" community. These changes are broken down into two rounds of work, based on the amount of time necessary to complete the tasks. The majority of these recommendations deal with all types of development except single-family construction, consistent with the current thrust of the LEED program.

First Round Policies

- *Join United States Green Building Council (USGBC)* – Membership in this organization costs only \$500 annually, giving Novi access to the resources and information leveraged by this nationwide organization. The Building Division has finalized this issue and Staff has been utilizing the resources and receiving publications for research.
- *Leadership in Energy and Environmental Design (LEED) Standards Adoption* – The Green Working Group determined that in order to be clear to the development community, and rather than adopting our own set of standards, it would be advantageous to adopt the existing LEED standards, which are well known throughout the development community. This would make clear to the development community that we support sustainable development and encourage certification through the LEED standards. City Council is asked to adopt the attached resolution, making the LEED standards the official green building guidelines for the City of Novi.
- *Public Buildings Policy* – Many levels of government have begun to mandate that all future construction of public buildings will be required to achieve LEED Silver or better certification. After further discussion, staff has made slight revisions to the proposed resolution. These revisions would encourage, but not require, "best practices" to follow the LEED criteria, even if formal certification is not being considered. Such "best practices" approach, to look at durability and long-term operating costs, is now a realistic and standard practice in design. City Council is asked to adopt the attached resolution regarding public buildings and remodeling.
- *Storm Water Ordinance Revisions* – Novi has effective, but stringent, storm water management requirements for all new construction. The Engineering Department has researched technical aspects of alternative storm water management systems, and has recommended amendments to provide low impact development standards for storm water systems. City Council has already approved a first reading of the ordinance language brought forward by the Engineering Division.

Second Round Policies

- *Maximum Lot Coverage Provisions* – Not specifically LEED related, Novi currently has maximum lot coverage standards for only a few zoning districts. Adding maximum lot coverages would not be intended to be any stricter than current standards. It would instead be used as the base for future development options that would reward developers for preserving additional areas of their site in a green state. It would also open up another criterion for developers to meet, in order to qualify for an expedited plan review.
- *Residential Development Options* – To encourage further preservation of natural features throughout the community in new development, modifications may need to be made to the existing residential options. Staff has already been taking a fresh look at all the options currently available and will make recommendations as to where additional preservation can be gained, while still meeting the intent of and the densities suggested in the Master Plan for Land Use.
- *Façade Ordinance* – Staff has been discussing modifications to the façade ordinance with the City's façade consultant in an effort to include new building materials that the current ordinance does not address. As a part of this effort, provisions will be considered to allow for more environmentally friendly materials. These amendments are currently under review by the Community Development Department and will be forwarded to the Planning Commission for consideration in the near future.

- *Landscape Ordinance* – There are a variety of changes that staff recommends for the landscape ordinance, based on observations of the effects of its implementation over several years. As part of these changes, staff will be recommending the use of native and drought resistant plantings, to further another of the LEED criteria.
- *Green Building Expo* – Once Novi has the bulk of these new policies and ordinances in place, Staff would suggest holding a Green Building Expo, possibly in conjunction with another Natural Features Expo, to inform the public and development community about the policies in Novi and benefits of green construction. This would occur as a final capstone to the effort.

At this time, Staff is not recommending any incentives be put in place for LEED construction. Several options were presented at the last review of the policy, none of which received a consensus either from City Council or from city staff. Valuable resources, both financially and in terms of time, would be tied up for potential incentives for new LEED buildings. Also, it appears as though the market has decided, on its own, to move towards green construction in Novi. The new JPRA office building being constructed on Bridge Street by Whitehall Real Estate is registered with the USGBC and is pursuing certification. Additionally, staff has had conversations with another builder and tenant that are interested in pursuing the certification, with or without public involvement.

RECOMMENDED ACTION: City Council is asked to take the following actions:

1. Adoption of the attached resolution encouraging green building practices through voluntary participation in private developments by making the LEED standards Novi's official green building criteria,
2. Adoption of the attached resolution encouraging consideration of "best practices" in new construction or major renovations of public buildings,
3. Referral to the Planning Commission for research and potential ordinance amendments regarding alternative landscaping options, modifications to the façade ordinance, maximum lot coverage provisions, and other ordinance sections related to green and/or sustainable construction.

	1	2	Y	N
Mayor Landry				
Mayor Pro Tem Capello				
Council Member Gatt				
Council Member Margolis				

	1	2	Y	N
Council Member Mutch				
Council Member Nagy				
Council Member Paul				

**RESOLUTION ADOPTING LEED STANDARDS AS NOVI'S
OFFICIAL GREEN BUILDING CRITERIA**

CITY OF NOVI
COUNTY OF OAKLAND, MICHIGAN

RESOLUTION ADOPTING LEED STANDARDS AS NOVI'S OFFICIAL GREEN BUILDING CRITERIA

Minutes of a _____ Meeting of the City Council of the City of Novi, County of Oakland, Michigan, held in the City Hall in said City on _____, 2007, at _____ o'clock P.M. Prevailing Eastern Time.

PRESENT: Councilmembers _____

ABSENT: Councilmembers _____

The following preamble and Resolution were offered by Councilmember _____ and supported by Councilmember _____.

WHEREAS, on January 13, 2007, the City Council adopted goals and strategies for the City of Novi, including the goal that Novi will "Be a community that values natural areas and natural features" with an adopted strategy to "Allow and encourage green building and development"; and

WHEREAS, on September 24, 2007, the City Council received a report from City Staff regarding "green" construction and Leadership in Energy and Environmental Design (LEED) standards that were developed by the United States Green Building Council, a non-profit organization, and are being used nationwide; and

WHEREAS, green construction has been viewed as promoting the "Triple Bottom Line" by promoting Economic Prosperity, Social Responsibility, and Environmental Stewardship, and

WHEREAS, green construction can reduce energy consumption by up to 30%, saving building tenants up to fifty cents in operating costs per square foot, per year; and

WHEREAS, all fifty states are home to at least one LEED certified project and fifty-six units of local government have already adopted LEED as their green building standards; and

WHEREAS, the City of Novi prides itself on being an environmentally-friendly community, promoting the preservation of wetlands, woodlands, and other natural features; and

WHEREAS, the City of Novi strives to remain on the cusp of new building and planning techniques to make Novi an even more desirable and environmentally-conscious community;

NOW, THEREFORE, BE IT RESOLVED, that the Novi City Council hereby resolves:

1. To encourage voluntary participation by private developments in the City of Novi to be energy efficient and environmentally sustainable, through the use of the standards established and published by the United States Green Building Council, and the related standards provided by the Leadership in Energy and Environmental Design (LEED) Registered Project Checklist.

2. To further review the City's ordinances and policies and consider modifications to encourage "green" and environmentally-friendly construction, utilizing the LEED checklist and related standards as a baseline for consideration.

3. To maintain membership in the United States Green Building Council to allow access to the resources and information leveraged by this nationwide organization.

AYES:

NAYS:

ABSTENTIONS:

ABSENT:

RESOLUTION DECLARED ADOPTED.

MARYANNE CORNELIUS, CITY CLERK

CERTIFICATION

I hereby certify that the foregoing is a true and complete copy of a Resolution adopted by the City Council of the City of Novi at _____ meeting held this _____ day of _____, 2007.

MARYANNE CORNELIUS, CITY CLERK

**RESOLUTION CONCERNING GREEN CONSTRUCTION
FOR FUTURE PUBLIC BUILDINGS**

CITY OF NOVI
COUNTY OF OAKLAND, MICHIGAN

RESOLUTION CONCERNING GREEN CONSTRUCTION FOR FUTURE PUBLIC BUILDINGS

Minutes of a _____ Meeting of the City Council of the City of Novi, County of Oakland, Michigan, held in the City Hall in said City on _____, 2007, at _____ o'clock P.M. Prevailing Eastern Time.

PRESENT: Councilmembers _____

ABSENT: Councilmembers _____

The following preamble and Resolution were offered by Councilmember _____ and supported by Councilmember _____.

WHEREAS, on January 13, 2007, the City Council adopted goals and strategies for the City of Novi, including the goal that Novi will "Be a community that values natural areas and natural features" with an adopted strategy to "Allow and encourage green building and development"; and

WHEREAS, On September 24, 2007, the City Council received a report from City Staff regarding "green" construction and Leadership in Energy and Environmental Design (LEED) standards that were developed by the United States Green Building Council, a non-profit organization, and are being used nationwide; and

WHEREAS, green construction can save a building owner approximately twenty percent in operation and maintenance costs over the life of a building; and

WHEREAS, forty-six percent of all LEED certified buildings are owned by federal, state, or local units of government; and

WHEREAS, State of Michigan Executive Directive 2005-4, "Energy Efficiency in State Facilities and Operations," required that all future State of Michigan capital outlays in excess of one million dollars achieve a minimum of twenty-six points on the LEED Registered Project Checklist, allowing the project to be registered as a "green" building; and

WHEREAS, the City of Novi taxpayers will benefit in the long term from reduced operating and maintenance costs and a healthier environment;

NOW, THEREFORE, BE IT RESOLVED, that the Novi City Council hereby resolves:

1. That future publicly-constructed buildings in the City of Novi shall strive to use "best practices" and utilize LEED certification criteria, to the extent such criteria and certification are financially, physically, and operationally feasible, thereby ensuring that these buildings will be energy efficient and environmentally sustainable;

2. That future major renovations to publicly-owned buildings in the City of Novi shall strive to use "best practices" and utilize LEED certification criteria, to the extent such criteria and certification are financially, physically, and operationally feasible, thereby ensuring that these renovations will be energy efficient and environmentally sustainable;

3. Where LEED certification is not financially, physically, or operationally feasible, the standards in place for the LEED certification process shall be used as "best practices" in designing or remodeling a facility.

AYES:

NAYS:

ABSTENTIONS:

ABSENT:

RESOLUTION DECLARED ADOPTED.

MARYANNE CORNELIUS, CITY CLERK

CERTIFICATION

I hereby certify that the foregoing is a true and complete copy of a Resolution adopted by the City Council of the City of Novi at _____ meeting held this _____ day of _____, 2007.

MARYANNE CORNELIUS, CITY CLERK

**CITY COUNCIL MINUTES
FEBRUARY 5, 2007**

**REGULAR MEETING OF THE COUNCIL OF THE CITY OF NOVI
MONDAY, FEBRUARY 5, 2007 AT 7:00 P.M.
COUNCIL CHAMBERS – NOVI CIVIC CENTER – 45175 W. TEN MILE ROAD**

Mayor Landry called the meeting to order at 7:00 P.M.

PLEDGE OF ALLEGIANCE

ROLL CALL: Mayor Landry, Mayor Pro Tem Capello, Council Members Gatt, Margolis, Mutch, Nagy-absent/excused, Paul

3. Consideration and adoption of Green Building policies and resolutions.

Mr. Pearson said this was something that staff had been working on but it also represented confluence with one of the strategic goals that Council just adopted. He said that was to be a community that appreciated and encouraged natural areas and natural features. He said the buzz word Green Buildings really encompassed a lot of different building and design techniques that were being used successfully around the country and around the world. It was something that staff looked at to see how it might fit in with Novi. He said Ms. McBeth and Mr. Schmitt would talk Council through this.

Ms. McBeth said they were very gratified to hear at the City Council Goal Setting session that one of Council's goals was also to look at green buildings and encourage those in Novi because City staff had been looking at those for some time too. She said they had formed a Green Working Committee and introduced it to Planning, Building, Engineering and the Wetland Consultant. She said they got together and came up with a lot of ideas and what they saw today was a result of a lot of talking, research, looking at ideas and these were really recommendations for consideration and discussion. She said they didn't have to be implemented at this time. They were talking about two rounds of reviews, first round policies seemed more straight forward and second round policies would take a little more time to do.

Mr. Schmitt said this came to a head when he checked on one of the planning blogs and the first article they posted for the year was "Is 2007 the Year of the Green Building. He said staff had started working on this in 2006 and what was in front of Council this evening was the first culmination of their work on this. He said they had broken it down to two rounds and there was a third piece to this that he would touch on briefly. Mr. Schmitt said it was three separate ordinance amendments to the Zoning Ordinance. Ideally they would like to update the whole ordinance not only with LEED in mind but with a variety of other things in mind, and they would hope that would be looked at during the budget process. However, the three specific items, the Façade Ordinance, Lighting Ordinance and the Landscape Ordinance really could tie into this directly. He said those were three things they would be looking at in the bigger picture as they moved

forward on this. He said when the architectural consultant comes on board they would begin with the Façade Ordinance. They had already started discussion on the Landscape and Lighting Ordinances internally.

Mr. Schmitt said in terms of the specific Green Building Policies in front of Council it would really put Novi in the forefront of a movement that five years ago would have been fringe, and ten years ago he might not have been able to come up with much to talk about. He said it really was becoming a more viable way of doing business. The common misconception was that it cost more, and more and more people are finding out that the green construction was comparable and sometimes cheaper than traditional construction. He noted a lot of it depended on where you were at in the country and how much of the infrastructure was already in place but Michigan was blessed in that regard in that we have one of the highest numbers of buildings in the country. He said Grand Rapids was actually the highest per capita in the country. They have a lot of green building going on out there led by private companies in the Kentwood area and in the suburbs of Grand Rapids. A lot of the corporations there had taken up this cause and had done corporate campuses with LEED certification in mind.

Mr. Schmitt said in terms of the specific policies, the first and easiest the staff came up with was membership in the U.S. Green Building Council, which would give access to the resources and information. He said they had joined that group and were going to start utilization of those pieces of information that was available to them. He said the side benefit was given access to that information planners would have the ability to become LEED certified practitioners, which was something that he and Director McBeth would look into this year, and try to achieve that milestone in their careers. He thought the most important one was the actual adoption of the LEED standards. LEED, Leadership and Energy in Environmental Design, it's put out by the

U.S. Building Council and it was the gold standard. He said there were four levels of certification, certified, silver, gold and platinum. The standards were well accepted in the industry, and there was a fairly detailed check list included in Council packets. He said what they thought a good starting point would be was to adopt those as Novi's green building standards. It was something that everyone would know about; the LEED standards had been published and dissected by any number of architects, engineers and planners in the field. He noted it was identified by the fact that they understand that this movement was going forward and they wanted to get on with it.

Mr. Schmitt commented they thought a way to implement this was to make it something of an incentive based process because while we can say we want to be green it might not get done. They had come up with several ideas they wanted to present to the Council in term so trying to promote this. First and foremost, there had been a lot of talk

about the time it took to get through the process and so it seemed like an expedited plan review seemed like a good thing to tie in here. He said in terms of qualifying for that proposal that they had come up with this evening was that if seven of the LEED criteria were met and could be identified at the pre-application level they would speed their process through. They would be given priority in reviews and priority at the Planning Commission. He said that would get the process done quicker and time was always money in the development community. Novi was somewhat a level ahead in this regard because some of the ordinances were already required such as storm water and landscaping and things of that nature, they would already qualify under a few of those LEED criteria already. Mr. Schmitt said they were actually progressive without knowing it in this regard. He said the more he looked into the LEED criteria he found they pushed a lot of the site selection information already as part of our due course, which was good for the City.

Mr. Schmitt said the second incentive was a fee rebating process and was something they would like to flush out a little bit more, if they actually get certified, and would put nothing out from the City up front. However, if someone were to build a building and they had identified it through the process as possibly being a green building, and they came back after construction and actually got it certified, he thought there were some benefits in that and the City should tie in there and help make it a more financially feasible to someone. He said even further along the lines and possibly more radical was a tax abatement for this. He noted some communities had started going to that and given the relatively small amount of projects that qualify at the higher levels they thought it might be something to study further in the future. He thought at this point a fee rebate with an amount to be determined was really a good step towards an incentive in the process. He said they would like to talk with the development community about what it would take and was it a realistic number to make this a reality.

Mr. Schmitt said the second resolution policy was a public buildings policy, which was something becoming common with the communities that were trying to lead by example. The State of Michigan was specifically referenced in the resolution because we are in the State of Michigan and anything over \$1 million capital was supposed to be LEED certified now. He commented that he already had the Deputy Chief Lindberg's ear about doing a few things at the gun range and trying to do some test cases. He said the Novi Library was also coming up and possible renovations to the Fire Department. Mr. Schmitt said in the future the City Hall building would probably have to be renovated or rebuilt. So having the policy in place now was really just a foresight of saying in the future we would build more sustainable buildings, and not just tear it down and rebuild somewhere else.

Mr. Schmitt said the third policy was something that staff had thought about since he came to Novi five years ago and was something that would be a benefit to the LEED certified projects, and was maximum lot coverage. He said it was in the ordinance in a few places but most places it references footnote G, which said

"maximum lot coverage was determined by setbacks, landscaping, parking requirements and other requirements of the zoning district in which you are constructing." He said it was vague and didn't help people when they called and asked what their lot coverage was. He commented that given that the LEED checklist then had a lot coverage item in it, it seemed natural to look at it.

Mr. Schmitt said there were a lot of storm water things involved with green construction and that was something our new engineer was beginning to look at, and was something they would like to look at in the future. Regarding the residential development options in terms of making them more likely to actually achieve preservation instead of simply moving natural features around or replacing them, if we could make it worthwhile for someone to preserve something and not necessarily blow the density of the Master Plan out of the water, it seemed like something they should take a look at.

Lastly, once a substantial amount of this was done and they wanted to push it to the front of the mind of the public, he thought they should have a green building expo. He said whether that tied into the natural features expo and became a recurring theme or whether we tied on to the Fall for Novi and did this let's get the word out there that Novi's really trying to be progressive in this regard. He said it seemed natural to tie into the existing environmental infrastructure and the things that had been pushed over the years to now start building sustainable buildings. He said they might not be able to preserve all the land but could sure make the buildings more sustainable to preserve more land in the future.

Mr. Schmitt stated he would be happy to answer questions. He noted he had done a lot of research over the last couple months and it was an exciting topic.

Member Margolis thanked the staff for being proactive in this area and she enjoyed seeing people being excited about what they were doing, and moving forward. She noted she didn't want it to sound like she was against this. However, she thought what happened when looking at things in separate pieces was that they didn't look at what the impact was across the City and across the organization. She would be looking for was what the short and long range impacts would be on the kinds of things they were trying to do right now. How the process would impact the initiatives they had in terms of streamlining the process for people who wanted to build in Novi. Also, what the developer feedback would be on this. She liked the idea of incentives and thought it was something they could promote about this community but she didn't want to impact things in a negative way as they were starting to look at economic development. She wanted feedback from the developers, the community and from staff on the impact of this in terms of economic development and the kinds of things they were going to do. She thought they needed to hear that from the business community. She also had the same kinds of questions regarding adopting the standards. She asked how the expedited plan review would affect what happened with the other plans. She said anytime someone's plans are expedited

someone else's got slower. Member Margolis said one of the things they talked about was expediting plan review for the more attractive developments they wanted in terms of economic development, the OST developments. She asked how that would fit with that. She wanted to know what the affect of the fee rebate would be overall fiscally for the City.

Member Margolis said the public buildings policy sounded great, but when she saw the major impact of that immediately would be the future library that had already gone through their own design. She wanted the feedback from the Library Board. She said if they said great, then that's where they were going but before moving on that she didn't want to cut them off at the knees after all the work they had done to make sure that had been incorporated.

Member Margolis stated she thought this was great and she was glad they were moving forward. She said things had come before Council recently that they couldn't act on because they didn't take into account the new technologies that were available. She said before she voted on this she would like to have a great deal more information on most of those topics.

Member Gatt said he applauded Mr. Schmitt and his enthusiasm for this project. He said although he was as much an environmentalist as anyone, he was not ready to vote on this package yet as he needed more information. Member Gatt wanted to know what Novi's major developers would say and how it would impact them. He asked for more information before moving in a different direction than they were at right now. As far as expediting plans that was something he didn't really care for because that meant we would do it faster but we were going to pick and choose who we would do it faster for. He didn't see the fairness in that. Member Gatt noted he was sure that someday they would move toward a green city but he was not ready to adopt all these plans yet.

Member Paul thanked Mr. Schmitt for all his work and enthusiasm. She said she had been reading about this also, and one of the things that she wanted to share was that green buildings wouldn't even increase the building costs 1%. In one years time the heating and the cooling would be so much lower because of the green building and runoff that they would make that money up in one year. Member Paul said there were many, many whole states that were doing green buildings so she thought they were further behind than most other states in this area. Member Paul noted that one of the areas that was probably the most influential to increase awareness of this was when people put in the bio-retention basins/green buildings they are given tax breaks because they were preventing the water runoff. She said last year there were several different dredging projects in the City worth over a million dollars on several of the projects. She said that was being saved because the water was not running down and the speed of the water was not deteriorating all of the stream banks. She commented that those were some of the things that were being discussed. Member Paul said when Mr. Schmitt said time was money and they would be expedited it looked like the

whole planning process was being expedited not just for one developer but for everybody because of the comments received from the Sikich Group. She said it seemed like their whole team was functioning for everybody and not just for one individual. She asked if that was what he was seeing.

Mr. Schmitt said the Pride Report had them moving at a much quicker pace than they were previously. He thought the anticipation was that for a project they wanted to push, whether a green building or an OST development, there was always a little more room and a little more horsepower to be gotten out of staff. Member Paul said she was very much in favor of this and said she applauded him for his efforts.

Member Mutch thanked Mr. Schmitt for his presentation and said he had been very interested in seeing them explore some of these policy changes as well as some of these initiatives, and they needed to to compete in the marketplace. He commented that Auburn Hills was one of the major growth centers in southeast Michigan; it's where companies that don't locate in Novi locate. He said they had a similar policy in place since last year and it took quite a bit of time and input from their development community to craft a similar resolution. Member Mutch said they were using that as their benchmark. Ann Arbor was another community where they are strongly encouraging the green building process not only in their private sector but in their public sector. He said regarding the discussion on the impact on the library building, the Ann Arbor District Library system had built two libraries using green building principles, and was building a third library using green building principles. He said they not only willingly did that but made a point of doing it because they did the cost benefit analysis and in every regard they would save money in the long run and the impact to the community in the long run.

Member Mutch thought some of the comments made this sound like they were coming forward with some restrictive regime that would strongly impact the development community. He said what was before Council tonight was nothing of the sort. The first item was a resolution that simply said that LEED standards were the standards to be used for the basis for future policies and procedures relating to green and environmentally friendly construction. He said there would be no obligation on the City's part to adopt any future polices and there would be nothing that would impact the development community at all. It simply said moving forward these would be the standards they would use. He said if they were not going to use the LEED standards then what standards would they follow. He asked if they would come up with their own set of standards and reinvent the wheel. He said he didn't understand why they would do that so he thought the question with the first resolution was either they would have a set of standards or they would not. Member Mutch said if they weren't he didn't see any point in spending a lot of time studying this much further because there was nothing else to put in place. He didn't see any problem with adopting the first resolution.

Member Mutch said the second resolution regarding LEED certification for public buildings; he thought enough work had been done in the area to justify following the LEED route in terms of the cost benefit financially and environmentally. He said even in their own resolution they gave themselves an out, and said "where fiscally, physically and operationally feasible." He said if it was not one of those, they didn't have to do it, and it was their own resolution. He said if they decided that LEED was too much work for them to accomplish as a public organization, as a public body, then it wouldn't be followed. It was not the law it was simply a statement of where they want to go forward in the future.

Member Mutch thought, regarding expedited plan review, that there were several comments that were legitimate concerns. However, he thought the administration was looking for direction from Council about whether that was something that should be pursued or not.

Member Mutch said regarding the fee rebating policy, the City administration was looking for direction. If it's something that they're interested in doing they would bring back recommendations. He said this was just a broad policy concept at this point and not specifics that they were adopting.

Finally, the issue of maximum lot coverage provision, that was simply a referral to the Planning Commission so they could sit down with all the parties that they had talked about this evening and say how would this work, how would it impact development and was this doable or not doable. Member Mutch said they couldn't have that conversation unless they start the process. He said looking at all of these, he didn't see any reason why they couldn't adopt the first two resolutions. They would have zero impact on the development community, don't require any new ordinances and simply made a policy statement about where as a community they wanted to go. He said likewise #5 simply started the process to look at the lot coverage provisions in the ordinances.

Member Mutch said they talked about wanting to be a distinct and competitive community that was going to attract the high quality businesses that would make Novi even better than it was now. As Member Paul noted, Novi was behind the curve when it came to green building policy. He commented that Grand Rapids was one of the economic bright spots in the state. They were generating jobs when southeast Michigan was hemorrhaging jobs. He thought part of that was that they had something to sell not only to the companies that were located in the Grand Rapids area but nationally; they have something that's distinct. Member Mutch said this was a chance for them to take what they've always said they were, an environmentally friendly community, as the woodland, wetland, and storm water ordinances reflect, and just say they had been trying to protect the environment externally, but now wanted to extend that concept to the actual construction and development of sites. Member Mutch said what was before Council was baby steps, and he didn't see any reason they couldn't move forward on resolutions 1 and 2 and make a referral to the Planning Commission.

If Council wanted to discuss resolutions 3 and 4 some more or if they wanted to ask City staff for more detail on how those would work, he thought those were legitimate questions. However, he didn't see any reason for them to stop this process now if they weren't interested in moving forward with LEED standards and LEED certification. He suggested deciding and not wasting a lot of staff time if not interested in doing that but he would like to see the first two resolutions adopted. He said start the ball rolling and work out the details as they move forward.

Mayor Pro Tem Capello stated he had not heard anyone state they were not in favor of moving forward and continuing to study the green building concept. He believed that a lot of the ordinances in place now with the wetlands, woodlands and storm water, already incorporate some of the requirements of LEED. He said to look at something this important over a four day period, and then pass judgment on it tonight was just not enough time. He agreed with previous speakers that he would like to hear from the development community and see what they think of it. He told Mr. Schmitt that he really liked the idea of offering incentives. Mayor Pro Tem Capello felt that under the leadership of Mr. Pearson and Mayor Landry they had made a lot of strides with the business and development communities in the last ten months. He would hate to pass a resolution without giving it the due course of study and thought at the Council level and send a message that the tough standards of Novi in the wetlands, woodlands and storm water was now going to become tougher again by adopting this green building concept. He felt the stigma of adopting more difficult environmental laws could send that message and he wasn't ready to do that without being able to explain the impact that this would have. He said the best way to explain the impact would be to sit down with the business and development communities, get their input, get them to say it would work, and it would be a great concept to send out there and everybody would be happy. Mayor Pro Tem Capello said he would not turn it down and would not make a motion to approve. and he would not send the staff around to chase their tails, he thought it was a good concept but needed more work and more study.

CM-07-02-024 Moved by Capello, seconded by Margolis; MOTION CARRIED:

To postpone and consider the comments of Council and establish a committee and invite developers come in and give them an opportunity to review this with their architects and engineers and provide some input, and return to Council in 60 days with a progress report.

Member Paul asked for a timeline to return to Council.

Mr. Pearson said as he understood it Council was asking that staff fan out and float this with some of the office developers primarily, and talk with other communities to see what the level of usage was to find out what the impact

would be if the incentives discussed were adopted. He said they could give Council a progress report in 60 days. Mayor Pro Tem Capello was agreeable.

Mayor Landry said they were entering a very intense economic development period competition wise. As the City moved toward build out there were only a few years for them to compete to get businesses, make sure the tax base was sufficient when the City was built out. He said that worked two ways. It was a period of time for us to attract businesses but if Novi was going to be a green city there was a period of time that they had to make such a move. Mayor Landry understood that it worked both ways. However, ever since he had been involved in the City he had heard a lot about how difficult Novi was to build in, what a pain it was to try to build something, and he had also heard some very positive comments. He said they had done a lot of things, the Sikich report, and were about to do a lot of things to improve the efficiency of the City and the efficiency in the manner the building projects move through the City. He thought they were making great strides in our reputation in the building community. He thought they were doing a great job.

Mayor Landry said with that background he looked at this and saw comments like "costs of LEEDS certified buildings are often on par with traditional development." He said to him that translates it was often more expensive to build a LEEDS certified building. It's often on par but it was often more expensive. Mayor Landry said he was intently listening to comments and was hearing that "often costs were made up in the first year".

While that might be true, it meant to him that it would be more expensive to build a building but they might be able to make it up. He was also hearing that "we were behind the curve and not where we should be", and was also hearing there were other communities that had embraced the LEEDS standards. He said he needed more information before he would be comfortable making such a decision. If costs were often made up the building community should know about this. If we are behind the times, then the builders should be familiar with this from other communities and he would like to sound them out and see what they had to say. He would also like to see if the building community would say that cost could be made up in the first year or two. Mayor Landry said that would be important to him to ask the people whose money we are requesting they put down and invest in our community. Mayor Landry said if there were other communities, he would like to know who they were, and would like to get reports from them. If Auburn Hills was a leader he would like to know what their experience was. They should be able to tell Council that they had embraced this and they had not been adversely affected, and had been a wonderful thing and the builders love it. He was not prepared to say no but was not prepared to embrace these goals and objectives at this time because he was not understanding of what the precise affect they were going to have on economic development in the City. Mayor Landry said obviously Council wanted to be environmentally concerned but he didn't want to rush and place a label on Novi that Novi was a LEED city, he

wanted to know what that meant. Mayor Landry said to give the administration direction he thought they needed to sound out the development community. He wanted to hear from particular developers what they thought about this. Second, he wanted a list of other communities who had done this and some comments from them, and he would like some very specific figures on cost. He asked for facts and figures of examples. Is it more expensive and if it was how fast could it be made up, and he wanted to hear developers comment on that. Mayor Landry said once they had all of that information he would be prepared to decide one way or another on this. He would support the motion to postpone for those reasons.

Member Paul said the citizen survey that the City paid for and got input back from there were three repetitive comments, taxes, traffic and roads and trees, in that order. The third one was the one they were specifically discussing tonight, and it was the natural resources that people moved here four years ago when it was more rural and that was what they were looking for. Some of the things in the ordinances now were to preserve our natural features but sometimes in doing that water was rerouted into uplands or wooded areas, therefore, sometimes there was tree die off. She said that was pretty common. She asked how they could improve on that for the current ordinances. One of the goals for Council was to look at the natural features and try to enhance those.

Member Paul said LEED standards were just one way to guide Council, and she would like to have those to discuss at a meeting, and perhaps more of a presentation from the Planning Department as they find out more information. She said minutes from Ann Arbor, Grand Rapids and Auburn Hills would be three very quick cities and she would like to see those so that everyone could have that information. She had read the Ann Arbor Library's. She knew that Grand Rapids was way ahead of Novi economically and as Member Mutch said "we need to keep up with our neighbors". She said Novi was in a very global area and there were entire states that mandated this. This was more of a new phenomenon as it was coming north but in the southern areas they mandate that and they mandate parking islands for retention in every five spots. In the south they have those for shading purposes so the asphalt's not hot so there were more issues they had with the environment because of the heat index. They also have them for the actual purpose of the natural features and how that preserved their environment. She hoped Council could have an open mind and have a good discussion on this because it was what the people of this community actually asked for.

Member Mutch said one of the things he thought Mr. Schmitt did well with the policies was that they were all voluntary, and none of these resolutions were mandates from the City. Mr. Schmitt said that was correct. Member Mutch said what they are saying with the policies was that LEED was the standard that Council would follow, and what they were asking from the development community was they would like him to follow standards but at this point they and

with nothing he had seen except the lot coverage they weren't making any recommendations that LEED standards be imposed on our development community. Mr. Schmitt said he only saw one community in the U.S. that did that. Member Mutch said the approach Mr. Schmitt was to incentivize this process and say expedited plan review, fee reduction, and down the road tax abatements. Member Mutch's understanding was he was trying to make this cheaper if all we are concerned about was the financial side for the development community we are going to essentially clear the path for them and find a way to make this doable for him in a way that wouldn't cost any money and not as a mandate from the City. Mr. Schmitt agreed, and thought, and said any community that incentivized that was the approach they had taken that was the only way to do it to have it accepted. Member Mutch said he would not support postponing this because he would be hard pressed to see how they would change these resolutions. He said they could be watered down to the point they didn't mean anything. He said they were simply statements by the cities from the City's perspective that LEED was the standard and we were going to follow LEED standards with our public buildings. He said any pursuit of LEED certification by the development community was completely voluntary. If they decide they don't want to pursue it there was nothing that Council would be mandating that would require them to do it. Member Mutch said our process gave them a head start on the LEED certification. For many developers, it wouldn't be starting from scratch it would be simply giving some focus to the standards and moving forward from there. He wouldn't want staff to spend a lot of time gathering information. He thought some information could be brought back that was referenced tonight but he didn't see a reason to put off the policy statements. It didn't make sense to him, and he didn't want something to come back so watered down that it was meaningless. He would not support the motion to postpone.

Mayor Landry said if the motion to postpone passed he wanted to indicate to the administration that what he was interested in finding out what were those communities that we are directly competing with doing. Auburn Hills and Ann Arbor was wonderful but he wanted to know what Wixom, Milford, Farmington, Farmington Hills, Livonia, Plymouth, Plymouth Township, Canton, Northville, Brighton and Southfield were doing. He said when a business was thinking about moving to the western corridor, what communities did they have to choose from. He said if the answer came back that none of them or a minority of them were doing this, then that might mean we need to do it so that we are more competitive. He was interested in knowing what our direct neighbors and those we are competing with for economic development were doing a long this line

Roll call vote on CM-07-02-024 Yeas: Landry, Capello, Gatt, Margolis

Nays: Mutch, Paul

Absent: Nagy

**SUPPLEMENTAL MEMO
OFF-WEEK PACKET
JUNE 2007**

**LETTERS FROM DEVELOPMENT COMMUNITY
REGARDING PROPOSAL**

VIA ELECTRONIC MAIL

March 8, 2007

Mr. Timothy Schmitt, AICP
City of Novi
45175 W. Ten Mile Rd.
Novi, Michigan 48375-3024



Re: LEED Certification in Novi

Dear Tim:

Thank you for sending me the Planning Department's proposal to promote the utilization of the USGBC's LEED certification program. We had a timely discussion last week concerning this issue as I was meeting with our general contractor and architect to discuss the possibility of constructing a LEED certified building in the Haggerty Corridor Corporate Park. As I am sure you know, attaining any level of LEED certification is a difficult process. While most people familiar with the LEED program are aware of possible increases in the construction costs related to a LEED building, they are not aware of the other higher costs that must be incurred to achieve even the lowest level of certification. The construction costs are increased by between 8% to 15%, but there is also a corresponding increase in the architectural costs. Much of the difficulty of achieving LEED certification arises from the design and documentation requirements, increasing the architects involvement throughout the process. This can add another 10% to the increased costs of a project.

Despite these difficulties achieving LEED certification, I believe that the costs are worth the benefits both to our development, the Haggerty Corridor Corporate Park, and our community, the City of Novi. The proposals in your policy memo are supportive but not mandatory, which is the correct approach. The forceful implementation of policies which increase development costs will chill our economic growth and put our City at a competitive disadvantage relative to our neighbors. But, if the City provides support for the achievement of LEED certification, both economically and by providing faster service, the LEED program can be a source of competitive advantage. This is especially true as more companies recognize the need to support "green" policies.

In order to implement the policies in your memorandum, the City will need to commit to viewing technological advances not simply as untested and not worthy of implementation within the City. We have lobbied the City for changes to the stormwater ordinance for many years. While CPVC pipes are used in 75% of all sanity sewer applications, and has even been approved in California, despite being a recyclable material and non-corrosive (no contaminants leached into the ground), the City refuses to allow its use outside our building shells. There will need to be, as your memo mentions, some reworking of certain ordinance sections and a shift in how new products are viewed.

Mr. Timothy Schmitt, AICP

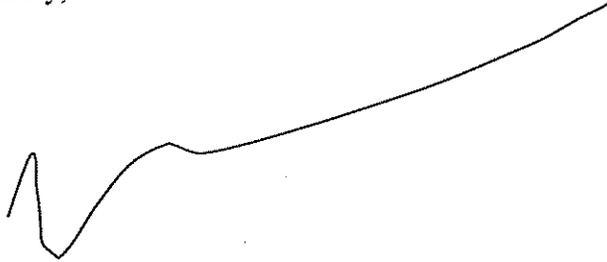
March 8, 2007

Page 2 of 2

I believe that as the LEED certification program is supported by more municipalities it will be supported by more developers. Once that happens, tenants will be able to appreciate the advantages; indoor air quality, employee moral, operating cost savings.

Northern Equities Group supports the proposals contained in your policy memo and would be willing to assist your department to develop further details.

Sincerely,

A handwritten signature in black ink, appearing to read 'Matthew Sosin'. The signature is fluid and cursive, starting with a small loop and ending with a long, sweeping horizontal stroke that extends to the right.

Matthew Sosin
Vice President

Schmitt, Tim

JPRA / WHITEHALL

From: Bryan El-Zoghby [belzoghby@jpra.com]
Sent: Friday, March 02, 2007 9:17 AM
To: Robert Hoida; Bryan El-Zoghby; Fred McCoy
Cc: Greg Tysowski
Subject: RE: City of Novi Green Building Policies

Bob,

I've read the attached documents and basically have no major issues; it's great to see a community wanting to get involved in "green" issues. In my opinion though, there were a couple of statements that were perhaps a bit aggressive. In stating that there can be a 20% decrease in operational/maintenance costs & a 30% decrease in energy consumption, it may mislead a person unfamiliar with the LEED rating system to believe that these savings are easily (or likely to be) achieved. They are indeed obtainable, but most likely not for buildings that only reach the minimum 26 point level (where obviously, the easiest to obtain and most cost effective LEED Credits are selected first). It seems that more aggressive tactics (Silver or Gold certification) would be required to meet those numbers ... and of course along with that, comes increased cost (which in many instances, can be significant). Finally, I hope they also understand that the payback for these additional construction costs (not to mention increased consultant fees), will most likely occur over a long period of time. Many items that we've looked at with our past projects have had 7 to 10 year paybacks (others as long as 15 to 20), which may or may not be acceptable to a public entity which usually has to be very budget conscious given the local tax structure etc ...

I'm sure sure Mr. Schmitt and many others at the City are already aware of what I've stated above. That said, I just wanted to add those thoughts in an attempt to be helpful.

Bryan El-Zoghby, AIA, LEED® AP
 Principal

From: Robert Hoida
Sent: Thursday, March 01, 2007 5:35 PM
To: Bryan El-Zoghby; Fred McCoy
Cc: Greg Tysowski
Subject: FW: City of Novi Green Building Policies

Bryan,
 Here is the e-mail from Novi that was discussed last night. Please review and let's discuss any comments that we can make back to them.
 bob

05/17/2007

TO: Mayor +
City Council
PWA



TO: Clay Pearson, City Manager
FROM: ^{Bu} Barbara McBeth, AICP, Deputy Director of Community Development
DATE: June 21, 2007
SUBJECT: Green Building in Novi – Status Update

The Community Development Department previously sent forward a Green Building policy to the City Council at the February 5, 2007 meeting. City Council postponed action on the item, pending additional research by City Staff and input from the development community. City Staff has been working on this issue for several months and is preparing a follow up report for the City Council.

Staff contacted six corporate citizens: Amson Dembs, Northern Equities Group, The Taubman Company, Singh Development, and jointly JPRA and Whitehall Real Estate. Responses are still coming in and are expected from all but Singh Development. Please note, LEED certification has little impact on single-family home construction, as it is primarily used in non-residential buildings.

In terms of peer communities, Staff was asked to look into neighboring communities for potential comparison with Novi.

City	Registered projects	Certified projects	Policy in place?
Novi	1	0	No policy (recent discussion about establishing a policy)
Auburn Hills	1	0	Policy in place since November 13, 2006
Ann Arbor	10	1	No policy (recent discussion through a downtown area report)
Wixom	1	0	No Policy
Milford	0	0	No Policy
Farmington	0	0	No Policy
Farmington Hills	0	0	No Policy (topic discussed in recent sustainability study for City)

City	Registered projects	Certified projects	Policy in place?
Livonia	1	0	No Policy
Plymouth	0	0	No Policy
Plymouth Twp	0	0	No Policy
Canton	1	0	No Policy
Northville	1	0	No Policy
Brighton	2	0	No Policy
Southfield	2	0	No policy (committee has been formed to discuss topic)

Staff also found that Wyoming, Michigan has five LEED registered projects, including portions of the new hospital complex.

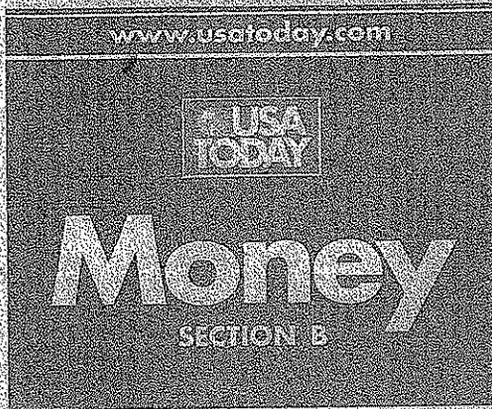
Last month the Novi Economic Development Corporation and City Staff attended a briefing on green building issues from Lawrence Tech University officials. The topic related to LTU's sustainability expertise and how Novi might capitalize upon their resources for our businesses and our organization. The EDC continues to discuss this topic, and the attached article from USA Today was distributed by one of the EDC's members for review at this morning's EDC meeting.

The Engineering Division has also prepared a memo dated May 30th, as previously distributed, identifying possible Green Site Development revisions to the Storm Water Ordinance. The "Green Working Group" of staff and city consultants will coordinate this information for future reference by the City Council.

We have attached excerpts from two reports, highlighting the cost/benefit analysis that is ongoing with respect to LEED certified buildings. Since the field is relatively young in relation to the construction industry in general, hard data is scarce. The Costing Green report is from Davis Langdon, an industry leader in cost management for construction projects. The second is a report from the Green Building Council of Canada, entitled A Business Case for Green Buildings in Canada. Complete copies of both reports, along with a variety of other information that has been gathered in recent years can be found in the Resources section of the USGBC website, under the heading "Research."

- C Pam Antil, Assistant City Manager
- Rob Hayes, City Engineer
- Steve Rumble, Community Development Director
- Ara Topouzian, Economic Development Manager
- David Beschke, Landscape Architect

**USA TODAY ARTICLE
REVIEWED BY THE EDC**



14 | Win: Brandi Chastain celebrates the 1999 World Cup victory

Monday, June 11, 2007

More hotels using eco-friendly design, construction to go green

Energy efficiency among motivations for change

By Barbara DeLollis
USA TODAY

Major hotel chains, big consumers of resources such as power and water, are starting to change their environmentally wasteful ways and design "greener" buildings.

Although most of the efforts are in their infancy, Hilton, Marriott and Wyndham are encouraging the building of eco-friendly and energy-efficient hotels.

Building green hotels isn't about fetching higher rates. Hoteliers view it as an advantage at a time when customers want to patronize green businesses and hotel operators want to cut high bills for electricity and water.

Although green construction is mostly voluntary in the USA, cities such as Dallas, Las Vegas and Arlington, Va., are encouraging it by expediting permits, granting subsidies or requiring it. "People want to be at a hotel that is on the cutting edge," says Dallas Mayor Laura Miller. "Whoever does it first is cool."

Marriott's only green-certified hotel, which is in College Park, Md., uses 30% less electricity than a comparable property. That means it can charge the same rates as rivals, yet earn a better profit, says manager George Trujillo.

Seeing the benefits, chains are slowly embracing new construction guidelines created by the U.S. Green Building Council. Under the

▶ Airport Check-in, 4B

program, hotels can get certified by curbing a building's energy and water use, improving air quality and reducing carbon emissions.

Among ways to gain points: recycle construction waste; locate near mass transit; plant water-efficient landscaping; install windows that open; choose low-energy elevators and laundry machines; and cover rooftops with tiles made from recycled tires. Buildings can win one of four certification tiers, ranging from standard to platinum.

Until now, the hotel industry has resisted change. Today, just four U.S. hotels are certified green, vs. more than 800 U.S. office buildings.

But that's changing, especially as green construction costs fall and

expertise and material quality rise, says Tom Hicks of Green Building Council, which has 59 applications for U.S. hotel projects, including 7,500 rooms in MGM Mirage's \$7.4 billion CityCenter in Las Vegas, said to be the largest privately financed green building project in the USA.

"You say 'green,' and a lot of them think 'tree hugger,'" Trujillo says. "You say 'energy-efficient building,' and they're very interested."

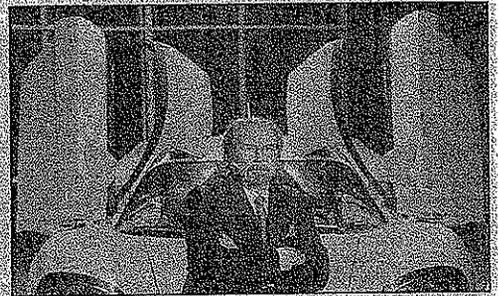
California and New York have the most green hotel projects underway with 14 and 10, respectively.

Marriott and Hilton each run one green-certified hotel. Marriott hopes to have six more in three years. Marriott is rewriting construction and design guidelines for its Springhill Suites and Courtyard brands. Hilton is doing the same for brands including Hilton, Doubletree and Embassy Suites.

Interest is so keen that Marriott project manager Karim Khalifa says he gets calls daily from owners asking what it takes to get certified.

Last week, Wyndham took its first step toward encouraging green building by launching a spa addition that can be built at its hotels to meet green standards.

Inside Money



By Dan MacMedan, USA TODAY

Car guy: Steve Saleen with a namesake Saleen S7.

Making a living on a need for speed

Steve Saleen founded a company that turns others' vehicles into road rockets. 10B



By Eileen Blass, USA TODAY

Bonus section

Retiring in Place

Sticking around

Many retirees want to stay in their communities. Pullout starting on 5B

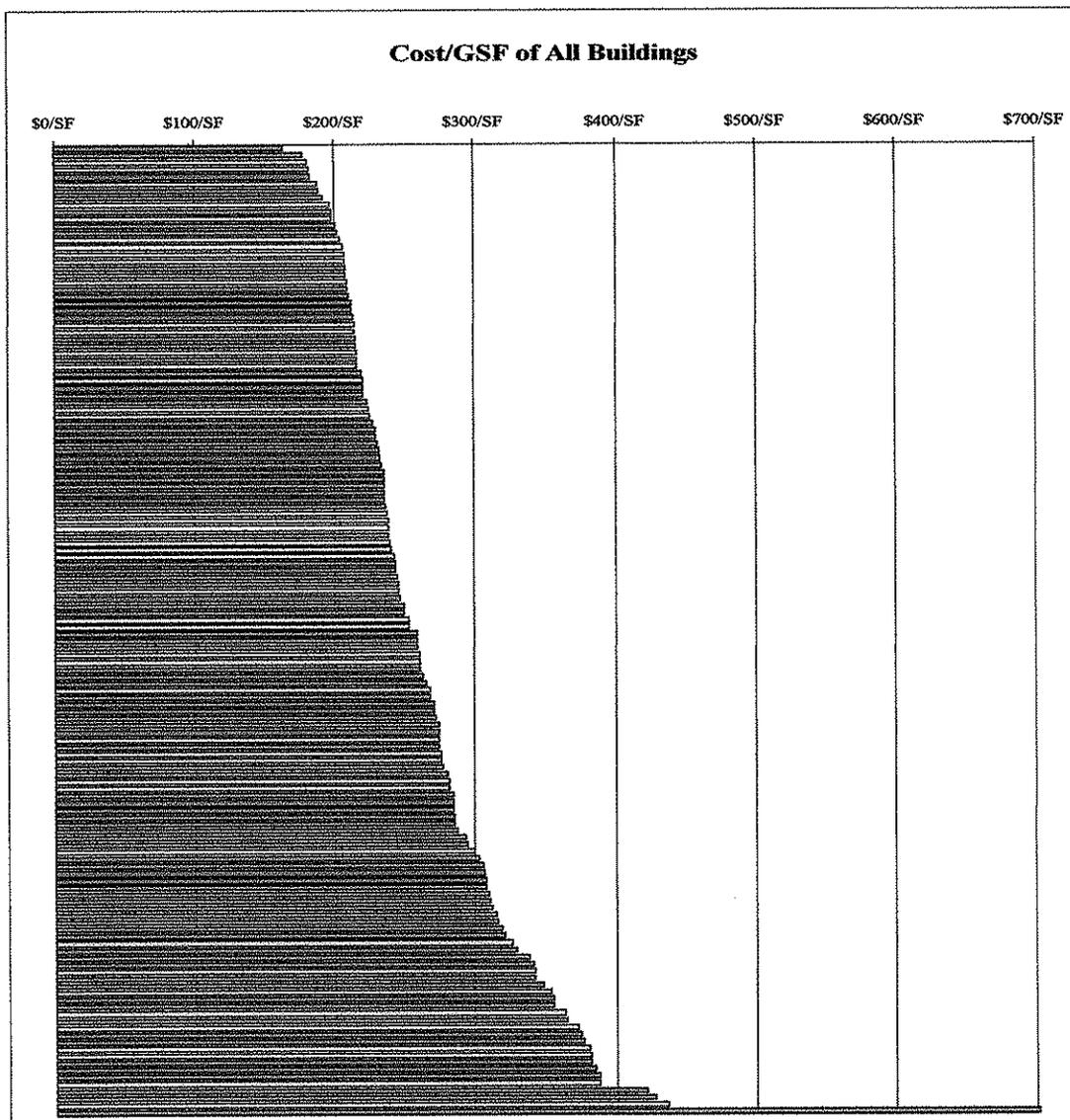
Active community: Helen and Erik Nelson work out.

COSTING GREEN
EXCERPT
BY DAVID LANDON

Analyzing the Data – Cost Analysis of Similar Buildings

In this study, our goal was to compare construction costs of buildings where LEED certification was a primary goal to similar buildings where LEED was not considered during design. We selected projects from our extensive database of cost information which were designed with a goal of meeting some level of the USGBC's LEED certification. 61 buildings were selected which met this criteria. Of these, the most common three program types were libraries, laboratories, and academic classroom buildings – these categories made up 45 of the buildings studied.

We compared the green projects in the three largest categories to buildings with similar program types. 138 buildings were studied – 93 non-LEED and 45 LEED-seeking. All costs were normalized for time and location in order to ensure consistency for the comparisons. It is important to note that the only distinction between the buildings was the intent to incorporate sustainable design in order to achieve LEED rating. The non-LEED buildings all would have earned some LEED points by virtue of their basic design, but sustainability had not been the intent. We will look at the differences between LEED-seeking and non-LEED a little later.



The graph above compares the cost per square foot for all buildings in our study, from lowest to highest. Blue lines show non-LEED buildings, green lines indicate buildings attempting LEED Certified, silver lines indicate those seeking LEED Silver, and gold lines indicate those buildings seeking to achieve either LEED Gold or Platinum.

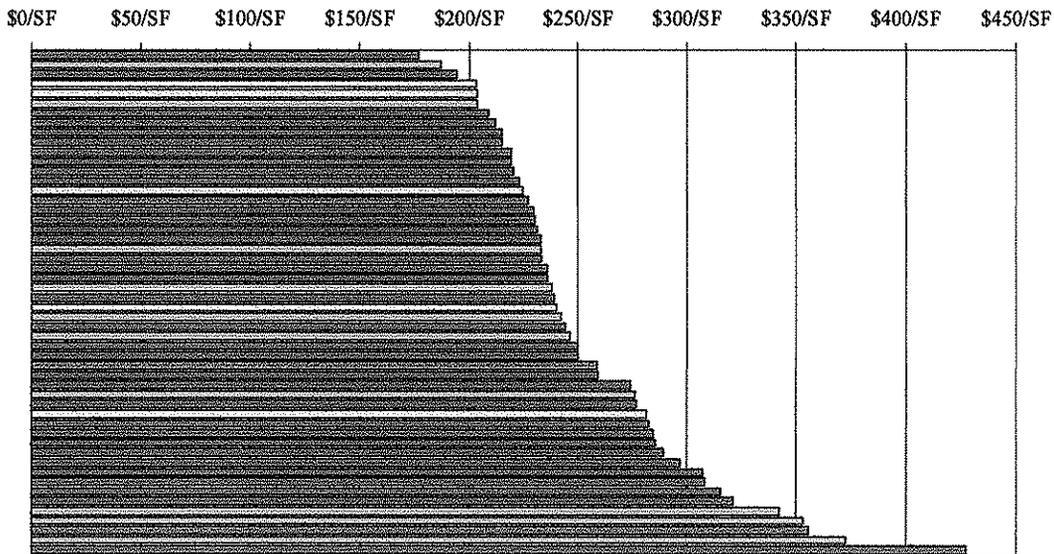
In a comparison between all projects – LEED-seeking versus non-LEED, something interesting came to light: the cost per square foot for the LEED-seeking buildings was scattered throughout the range of costs for all buildings studied, with no apparent pattern to the distribution. This was tested statistically using the t-test method of analyzing sample variations. This test indicated that there was no statistically significant difference between the LEED population and the non-LEED population. In other words, any variations in the samples, or the sample averages, were within the range to be expected from any random sample of the whole population. It is important to note, however, that the standard deviation in dollars per square foot cost for each category (LEED-seeking and non-LEED) was quite high, since there is such a wide variation in building costs.

Academic Buildings

After comparing all 138 projects, we next compared buildings by category. First we looked at academic classroom buildings, located on college and university campuses. A total of 52 buildings were studied – 15 LEED-seeking and 37 non-LEED.

As we can see from the graph below, there was no indication that the LEED-seeking projects tended to be any more expensive than the non-LEED. The difference between average cost per square foot was, again, statistically insignificant for academic classroom buildings.

Academic Buildings - Cost / SF

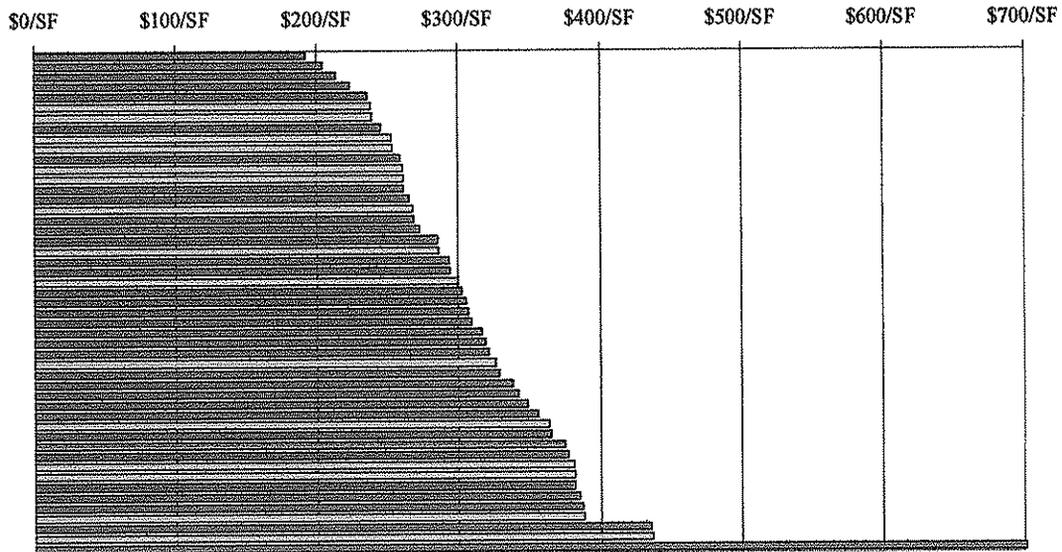


In the sampling of academic classroom buildings which were LEED-seeking, the only LEED levels attempted were Certified and Silver (Certified are shown as green bars in the graph above, while Silver projects are shown as silver bars). When the Silver projects were averaged and that average compared to the average cost per square foot for non-LEED buildings, there was still no significant difference noted.

Laboratory Buildings

The next category examined was laboratory buildings. 15 LEED-seeking laboratories were compared to 34 non-LEED laboratory buildings.

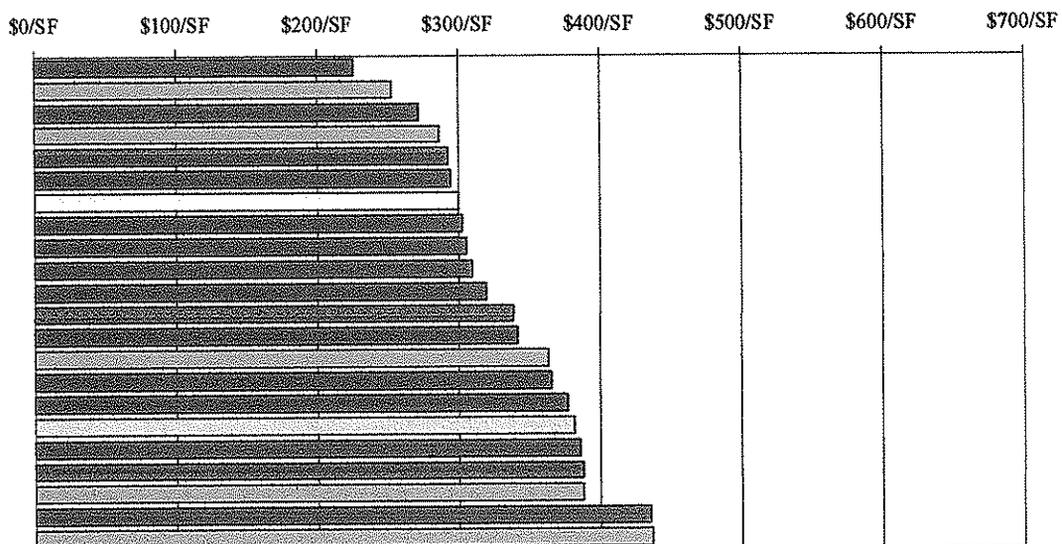
Laboratories - Cost / SF



Again, no significant statistical difference was noted between the average costs per square foot for LEED-seeking versus non-LEED laboratories. However, we did see a fairly large standard deviation in price between the labs. This was not unexpected, since construction costs for laboratory buildings often varies widely depending on the type of laboratory being built. For example, materials and forensics laboratories tend to be more expensive, while teaching and environmental studies laboratories tend to be less expensive overall.

To try to eliminate the effect of this wide variation in costs due to laboratory type, we took a closer look at only the wet labs, excluding teaching and materials labs to remove the higher and lower end costs from the analysis. For this, only 22 total buildings were studied – 7 LEED-seeking and 15 non-LEED.

Wet Laboratories - Cost / SF

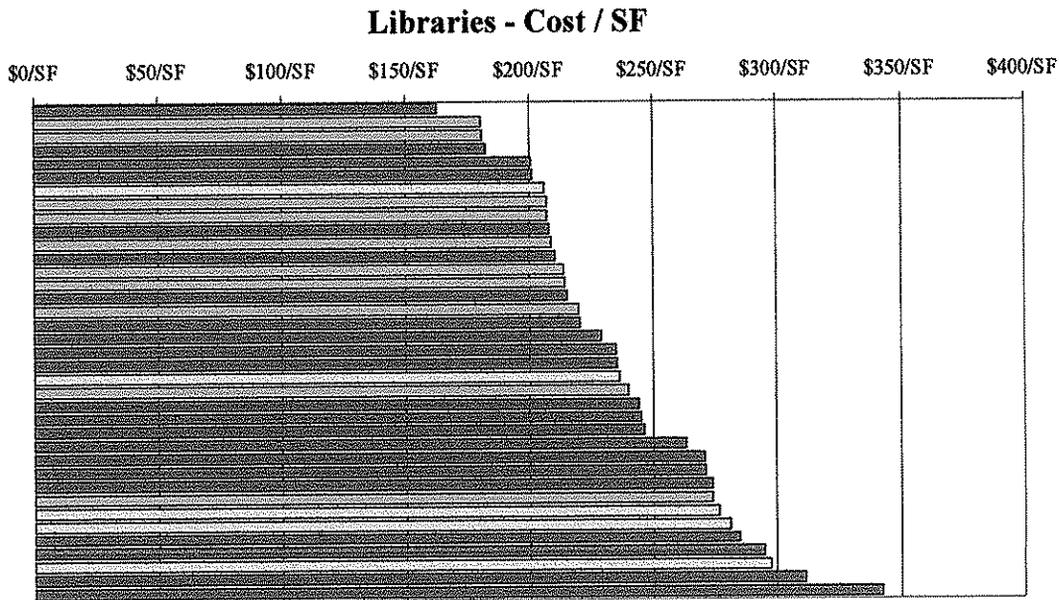


In this graph, LEED levels are denoted by the different colors. Green bars indicate Certified buildings, silver bars indicate Silver buildings, and the gold bar indicates a laboratory which was attempting LEED Gold rating. Interestingly, while we drastically reduced the standard deviation between lowest and highest cost for the buildings studied, we still saw no significant statistical differences between average costs per square foot for the LEED-seeking versus the non-LEED buildings.

Library Buildings

Finally, we compared 15 LEED-seeking libraries to 22 non-LEED libraries.

Bar color denotes LEED level attempted – gold for LEED Gold, Silver for LEED silver, and green for LEED Certified.

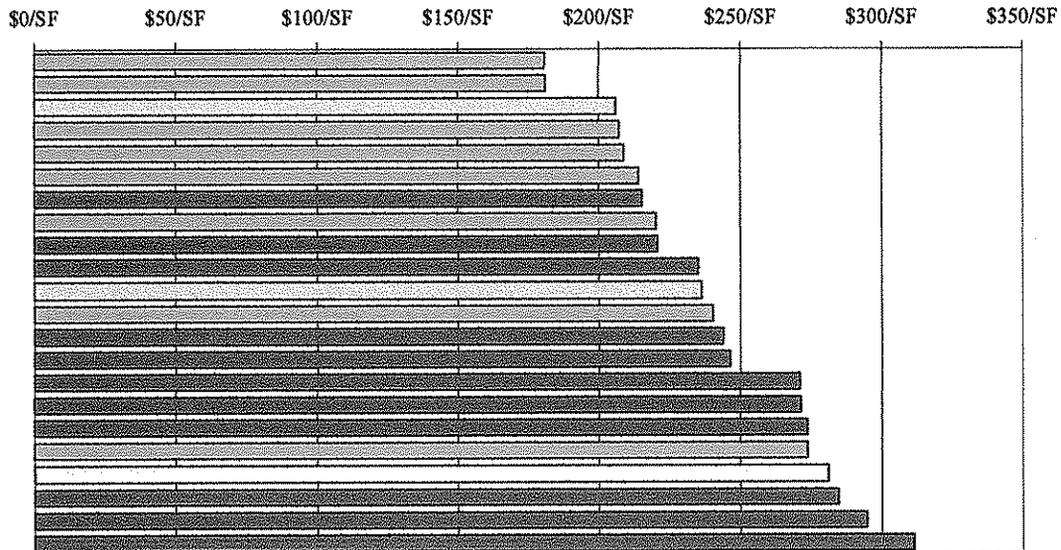


It is interesting to note that the majority of the LEED-seeking libraries tend to fall into the lower half of the range for cost per square foot. However, this does not automatically suggest that green libraries are, overall, less expensive than non-LEED libraries to build. A majority of those libraries were all built by the same owner, who has mandated LEED for all libraries, regardless of the assigned budget. This comparison does suggest, however, that green libraries are certainly affordable and achievable.

Due to the fact that so many of the LEED-seeking libraries come from one owner and constituted tighter construction budgets, the average cost per square foot for green was slightly lower than the average cost per square foot for non-LEED libraries. This difference, however, was again not statistically significant, nor, if it had been significantly different, could we have surmised that this was a true result which could be applied to any LEED-seeking libraries across the board.

As with laboratories, there does tend to be a wide variation in construction costs per square foot overall for libraries, based on the type of library constructed (academic, main community library, or city or community branch library). To narrow the analysis by library type, we excluded all but branch libraries from the comparison – looking only at those libraries that were less than 40,000 total square feet. This reduced the numbers to 11 LEED-seeking and 11 non-LEED library buildings.

Branch Libraries - Cost / SF



Bar color denotes LEED level attempted – gold for LEED Gold, Silver for LEED silver, and green for LEED Certified.

When we narrowed in on these types of buildings, we finally see a statistically significant difference in cost per square foot between LEED-seeking and non-LEED libraries. The difference noted suggested that the LEED-seeking libraries were cheaper to build than the non-LEED! However, again, we point to the fact that a majority of those green libraries in the analysis were from a single owner with a set commitment to achieve LEED, and with tight controls over budget and costs to suggest that this statistically significant difference in cost is likely skewed by this fact.

LEED-Seeking versus Non-LEED

Throughout these comparisons we have referred to the two groups as LEED-seeking and non-LEED. However, it is important to keep in mind that the difference between these groups is simply that the LEED-seeking buildings were designed with LEED certification in mind, while this was not one of the goals for the non-LEED buildings. Non-LEED buildings qualified for at least some LEED points by virtue of their design, location, and other factors.

To compare LEED-seeking to non-LEED buildings, ten non-LEED buildings were selected at random from the 93 examined for this study. A LEED checklist was created for each of these ten buildings to determine the number and type of points each project would receive with their current design.

This analysis concluded that these non-LEED projects achieved between 15 and 25 points with their established designs, and in fact one project was estimated to qualify for 29 points – enough to earn a rating of LEED Certified if the building owners had so desired.

Closer examination of the non-LEED and LEED buildings suggests that for any building, there are usually about 12 points that can be earned without any changes to design, due simply to the building's location, program, or requirements of the owner or local codes. Up to 18 additional points are then available for a minimum of effort, and little or no additional cost required.

Cost Analysis of Similar Buildings – Conclusion

We can draw four key conclusions from our analysis of construction costs for LEED-seeking versus non-LEED seeking projects:

- There is a very large variation in costs of buildings, even within the same building program category.
- Cost differences between buildings are due primarily to program type.
- There are low cost and high cost green buildings
- There are low cost and high cost non-green buildings.

There is such a wide variation in cost per square foot between buildings on a regular basis, even without taking sustainable design into account, that this certainly contributed to the lack of statistically significant differences between the LEED-seeking and non-LEED buildings. Additionally, comparisons of this type can not be considered reliably meaningful because budgets can never be compiled based on an average. Any number of factors can distort the results obtained, as we saw with the comparison of library buildings, such that the same comparisons done with a completely different sampling of buildings might yield completely different and conflicting results. While we saw no significant differences in cost per square foot in the sampling of buildings studied, this could easily not be the case for any other data configuration. Averages will always be highly dependent on the data pool being sampled.

What does this mean in regard to the cost of green? The conclusion is that comparing the average cost per square foot for one set of buildings to another does not provide any meaningful data for any individual project to assess what – if any – cost impact there might be for incorporating LEED and sustainable design. The normal variations between buildings are sufficiently large that analysis of averages is not helpful. Remember – buildings can never be budgeted on averages.

Analyzing the Data – Initial Budget

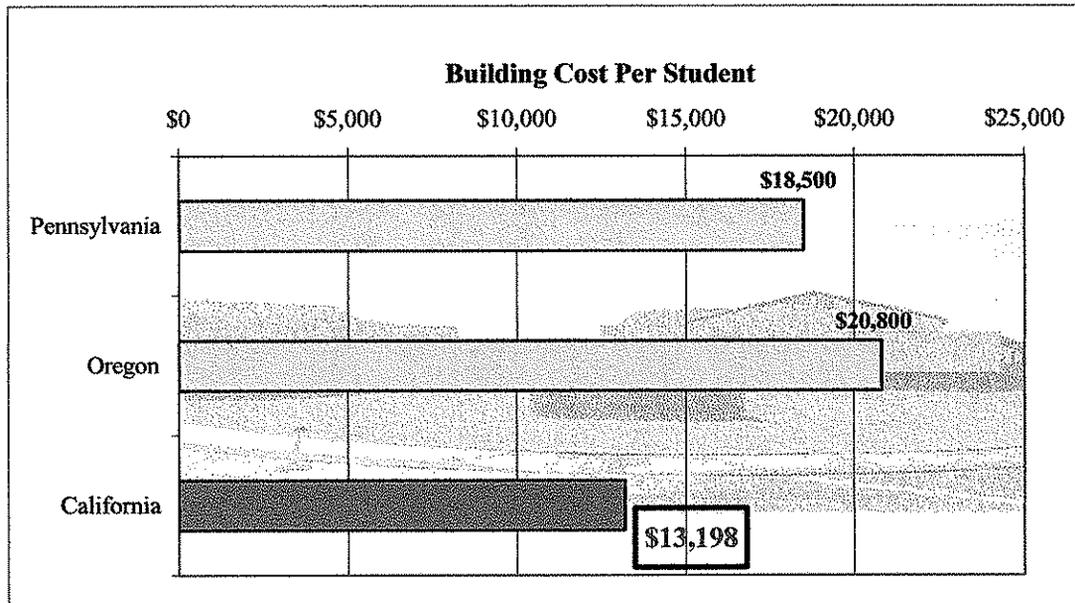
One of the most common methods used to establish the cost of green has been to compare the final construction costs for the project to the established budget. In other words, was the budget increased to accommodate the sustainable elements, or were those elements incorporated into the project within the original available funds. Within the 61 LEED seeking buildings we studied, we found that over half the projects had original budgets that were set without regard to sustainable design, and yet received no supplemental funds to support sustainable goals. Of those that did receive additional funding, the supplement was usually provided only for specific enhancements or requirements, such as photovoltaic systems, and the range of monies supplemented, for those few that required it, was typically in the range of 0 – 3% of initial budget.

The projects that were the most successful in remaining within their original budgets were those which had clear goals established from the start, and which integrated the sustainable elements into the project at an early stage. Projects that viewed the elements as added scope, tended to experience the greater budget difficulties.

It is important to be circumspect when using initial budget performance as a benchmark, however, as the budget performance alone may not present the full picture. The following graph compares the building cost per student for schools built in Pennsylvania, Oregon, and California:

- The Pennsylvania elementary school obtained a LEED Silver certification for a premium of 2%².
- In Oregon, a middle school was built that obtained a rating of LEED Gold for no additional premium³.

Taken without additional information, one might surmise that LEED certification could be obtained for around 2% over starting budget.



However, this conclusion would be misleading. As can be seen from the chart, the cost per student allocated to each newly constructed school varies widely between the states. The Silver-

² “Clearview Elementary School – Highlighting high performance”, <http://www.nrel.gov/docs/fy02osti/32680.pdf>

³ “Case Study – The Dalles Middle School”, <http://www.energy.state.or.us/school/thedalles.pdf>

rated elementary school was built at a cost of \$18,500 per student. The Gold-rated middle school in Oregon was built at a cost of \$20,800 per student. Compare this to the average amount spent per student in California, which is just over \$13,000⁴. Clearly we can see that starting budget must play a role in determining final LEED premium for these projects.

As we can see from this example, simply comparing a project's cost to its budget does not give an accurate picture of the true cost of green.

Initial Budget Cost Analysis - Conclusion

As the various methods of analysis showed, there is no 'one size fits all' answer to the question of the cost of green. A majority of the buildings we studied were able to achieve their goals for LEED certification without any additional funding. Others required additional funding, but only for specific sustainable features, such as the installation of a photovoltaic system. Additionally, our analysis suggested that the cost per square foot for buildings seeking LEED certification falls into the existing range of costs for buildings of similar program type.

From this analysis we can conclude that many projects can achieve sustainable design within their initial budget, or with very small supplemental funding. This suggests that owners are finding ways to incorporate the elements important to the goals and values of the project, regardless of budget, by making choices and value decisions.

⁴ "Fact Book 2003: Handbook of Education Inform", <http://www.cde.ca.gov/resrc/factbook/factbook03.pdf>

Budgeting Methodology for Green

When establishing a design and a budget for a LEED building, the key point to remember is that sustainability is a program issue, rather than an added requirement. Our analysis indicates that it is necessary to understand the project goals, the approach to achieving the goals, and the factors at play in for the project. Simply choosing to add a premium to a budget for a non-green building will not give any meaningful reflection of the cost for that building to meet its green goals. The first question in budgeting should not be "How much more will it cost?", but "How will we do this?"

This must be done as early as possible in the project and it must be considered at every step of design and construction. This is done by:

- Establishing team goals, expectations & expertise
- Including specific goals in the Program
- Aligning budget with program
- Staying on track through design and construction

Perhaps the most important thing to remember is that sustainability is **not** a below-the-line item.

Establish Team Goals, Expectations and Expertise

When considering sustainability, it is important to understand your team. As we discussed previously, the feasibility and potential cost impact of a number of LEED points can be significantly increased or decreased by whether or not the members of the design and construction teams are familiar with sustainable practices, and willing to commit to following established protocols and procedures.

It is also important to ensure that the team includes the expertise that will be necessary to allow the sustainable elements to be incorporated smoothly. And finally, you must align the goals and values of the project such that all members of the team accept and understand them.

Include Specific Goals

A LEED checklist should be prepared at the start of the project and at every program stage. This will enable the project team to clearly understand their current ability to meet the project's established goals and values. Additionally, the team should specify specific design measures to be employed in meeting the goals, and these should be routinely monitored to ensure complete compliance.

It may seem to be impractical to develop a sustainable design strategy during the program stage of design, when so little of the building is defined. It is our experience, however, that many of the features can be identified, visualized and incorporated into the cost model if sufficient attention is paid to them.

In the design, include contingency points, recognizing that some of the points may be unsuccessful. It is essential to plan for at least three or four points more than the minimum required for a given level. We have found that where projects need "just one more point", those last points tend to be difficult and very expensive.

It is also important to be specific in point selection. There will always be points which are uncertain, which should properly be counted as points in the 'maybe' column on the checklist. The 'maybe' column should not, however, be used as a substitute for thinking through the feasibility of a point; 'maybe' is not the same as indecision.

Align Budget with Program

It is essential to align the budget with the program during the programming phase of the project. If there are insufficient funds to fulfill all of the program goals, either the goals must be reduced, or the budget increased. Too often projects move forward with a mismatch, either because the

project team is unaware of the mismatch, or more often, due to wishful thinking that something will turn up to resolve the problem.

In order to align the budget with the program, a cost model should be developed, which allocates the available funds to the program elements. It is quite possible to develop a thorough cost model from program information, even when design information is limited. The program will dictate the majority of the cost elements, both in quantity and quality, and from that it is possible to build a cost model. The cost model will both reflect the program – highlighting areas of shortfall – and provide planning guidance for the design team by distributing the budget across the disciplines.

The cost model also provides a communication tool for the project team, allowing clear understanding of any budget limitations. These must be addressed by adjusting scope, design or funds. Proceeding with inadequate funding will lead to more drastic scope reductions at later stages in the design process, and greater conflict between competing interests in the program. It is in these cases that sustainable elements are most vulnerable to elimination as unaffordable expenses.

In order to align your budget with your program you must:

- Understand your starting budget.
- Generate a cost model for the project to understand where costs lie.
- Allocate funds.
- Address limitations in the budget at the Program stage.

It is the choices made during design which will ultimately determine whether a building can be sustainable, not the budget set.

Stay On Track

Once you have a clear understanding of the goals and values for the project, as well as the budget available, it is important to stay on track throughout the entire process. The steps for staying on track include:

- *Documentation:* Begin any necessary documentation as early as possible, and maintain it as you go.
- *Update / Monitor Checklist:* Update and monitor the LEED checklist so you have a clear picture of how the sustainable goals are being met, and whether the LEED goal is succeeding.
- *Energy / Cost Models:* Use energy and cost models as design tools. Energy models are useful during all design phases to establish the design criteria necessary to meet selected LEED points. Cost models will allow you to track cost impacts from any necessary changes to design or procedure as the project progresses. Energy and cost models can be combined to make a very effective decision making tool, preferably early in design.

Budgeting Methodology – Conclusion

The only effective way to budget for sustainable features within buildings is to identify the goals, and build an appropriate cost model for them. If they are seen as upgrades or additions, the cost of the elements will also be seen as an addition. It is possible to establish goals and budgets from the very beginning of the project. Other methods are ineffective and unnecessary.

A BUSINESS CASE FOR GREEN BUILDINGS IN CANADA
EXCERPT
BY THE GREEN BUILDING COUNCIL OF CANADA

7. SUMMARY

For many people, the term "Green Building" brings images of radical design focused solely on the environment. In reality, green buildings simply achieve social and environmental goals well beyond those for conventional buildings. Essentially, the difference between green and conventional buildings is that green buildings offer healthier and more comfortable interior spaces and include measures to reduce their ecological footprint.

The ecological goals are typically achieved by reducing energy and water use through innovative systems and integration. Increased occupant health and safety is achieved by designing and constructing superior indoor environments through better ventilation, a focus on natural light, and the use of appropriate materials. Many of these environmental and social benefits offer economic benefits as well: reduced energy and water use equates to lower operational costs, while improved indoor environment results in productivity gains. Important benefits of green buildings include:

- Superior Occupant Comfort and Health
- Ecological benefits and Reduced Climate Change Impact
- Reduced Operating Costs
- Productivity Gains
- Property Value and Absorption Rate gains
- Increased Retail Sales
- Improved Image
- Risk Reduction

Green buildings are achieved through an integrated process involving many building stakeholders (defined as *Integrated Design*), the result of which is an efficient building meeting the needs of the occupants while at the same time reducing its ecological footprint. Although there are direct monetary savings from the efficiencies achieved, green buildings cost more than conventional buildings to design and construct, largely due to increased design time and the implementation of non-standard materials and systems. However, this increase in capital cost is overshadowed by operational benefits, many of which provide a strong economic case, particularly when occupancy issues are considered.

As part of this work, several American studies were reviewed that quantified the direct economic costs and benefits associated with green buildings. These studies were performed on real and theoretical buildings, with sample sizes up to over a hundred buildings. Without exception, these studies conclude that there is a strong economic basis for green buildings, but only when operational costs are included in the equation. More specifically, whole building studies have concluded that the net present values for pursuing green buildings instead of conventional buildings range from 50 to 400 \$/ft² (540 to 4300 \$/m²) dependent on

the length of time analyzed (20 to 60 years) and the degree to which the buildings employ green strategies. These studies also generally conclude that the greener the building, the higher the net present value.

Beyond the above are numerous recent North American multi-building studies on the qualitative effects of green buildings. In general, these studies concluded the following:

- Good daylighting increases productivity by 13%, can increase retail sales by 40%, and can increase school test scores by 5%
- Increased ventilation increases productivity by 4 to 17%
- Better quality ventilation reduces sickness by 9 to 50%
- Increase ventilation control increases productivity by 0.5 to 11%
- High glare reduces performance by 15 to 21%

Despite the strong case for green building, this industry is still in its infancy in Canada: It is currently small, but it is growing exponentially. Interest in green buildings is showing a similar rapid rise in growth, but useful and practical knowledge of green buildings by the various building stakeholders, is still generally limited. The portion of current construction in North America that can be defined as green is approaching 10%, but with continued interest, and in understanding the factors driving this movement, the relative number of green buildings will continue to rise.

The barriers to growth and acceptance in green buildings are generally due to the relative youth of the green building industry and the nature of the building sector. The relative youth has resulted in a general lack of knowledge about green buildings, which has compounded into a series of barriers including risks of system failures through inappropriate design, a failure of building owners and lending institutions to value green building benefits, and numerous false claims about green materials, systems, or services. There is also limited statistically sound research into the benefits of green buildings, particularly in the area of productivity, which could be a key element in the acceptance of green buildings. The current structure and practices within the building sector create other barriers, including a failure to consider operational benefits during construction, tendering styles not conducive to building efficiency, a focus on time in the construction period, and building standards and codes that do not reflect the nature of green buildings. Many of these barriers can be removed through education and focused strong research.

In summary, green buildings offer numerous unique benefits when compared to conventional buildings, and there are strong indications that these benefits greatly out-weigh the relatively small increase in construction costs. The benefits of green buildings are increasingly being recognized by building stakeholders, which is resulting in exponential growth in the green building industry in Canada. There is currently a strong business case for Green buildings in Canada when a more holistic, longer-term view of real building costs is incorporated. This business case can be strengthened through focused research and education of building stakeholders.

**REGISTERED PROJECT LIST FOR
THE STATE OF MICHIGAN, WITH CERTIFICATION
LEVEL NOTED IN MARGIN**



U.S. Green Building Council LEED Registered Projects

Sorted By: State
April 12, 2007

Confidential ?	Project Name	City	State	Country	Rating System	Version	Project Type	Owner Type	Occupant Type	Gross Square Footage	Registration Date
No	Diamond Building	Waterville	ME	US	LEED NC	2.1	Higher Education	Non-Profit Org.	Non-Profit Org.	53,860	11-May-2004
No	Schell-Swenson-Watson Alumni Center	Waterville	ME	US	LEED NC	2.0	Higher Education	Other	Non-Profit Org.	27,000	07-Oct-2002
No	Aibion College Science Complex	Aibion	MI	US	LEED NC	2.1	Multi-Use	Non-Profit Org.	Non-Profit Org.	150,000	18-Dec-2002
No	Detroit Lions Hq & Training Facility	Allen Park	MI	US	LEED NC	2.0	Stadium/Arena	Profit Org.	Profit Org.	217,000	29-Nov-2000
No	Fairlane Green Phase	Allen Park	MI	US	LEED CS	1.0	Pilots Only	Profit Org.	Profit Org.	404,040	12-Oct-2004
Yes		Allen Park	MI	US	LEED NC	2.1	Commercial Office	Profit Org.	Profit Org.	110,000	28-Apr-2005
Yes		Allen Park	MI	US	LEED NC	2.2	Multi-Use	Individual	Profit Org.	4,175	12-Apr-2006
Yes		Allen Park	MI	US	LEED NC	2.1	Retail	Profit Org.	Profit Org.	207,364	31-Aug-2005
Yes		Allen Park	MI	US	LEED CS	2.0	Retail	Individual	Individual	63,528	09-Feb-2007
Yes		Allen Park	MI	US	LEED NC	2.2	Retail	Profit Org.	Profit Org.	120,000	06-Mar-2007
Yes		Allen Park	MI	US	LEED NC	2.2	Retail	Profit Org.	Profit Org.	137,662	31-Jan-2007
No	Gvsu Movement Sciences Facility	Alendale	MI	US	LEED NC	2.2	Multi-Use	Profit Org.	Profit Org.	82,256	27-Nov-2006
No	Gvsu New Academic Building 2008	Alendale	MI	US	LEED NC	2.1	Higher Education	Other	Mixed Occupancy	53,480	07-Jul-2004
No	Lake Ontario Hall, Grand Valley State U	Alendale	MI	US	LEED NC	2.2	Multi-Use	Federal Government	Federal Government	31,000	19-Mar-2007
No	Replace Troop Quarters Facility	Alpena	MI	US	LEED NC	2.1	Commercial Office	Profit Org.	Federal Government	25,272	02-Nov-2005
No	Thunder Bay Nat'L Marine Sanct	Ann Arbor	MI	US	LEED NC	2.2	Laboratory	Non-Profit Org.	Mixed Occupancy	12,118	14-Dec-2006
No	210 E. Huron Renovation	Ann Arbor	MI	US	LEED NC	2.1	Higher Education	State Government	Non-Profit Org.	46,500	07-Sep-2005
No	Nsr Building Addition	Ann Arbor	MI	US	LEED NC	2.0	Multi-Use	Individual	Mixed Occupancy	107,803	08-Mar-2002
No	S.T. Dana Building Renovations	Ann Arbor	MI	US	LEED NC	2.2	Multi-Use	Individual	Mixed Occupancy	29,500	28-Feb-2007
No	Tierra On Ashley	Ann Arbor	MI	US	LEED NC	2.1	Multi-Use	Non-Profit Org.	Profit Org.	70,000	12-Oct-2005
Yes	Washtenaw Community College Health And F	Ann Arbor	MI	US	LEED NC	2.2	Health Care	Non-Profit Org.	Non-Profit Org.	1,100,000	22-Jun-2006
Yes		Ann Arbor	MI	US	LEED NC	2.2	Health Care	Non-Profit Org.	Non-Profit Org.	1,100,000	24-Apr-2006
Yes		Ann Arbor	MI	US	LEED NC	2.2	Health Care	Non-Profit Org.	Non-Profit Org.	14,000	18-Jan-2005
Yes		Ann Arbor	MI	US	LEED NC	2.1	Multi-Unit Residences	Profit Org.	Individual	270,283	03-Nov-2005
Yes		Ann Arbor	MI	US	LEED NC	2.2	Multi-Use	State Government	State Government	80,000	20-Jul-2006
Yes		Ann Arbor	MI	US	LEED NC	2.2	Multi-Use	Local Government	Local Government	380,000	20-Sep-2006
No	Brose Technology Center	Auburn Hills	MI	US	LEED NC	2.0	Commercial Office	Profit Org.	Profit Org.	52,000	06-Sep-2002
No	Beaver Island Academic Center	Beaver Island	MI	US	LEED NC	2.2	Multi-Use	State Government	State Government	12,157	18-Dec-2006
Yes	Sommerset Pointe Development	Birmingham	MI	US	LEED NC	2.2	Multi-Use	Individual	Individual	193,200	06-Oct-2006
Yes	Sg Construction Services	Boyer City	MI	US	LEED NC	2.2	Commercial Office	Profit Org.	Profit Org.	29,000	04-Jan-2007
Yes		Brighton	MI	US	LEED NC	2.2	Commercial Office	Profit Org.	Profit Org.	84,425	03-Mar-2005
Yes		Brighton	MI	US	LEED NC	2.2	Commercial Office	Non-Profit Org.	Non-Profit Org.	600,000	26-Feb-2001
No	Southwest Outpatient Campus -	Byron Township	MI	US	LEED NC	2.1	Health Care	Non-Profit Org.	Non-Profit Org.	172,550	10-Aug-2004
No	Steelcase Wood Furniture Manufacturing P	Caledonia	MI	US	LEED NC	1.0	Industrial	Profit Org.	Individual	28,800	04-May-2005
No	W.A. Lettinga Campus Academic And Housin	Caledonia Twnsh	MI	US	LEED NC	2.1	Commercial Office	Profit Org.	Profit Org.	42,000	05-Jul-2005
Yes		Canton	MI	US	LEED NC	2.1	Multi-Use	Non-Profit Org.	Non-Profit Org.	29,500	03-Nov-2005
Yes		Clare	MI	US	LEED NC	2.1	Multi-Use	Profit Org.	Profit Org.	32,400	03-Nov-2005
Yes		Clinton Township	MI	US	LEED NC	2.1	Higher Education	Profit Org.	Profit Org.	36,400	03-Nov-2005
Yes		Clinton Township	MI	US	LEED NC	2.1	Higher Education	Profit Org.	Profit Org.	7,000	05-Apr-2007
Yes		Clinton Township	MI	US	LEED CI	2.0	Retail	Profit Org.	Profit Org.	611,000	28-Apr-2005
No	Ford Research Innovation Center	Dearborn	MI	US	LEED NC	2.0	Interpretive Center	Profit Org.	Profit Org.	31,100	08-Jun-2002
No	Ford Rouge Visitor Center	Dearborn	MI	US	LEED NC	2.1	Commercial Office	Profit Org.	Profit Org.	32,000	24-Mar-2003
Yes		Dearborn	MI	US	LEED NC	2.1	Multi-Use	Profit Org.	Profit Org.	44,000	18-Jan-2003
Yes		Dearborn	MI	US	LEED NC	2.1	Multi-Use	Profit Org.	Profit Org.	9,870	01-Apr-2005
Yes		Dearborn	MI	US	LEED NC	2.1	Multi-Use	Non-Profit Org.	Non-Profit Org.	50,000	06-Nov-2002
Yes		Dearborn	MI	US	LEED NC	2.0	Multi-Use	Non-Profit Org.	Non-Profit Org.	718,720	21-Jul-2005
No	Bcbs Of Michigan	Detroit	MI	US	LEED NC	2.1	Multi-Use	Other	Non-Profit Org.	402,484	12-Jul-2002
No	Cass Technical High School	Detroit	MI	US	LEED NC	2.0	K-12 Education	Other	Local Government	286,219	17-Dec-2001
No	Detroit School Of Arts	Detroit	MI	US	LEED NC	2.0	Multi-Use	Other	Local Government	42,000	06-Jun-2006
No	La Solucion Lead-Eb Certification	Detroit	MI	US	LEED EB	2.0	Multi-Use	Profit Org.	Profit Org.	18,582	14-Oct-2005
No	Lithuanian Hall	Detroit	MI	US	LEED CS	1.0	Pilots Only	Non-Profit Org.	Mixed Occupancy	18,582	14-Oct-2005
No	Renaissance High School & Special Ed Sch	Detroit	MI	US	LEED NC	2.1	Multi-Use	Local Government	Local Government	400,000	12-Mar-2004



U.S. Green Building Council LEED Registered Projects

Sorted By: State
April 12, 2007

Confidential ?	Project Name	City	State	Country	LEED Rating System	Version	Project Type	Owner Type	Occupant Type	Gross Square Footage	Registration Date
No	Wsu Engineering Development Center	Detroit	MI	US	LEED NC 2.2	2.2	Multi-Use	Non-Profit Org.	Non-Profit Org.	82,000	02-Oct-2006
Yes		Detroit	MI	US	LEED CI 2.0	2.0	Commercial Office	Profit Org.	Profit Org.	50,000	20-Mar-2007
Yes		Detroit	MI	US	LEED EB 2.0	2.0	Multi-Use	Profit Org.	Profit Org.	100,000	08-Sep-2006
Yes		Detroit	MI	US	LEED NC 2.1	2.1	Multi-Use	Non-Profit Org.	Non-Profit Org.	82,000	30-Apr-2003
Yes		Detroit	MI	US	LEED NC 2.1	2.1	Other	Federal Government	Federal Government	39,000	18-Jan-2005
Yes		Detroit	MI	US	LEED NC 2.1	2.1	Other	Federal Government	Federal Government	25,350	18-Jan-2005
No	East Grand Rapids Community Center	East Grand Rapids	MI	US	LEED NC 2.1	2.1	Multi-Use	Local Government	Local Government	55,714	08-Oct-2004
No	Michigan State Univ. Chemistr	East Lansing	MI	US	LEED NC 2.1	2.1	Multi-Use	State Government	Mixed Occupancy	31,097	04-Nov-2005
No	Msu Federal Credit Union Hq Bu	East Lansing	MI	US	LEED NC 2.1	2.1	Multi-Use	Non-Profit Org.	Non-Profit Org.	169,978	08-Dec-2005
No	Affirmations Community Center	Ferrisville	MI	US	LEED NC 2.2	2.2	Multi-Use	Non-Profit Org.	Non-Profit Org.	15,000	20-Sep-2004
No	New Health Center	Fulton	MI	US	LEED NC 2.2	2.2	Multi-Use	Other	Other	6,444	06-Feb-2007
No	101 Sheldon Building	Grand Rapids	MI	US	LEED EB 2.0	2.0	Multi-Use	Non-Profit Org.	Non-Profit Org.	19,920	30-Nov-2006
No	Aquinas College Library	Grand Rapids	MI	US	LEED NC 2.1	2.1	Multi-Use	Other	Non-Profit Org.	66,849	30-Jul-2004
No	Bazzant Associates Headquarters	Grand Rapids	MI	US	LEED NC 2.0	2.0	Multi-Use	Profit Org.	Profit Org.	9,480	18-Mar-2002
No	Bobsm/Steaktees Building	Grand Rapids	MI	US	LEED NC 2.1	2.1	Multi-Use	Profit Org.	Profit Org.	105,053	07-Jan-2004
No	Calvin College Bunker Interpretive Centre	Grand Rapids	MI	US	LEED NC 2.0	2.0	Multi-Use	Non-Profit Org.	Non-Profit Org.	5,270	11-Sep-2003
No	Christian Counseling Center	Grand Rapids	MI	US	LEED NC 2.2	2.2	Commercial Office	Non-Profit Org.	Non-Profit Org.	12,720	17-May-2006
No	Da Bloodgett Children'S Home	Grand Rapids	MI	US	LEED NC 2.2	2.2	Commercial Office	Non-Profit Org.	Non-Profit Org.	30,575	11-Jan-2004
No	East Hills Center	Grand Rapids	MI	US	LEED CS 1.0 Pilots Only		Multi-Use	Profit Org.	Mixed Occupancy	7,200	24-May-2004
No	Fairmount Square Retail Building	Grand Rapids	MI	US	LEED CS 2.0	2.0	Multi-Use	Profit Org.	Mixed Occupancy	6,516	08-Dec-2006
No	Frips New Secondary Building	Grand Rapids	MI	US	LEED NC 2.0	2.0	K-12 Education	Other	Non-Profit Org.	214,000	26-Nov-2001
No	Forest Hills Fine Arts Center	Grand Rapids	MI	US	LEED NC 2.0	2.0	Multi-Use	Other	Profit Org.	37,640	26-Dec-2001
No	Gezon M.O.B.	Grand Rapids	MI	US	LEED CS 2.0	2.0	Health Care	Profit Org.	Profit Org.	69,000	06-Sep-2006
No	Goodwill Environmental School	Grand Rapids	MI	US	LEED NC 2.0	2.0	K-12 Education	Local Government	Individual	14,000	13-Dec-2000
No	Grand Rapids Metropolitan Ymca	Grand Rapids	MI	US	LEED NC 2.1	2.1	Multi-Use	Non-Profit Org.	Non-Profit Org.	152,986	21-Apr-2004
No	Grand Rapids State Office Bui	Grand Rapids	MI	US	LEED NC 2.2	2.2	Multi-Use	State Government	State Government	186,203	24-Feb-2006
No	Grocery Building	Grand Rapids	MI	US	LEED CS 2.0	2.0	Multi-Use	Profit Org.	Profit Org.	3,000	05-Jul-2006
No	Grps Burton School	Grand Rapids	MI	US	LEED NC 2.2	2.2	K-12 Education	Local Government	Local Government	165,334	06-Nov-2008
No	Grps Harrison Park Schools	Grand Rapids	MI	US	LEED NC 2.1	2.1	K-12 Education	Local Government	Local Government	160,000	19-Aug-2005
No	Grps Sibley Elementary School	Grand Rapids	MI	US	LEED NC 2.1	2.1	K-12 Education	Local Government	Local Government	67,000	17-May-2005
No	Hall Elementary School	Grand Rapids	MI	US	LEED NC 2.2	2.2	K-12 Education	Local Government	Local Government	50,000	10-Apr-2007
No	Hispanic Center Of Western Mic	Grand Rapids	MI	US	LEED NC 2.2	2.2	Health Care	Non-Profit Org.	Non-Profit Org.	380,000	03-Nov-2005
No	Interurban Transit Partnership	Grand Rapids	MI	US	LEED NC 2.2	2.2	Multi-Use	Non-Profit Org.	Non-Profit Org.	6,294	13-Mar-2008
No	Keystone Community Church	Grand Rapids	MI	US	LEED NC 2.1	2.1	Assembly	Local Government	Local Government	50,560	19-May-2003
No	Knapp Forest Elementary	Grand Rapids	MI	US	LEED NC 2.0	2.0	K-12 Education	Other	Non-Profit Org.	96,000	15-Nov-2004
No	Lemmen-Holton Cancer Pavilion	Grand Rapids	MI	US	LEED NC 2.2	2.2	Multi-Use	Local Government	Local Government	273,112	11-Jan-2002
No	Martineau Project	Grand Rapids	MI	US	LEED NC 2.1	2.1	Multi-Use	Non-Profit Org.	Mixed Occupancy	17,547	29-Oct-2003
No	Metro Health Plaza-Cascade	Grand Rapids	MI	US	LEED CI 2.0	2.0	Multi-Use	Non-Profit Org.	Non-Profit Org.	9,000	13-Feb-2006
No	North Alamo Club	Grand Rapids	MI	US	LEED NC 2.1	2.1	Health Care	Non-Profit Org.	Non-Profit Org.	15,391	19-Oct-2005
No	Northpointe Bank Corporate Hqs	Grand Rapids	MI	US	LEED NC 2.1	2.1	Commercial Office	Profit Org.	Profit Org.	69,362	31-Oct-2005
No	Progressive Ae	Grand Rapids	MI	US	LEED EB 2.0	2.0	Commercial Office	Profit Org.	Profit Org.	23,943	03-May-2004
No	Richard J. Lacks, Sr. Cancer Center	Grand Rapids	MI	US	LEED NC 2.0	2.0	Health Care	Non-Profit Org.	Non-Profit Org.	170,000	08-Apr-2002
No	Steelcase Global Hq 4E	Grand Rapids	MI	US	LEED CI 2.0	2.0	Commercial Office	Profit Org.	Profit Org.	11,000	10-Oct-2005
No	Sylvan Learning Center	Grand Rapids	MI	US	LEED NC 2.1	2.1	Commercial Office	Profit Org.	Profit Org.	3,032	08-May-2005
No	Ufow Local 951 Office Building	Grand Rapids	MI	US	LEED NC 2.1	2.1	Commercial Office	Non-Profit Org.	Non-Profit Org.	13,640	02-Sep-2004
No	Van Andel Institute Phase 2	Grand Rapids	MI	US	LEED NC 2.2	2.2	Laboratory	Profit Org.	Profit Org.	600,000	20-Dec-2005
No	Water/Environmental Services Facility	Grand Rapids	MI	US	LEED NC 2.1	2.1	Industrial	Local Government	Local Government	80,000	25-Mar-2003
No	West Catholic High School Gym	Grand Rapids	MI	US	LEED NC 2.2	2.2	K-12 Education	Non-Profit Org.	Non-Profit Org.	44,100	08-Apr-2006
No	West Michigan Center For Arts And Techn	Grand Rapids	MI	US	LEED CI 2.0	2.0	Community Dev.	Other	Local Government	38,700	13-Jun-2005
No	West Michigan Environmental Action Council	Grand Rapids	MI	US	LEED CI 1.0 Pilots Only		Commercial Office	Non-Profit Org.	Non-Profit Org.	7,200	16-Aug-2004
No	Wolverine Gas & Oil	Grand Rapids	MI	US	LEED CI 2.0	2.0	Commercial Office	Profit Org.	Profit Org.	13,580	16-Feb-2007
Yes		Grand Rapids	MI	US	LEED NC 2.1	2.1	Assembly	Non-Profit Org.	Non-Profit Org.	22,000	19-Oct-2005

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U.S. Green Building Council LEED Registered Projects

Sorted By: State
April 12, 2007

Confidential ?	Project Name	City	State	Country	LEED System	Rating	Version	Project Type	Owner Type	Occupant Type	Gross Square Footage	Registration Date
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.1	Commercial Office	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	40,060	05-Oct-2004
Yes	Grand Rapids	Grand Rapids	MI	US	LEED EB	2.0	Commercial Office	Profit Org.	Profit Org.	Profit Org.	31,255	07-Jul-2004
Yes	Grand Rapids	Grand Rapids	MI	US	LEED EB	2.0	Commercial Office	Profit Org.	Profit Org.	Profit Org.	86,436	16-Jan-2004
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.1	Commercial Office	Local Government	Local Government	Local Government	8,011	17-Jun-2004
Yes	Grand Rapids	Grand Rapids	MI	US	LEED CI	2.0	Commercial Office	Profit Org.	Profit Org.	Profit Org.	20,000	11-May-2004
Yes	Grand Rapids	Grand Rapids	MI	US	LEED CI	1.0 Pilots Only	Commercial Office	Profit Org.	Profit Org.	Profit Org.	16,475	12-Feb-2003
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.1	Health Care	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	7,400	15-Jul-2005
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.2	Health Care	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	141,800	13-Feb-2007
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.1	Higher Education	State Government	State Government	State Government	53,000	19-Aug-2005
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.1	K-12 Education	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	95,250	13-Sep-2005
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.1	Multi-Unit Residence	Profit Org.	Profit Org.	Profit Org.	48,620	09-Dec-2005
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.1	Multi-Unit Residence	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	12,000	07-Dec-2004
Yes	Grand Rapids	Grand Rapids	MI	US	LEED CS	2.1	Multi-Use	Profit Org.	Profit Org.	Profit Org.	19,920	18-Jul-2003
Yes	Grand Rapids	Grand Rapids	MI	US	LEED CS	1.0 Pilots Only	Multi-Use	Profit Org.	Profit Org.	Profit Org.	40,000	11-May-2004
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.1	Multi-Use	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	38,489	05-Sep-2002
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.1	Multi-Use	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	8,286	24-Aug-2004
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.1	Multi-Use	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	125,994	24-Sep-2003
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.2	Multi-Use	Other	Mixed Occupancy	Mixed Occupancy	232,000	07-Nov-2006
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.1	Multi-Use	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	20,052	20-Jul-2005
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.1	Multi-Use	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	7,220	06-Jan-2005
Yes	Grand Rapids	Grand Rapids	MI	US	LEED NC	2.1	Multi-Use	Profit Org.	Mixed Occupancy	Mixed Occupancy	175,000	31-Oct-2005
Yes	Grand Rapids	Grand Rapids	MI	US	LEED CS	2.1	Multi-Use	Non-Profit Org.	Profit Org.	Profit Org.	40,149	03-Jan-2005
Yes	Grand Rapids	Grand Rapids	MI	US	LEED CS	1.0 Pilots Only	Multi-Use	Profit Org.	Profit Org.	Profit Org.	103,000	08-Nov-2005
Yes	Grand Rapids	Greenville	MI	US	LEED NC	2.1	Single-Family Home	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	6,216	24-Jun-2005
Yes	Harper Woods	Harper Woods	MI	US	LEED NC	2.1	Multi-Use	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	13,410	30-Jul-2004
Yes	Hastings	Hastings	MI	US	LEED NC	2.1	Library	Local Government	Local Government	Local Government	17,800	04-May-2004
Yes	Holland	Holland	MI	US	LEED NC	2.1	Library	Local Government	Local Government	Local Government	19,672	06-Dec-2005
Yes	Holland	Holland	MI	US	LEED NC	2.2	Multi-Use	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	17,620	05-Sep-2006
Yes	Holland	Holland	MI	US	LEED NC	2.1	Commercial Office	Profit Org.	Profit Org.	Profit Org.	263,604	30-Aug-2005
Yes	Holland	Holland	MI	US	LEED CI	2.0	Commercial Office	Profit Org.	Profit Org.	Profit Org.	25,503	27-Sep-2004
Yes	Holland	Holland	MI	US	LEED CI	2.0	Commercial Office	Local Government	Local Government	Local Government	325,489	21-Feb-2006
Yes	Holland	Holland	MI	US	LEED CI	2.1	Commercial Office	Profit Org.	Profit Org.	Profit Org.	6,018	24-Jul-2006
Yes	Holland	Holland	MI	US	LEED NC	2.0	Industrial	Profit Org.	Profit Org.	Profit Org.	100,000	13-Feb-2001
Yes	Holland	Holland	MI	US	LEED CI	2.0	Industrial	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	80,000	23-Sep-2005
Yes	Holland	Holland	MI	US	LEED CS	2.0	Multi-Use	Non-Profit Org.	Mixed Occupancy	Mixed Occupancy	55,000	25-Aug-2006
Yes	Holland	Holland	MI	US	LEED NC	2.2	Multi-Use	Profit Org.	Profit Org.	Profit Org.	293,000	17-Apr-2006
Yes	Holland	Holland	MI	US	LEED CS	2.2	Multi-Use	Profit Org.	Profit Org.	Profit Org.	49,900	16-Jan-2007
Yes	Holland	Holland	MI	US	LEED CS	2.0	Multi-Use	Profit Org.	Profit Org.	Profit Org.	55,000	17-Jan-2007
Yes	Houghton	Houghton	MI	US	LEED NC	2.0	Higher Education	Non-Profit Org.	Non-Profit Org.	Non-Profit Org.	58,000	08-Feb-2002
No	Kalamazoo	Kalamazoo	MI	US	LEED NC	2.2	Higher Education	Other	Individual	Individual	78,242	18-Aug-2006
No	Kalamazoo	Kalamazoo	MI	US	LEED CI	2.2	K-12 Education	Other	Non-Profit Org.	Non-Profit Org.	84,000	16-Feb-2007
No	Kalamazoo	Kalamazoo	MI	US	LEED NC	2.0	Higher Education	Profit Org.	Profit Org.	Profit Org.	28,800	22-Nov-2006
Yes	Kalamazoo	Kalamazoo	MI	US	LEED NC	2.1	Higher Education	State Government	Local Government	Local Government	69,600	26-Jan-2001
Yes	Kalamazoo	Kalamazoo	MI	US	LEED NC	2.1	Transportation	State Government	State Government	State Government	0	05-Dec-2005
Yes	Kalamazoo	Kalamazoo	MI	US	LEED NC	2.2	Multi-Use	Local Government	Local Government	Local Government	0	27-Jan-2003
No	Kalamazoo	Kalamazoo	MI	US	LEED NC	2.2	Library	Profit Org.	Profit Org.	Profit Org.	3,634	25-Jan-2007
No	Lansing	Lansing	MI	US	LEED NC	2.2	Library	Local Government	Local Government	Local Government	30,000	06-Mar-2007
No	Lansing	Lansing	MI	US	LEED EB	2.1	Industrial	Non-Profit Org.	Profit Org.	Profit Org.	1,500,000	09-Jul-2004
No	Lansing	Lansing	MI	US	LEED NC	2.0	Multi-Use	Other	Mixed Occupancy	Mixed Occupancy	290,938	07-Jun-2006
No	Lansing	Lansing	MI	US	LEED CS	2.0	Commercial Office	Profit Org.	Profit Org.	Profit Org.	64,000	27-Sep-2006
No	Lansing	Lansing	MI	US	LEED CI	2.0	Commercial Office	Profit Org.	Profit Org.	Profit Org.	16,900	10-Jan-2007
Yes	Lansing	Lansing	MI	US	LEED NC	2.1	Multi-Unit Residence	Profit Org.	Profit Org.	Individual	132,000	22-Feb-2006
No	Lenox Township	Lenox Township	MI	US	LEED NC	2.1	Commercial Office	Local Government	Local Government	Local Government	16,000	27-Jun-2005



U.S. Green Building Council LEED Registered Projects

Sorted By: State
April 12, 2007

Confidential ?	Project Name	City	State	Country	Rating System	Version	Project Type	Owner Type	Occupant Type	Gross Square Footage	Registration Date
No	New Science + Media Building	Livonia	MI	US	LEED NC	2.2	Multi-Use	Non-Profit Org.	Non-Profit Org.	58,518	31-Jan-2007
No	Nmu, Meyland Hall	Marquette	MI	US	LEED NC	2.1	Multi-Unit Residence	State Government	State Government	49,778	09-Jan-2006
No	Northern Michigan University, Van Antwe	Marquette	MI	US	LEED NC	2.2	Multi-Use	State Government	State Government	62,251	01-Sep-2006
Yes		Marquette	MI	US	LEED NC	2.1	Multi-Unit Residence	Non-Profit Org.	Individual	58,800	26-Feb-2004
Yes		Marquette	MI	US	LEED NC	2.1	Multi-Unit Residence	State Government	Mixed Occupancy	105,860	12-Jul-2005
No	Renovation Of The Motherhouse	Monroe	MI	US	LEED NC	2.0	Multi-Unit Residence	Non-Profit Org.	Mixed Occupancy	300,000	26-Jun-2000
No	Ornu - College Of Education	Mount Pleasant	MI	US	LEED NC	2.2	Higher Education	Non-Profit Org.	Non-Profit Org.	125,330	25-Jul-2006
No	H&S Companies	Muskegon	MI	US	LEED NC	2.1	Multi-Use	Individual	Mixed Occupancy	5,284	26-Aug-2005
No	Michigan Alternative And Renewable Energ	Muskegon	MI	US	LEED NC	2.1	Multi-Use	Local Government	Mixed Occupancy	26,990	16-Dec-2003
No	Inform Studio	Northville	MI	US	LEED CI	2.0	Commercial Office	Profit Org.	Profit Org.	3,606	15-Mar-2007
No	Jora Architects Office Building	Novi	MI	US	LEED NC	2.2	Commercial Office	Profit Org.	Profit Org.	30,500	07-Mar-2007
Yes		Petoskey	MI	US	LEED NC	2.1	Multi-Use	Profit Org.	Profit Org.	526,990	10-Oct-2005
Yes		Port Huron	MI	US	LEED CS	1.0 Pilots Only	Multi-Use	Profit Org.	Mixed Occupancy	109,000	09-Feb-2004
Yes		Port Huron	MI	US	LEED NC	2.1	Multi-Use	Profit Org.	Mixed Occupancy	109,000	28-Apr-2003
Yes		Salem Township	MI	US	LEED NC	2.0	Commercial Office	Profit Org.	Mixed Occupancy	677,693	24-Jun-2002
Yes		Salline	MI	US	LEED NC	2.2	Multi-Use	Profit Org.	Profit Org.	343,813	05-Sep-2006
Yes		Sault Ste Marie	MI	US	LEED NC	2.0	Public Order/Safety	Federal Government	Profit Org.	34,125	21-Jun-2001
No	West Shore Community College Student Lea	Scottville, MI 49545	MI	US	LEED NC	2.0	Multi-Use	Mixed Occupancy	Mixed Occupancy	37,822	10-Jul-2006
No	Montcalm Community College - L	Sidney	MI	US	LEED NC	2.2	Multi-Use	Non-Profit Org.	Non-Profit Org.	21,911	24-Mar-2006
Yes		Southfield	MI	US	LEED NC	2.2	Laboratory	Profit Org.	Profit Org.	48,000	09-Dec-2005
Yes		Southfield, Mi	MI	US	LEED NC	2.1	Higher Education	Non-Profit Org.	Profit Org.	43,000	12-Feb-2004
Yes		Spring Lake	MI	US	LEED EB	2.0	Multi-Use	Non-Profit Org.	Non-Profit Org.	104,200	14-Jun-2006
Yes	Ice Mountain Bottling Plant	Stannwood	MI	US	LEED NC	2.0	Industrial	Profit Org.	Profit Org.	410,976	16-May-2001
Yes		Traverse City	MI	US	LEED NC	2.2	Transportation	Local Government	Local Government	3,500	21-Feb-2006
Yes		Troy	MI	US	LEED NC	2.2	Multi-Use	Non-Profit Org.	Non-Profit Org.	15,600	06-Dec-2006
No	Lasalle Bank Financial Center	Troy	MI	US	LEED EB	2.0	Multi-Use	Profit Org.	Profit Org.	477,000	30-Jan-2006
No	Walsh College Addition	Troy	MI	US	LEED NC	2.2	Higher Education	Non-Profit Org.	Non-Profit Org.	40,000	21-Feb-2006
Yes		Troy	MI	US	LEED EB	2.0	Commercial Office	Profit Org.	Mixed Occupancy	162,000	02-Mar-2007
Yes		Troy	MI	US	LEED NC	2.1	Multi-Use	Non-Profit Org.	Non-Profit Org.	26,000	03-Sep-2003
No	Saginaw Valley State Univ.	University Center	MI	US	LEED NC	2.2	Higher Education	Non-Profit Org.	Non-Profit Org.	76,662	10-Jan-2006
Yes		Van Buren Township	MI	US	LEED NC	2.0	Multi-Use	Non-Profit Org.	Profit Org.	1,041,000	25-Jun-2002
Yes		Warren	MI	US	LEED NC	2.1	Multi-Use	Profit Org.	State Government	68,420	18-May-2004
Yes		West Bloomfield	MI	US	LEED NC	2.1	Health Care	Non-Profit Org.	Non-Profit Org.	300,000	22-Dec-2005
No	First National Bank In Howell - Green O	Whitmore Lake	MI	US	LEED NC	2.0	Financial & Comm.	Profit Org.	Profit Org.	3,726	01-Aug-2002
No	New Whitmore Lake High School	Whitmore Lake	MI	US	LEED NC	2.1	K-12 Education	Other	Non-Profit Org.	155,264	03-Sep-2003
Yes		Wyom	MI	US	LEED NC	2.2	Multi-Use	Non-Profit Org.	Non-Profit Org.	95,456	09-Nov-2006
No	Metro Health Cup	Wyoming	MI	US	LEED NC	2.1	Other	Non-Profit Org.	Non-Profit Org.	50,834	24-May-2004
No	Metro Health Hospital	Wyoming	MI	US	LEED NC	2.1	Health Care	Non-Profit Org.	Non-Profit Org.	468,901	26-Aug-2003
No	Metro Health Medical Office	Wyoming	MI	US	LEED CS	1.0 Pilots Only	Multi-Use	Profit Org.	Profit Org.	31,700	03-Mar-2006
No	Metro Health Village-21	Wyoming	MI	US	LEED CS	2.0	Multi-Use	Profit Org.	Mixed Occupancy	12,083	21-Nov-2006
No	Metro Health Village Physician Office Bt	Wyoming	MI	US	LEED CS	2.0	Multi-Use	Profit Org.	Profit Org.	85,878	25-Sep-2006
No	Mps South (Procure Grand Rapids)	Wyoming	MI	US	LEED NC	2.2	Multi-Use	Profit Org.	Profit Org.	21,957	31-May-2006
No	Norman Family Dentistry	Wyoming	MI	US	LEED NC	2.2	Health Care	Individual	Individual	13,889	19-Mar-2007
Yes		Wyoming	MI	US	LEED CI	2.0	Health Care	Non-Profit Org.	Profit Org.	45,427	04-Dec-2006
Yes		Wyoming	MI	US	LEED CI	2.0	Multi-Use	Profit Org.	Profit Org.	10,000	18-May-2006
No	Herman Miller Bg Main Site	Zealand	MI	US	LEED CI	1.0 Pilots Only	Commercial Office	Profit Org.	Profit Org.	30,000	26-Dec-2002
No	Herman Miller C1 Main Site	Zealand	MI	US	LEED NC	2.0	Commercial Office	Profit Org.	Profit Org.	19,076	10-Sep-2001
Yes		Zealand	MI	US	LEED CI	2.0	Commercial Office	Profit Org.	Profit Org.	85,000	17-Jan-2007
Yes		Zealand	MI	US	LEED CI	2.0	Commercial Office	Profit Org.	Profit Org.	13,000	21-Feb-2006
Yes		Zealand	MI	US	LEED NC	2.1	Commercial Office	Profit Org.	Non-Profit Org.	19,223	07-Sep-2005
No	The Herman Miller Marketplace - An Inte	Zealand Township	MI	US	LEED NC	2.0	Commercial Office	Profit Org.	Profit Org.	96,000	20-Oct-2000
No	Reflections At Bloomington Central Sta	Bloomington	MN	US	LEED NC	2.1	Multi-Unit Residence	Profit Org.	Individual	266,000	30-Jul-2004
Yes		Bloomington	MN	US	LEED NC	2.1	Industrial	Profit Org.	Profit Org.	128,628	08-Nov-2004

**INCENTIVE LIST FROM AROUND
THE UNITED STATES**

Summary of Government LEED® Incentives

TAX INCENTIVES

Baltimore County, MD

On June 5, 2006, the County Council passed bill # 85-06 that gives a **county property tax credit to any commercial building that achieves LEED-NC Silver certification**. The duration of the tax credit is for ten consecutive years.
<http://www.baltimorecountycouncil.org/b08506.pdf>

Chatham County, GA

May, 2006: The Board of Commissioners of Chatham County passed an ordinance that gives **full property state and county tax abatement for any building achieving LEED Gold certification for the first five years, then tapering off by 20% each year until the tenth year**.
http://www.chathamcounty.org/Chatham/uploads/Agn2006//m2006_05_12.PDF
(page 79-85)

Cincinnati, OH

On September 20, 2006, the City of Cincinnati passed an amendment to Ordinance #342-2002 that gives an **automatic tax exemption and 100% exemption of the assessed property value for construction of new, private commercial buildings and residential units that achieve LEED certification**. **Residential units include new or rehabilitated apartment structures with four or more units but do not include detached residential structures**. The ordinance also sets aside funds from the Community Development Block Grant to provide financial assistance for builders of new residential or rehabilitated low-income or mixed-income structures and homes that meet LEED standards. Funds would be used to offset any increased costs from building to LEED standards.

Also on September 20, 2006, the City of Cincinnati passed an ordinance requiring new municipal buildings to be LEED certified. Renovated municipal buildings should incorporate LEED elements during construction.

Maryland

October 2001: Maryland's governor issued an Executive Order calling for all capital projects greater than 5,000 gsf to earn LEED certification.

April 2005: The House and Senate passed legislation in requiring a green building standard, such as LEED (Silver), be used for state capital projects. The state also approved a **green building tax credit for commercial developers**.
<http://business.marylandtaxes.com/taxinfo/taxcredit/greenbldg/default.asp>

Nevada

June 17, 2005: Governor Guinn signed AB3 requiring all state funded buildings be LEED Certified or higher in accordance with LEED or an equivalent standard. During each biennium, at least two occupied public buildings whose construction will be sponsored or financed by the State of Nevada must be designated as a demonstration project and be equivalent to a LEED Silver or higher certification, or an equivalent standard. The bill also provides **tax abatements for property which has an eligible LEED Silver building and tax exemptions for products or materials used in the construction of a LEED Silver building.**
www.leg.state.nv.us/22ndSpecial/Reports/history.cfm?ID=2546

New York

June 2001: New York Governor Pataki issued Executive Order #111 encouraging but not requiring state projects to seek LEED Certification. New York State Energy Research and Development Authority will be offering an incentive for design teams of any New York State building that achieves a LEED rating. NYSERDA's New Construction Program offers a 10% increase on incentives for energy efficiency measures that reduce the use of electricity. **NYSERDA provides low interest loans (4% below market rate) for energy efficiency measures and building materials that meet LEED or other generally accepted green building standards. The New York State Green Building Tax Credit Program provides a tax incentive to commercial developments incorporating specific green strategies informed by LEED.**
<http://www.dec.state.ny.us/website/ppu/grnbldg/index.html>

Oregon

Oregon's 35% Business Energy Tax Credit for sustainable buildings is tied to the LEED certification level achieved. A LEED Silver rating is the minimum standard to obtain the tax credit for sustainable buildings and applies to LEED NC, CI, and CS certified buildings.

Examples:

100,000 sf. LEED-NC Silver bldg. eligible for \$140,000 tax credit

100,000 sf. LEED-NC Gold bldg. eligible for \$177,485 tax credit

<http://oregon.gov/ENERGY/CONS/BUS/tax/sustain.shtml>

Pasadena, CA

December 19, 2005: The City Council passed an ordinance requiring all new commercial and residential construction to achieve the LEED Certified level at a minimum. This includes commercial construction of 25,000 square feet or more, residential buildings at least four stories high, and city buildings of 5,000 square feet or more. **Developers who exceed the minimum certification will qualify for a rebate from Pasadena Water and Power. Additionally, developers who include affordable housing will earn a construction tax rebate of \$1000 per unit.** The ordinance is effective beginning in April 2006.

http://www.cityofpasadena.net/councilagendas/2005%20agendas/Dec_19_05/5A1.pdf

DENSITY BONUS

Acton, MA

April 5, 2004: A new zoning by-law (section 5.5B.2.2.d) unanimously adopted at the Annual Town Meeting gives a density bonus for buildings achieving LEED certification.

<http://doc.acton-ma.gov/dsweb/Get/Document-8253/EAVPC+Articles+Presented+at+Town+Meeting+-+April+2004.pdf>

Arlington, VA

Arlington County allows commercial projects and private developments earning LEED Silver certification to develop sites at a higher density than conventional projects.

All site plan applications for commercial projects are required to include a LEED Scorecard and have a LEED Accredited Professional on the project team regardless of whether or not the project intends to seek LEED certification.

All projects must contribute to a green building fund for county-wide education and outreach activities. The contribution is refunded if projects earn LEED certification.

Arlington sponsors a voluntary green home program that encourages builders of new single-family homes to incorporate energy efficient and other green building components in their projects. The County offers "front-of-the-line" plan review, site signs, and publicity to program participants who achieve a given number of points as outlined by Arlington's Green Home Choice program.

EXPEDITED PERMIT REVIEW

Gainesville, FL

2002: The City of Gainesville passed Ordinance # 1835 requiring all government county buildings be LEED certified. Additionally, the county is providing a **fast-track building permit incentive and a 50% reduction in the cost of building permit fees for private contractors who use LEED.**

Issaquah, WA

Developers intending to use LEED may receive free professional consultation and projects achieving LEED certification are placed at the head of the building permit review line.

<http://www.ci.issaquah.wa.us/Page.asp?NavID=326>

San Francisco, CA

On September 28, 2006, Mayor Gavin Newsom announced that the Department of Building Inspection (DBI), working with the Department of Environment (DOE) and the Department of Planning, will finalize a policy that gives **priority permit review to all new and renovated buildings that achieve LEED Gold**

certification.

Press release: http://sfgov.org/site/mayor_page.asp?id=46866

Santa Monica, CA

2000: The City Council adopted an ordinance requiring all new city projects to achieve LEED Silver certification.

April 2004: The city launched a grant program that provides a financial incentive for private developers who achieve LEED certification. <http://greenbuildings.santa-monica.org/mainpages/Details%20-%20LEED%20Grants.pdf>

August 2005: The city passed an ordinance allowing LEED registered projects to receive expedited permitting. This includes all LEED for New Construction, Homes, Core and Shell. <http://www.smgreen.org/mainpages/whatsnew.htm>

Sarasota County, FL

March 18, 2005: The county passed a resolution mandating that all government county buildings be LEED certified. Additionally, the county is providing a **fast-track building permit incentive and a 50% reduction in the cost of building permit fees for private contractors who use LEED.**

On August 22, 2006, the county approved a Green Development Incentive Resolution (#2006-174) that provides **fast-track permitting** for residential and commercial green developments. Incentives apply to projects pursuing LEED for Neighborhood Developments (ND) or FGBC Green Development Standards.

GRANTS

Cincinnati, OH

On September 20, 2006, the City of Cincinnati passed an amendment to Ordinance #342-2002 that gives an automatic tax exemption and 100% exemption of the assessed property value for construction of new, private commercial buildings and residential units that achieve LEED certification. Residential units include new or rehabilitated apartment structures with four or more units but do not include detached residential structures. **The ordinance also sets aside funds from the Community Development Block Grant to provide financial assistance for builders of new residential or rehabilitated low- income or mixed-income structures and homes that meet LEED standards. Funds would be used to offset any increased costs from building to LEED standards.**

Also on September 20, 2006, the City of Cincinnati passed an ordinance requiring new municipal buildings to be LEED certified. Renovated municipal buildings should incorporate LEED elements during construction.

Pennsylvania Public Schools

In July 2005, the Pennsylvania legislature passed House Bill 628, amending the Public School Code to provide a financial incentive to public school districts that achieve LEED Silver certification.

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INCENTIVES BY REQUEST

Cranford, NJ

November 15, 2005: The Township of Cranford adopted Ordinance No. 2005-46 requiring all township-funded facilities projects and township-owned facilities to meet LEED Silver certification. The Township also adopted LEED-EB for its existing facilities.

The township also has an incentive program whereby **redevelopers may request an incentive, such as a density bonus, for achieving LEED certification.**

OTHER

Babylon, NY:

On November 29, 2006, the Town of Babylon passed a resolution adopting a local law that requires LEED certification for any new construction of commercial buildings, office buildings, industrial buildings, multiple residence, or senior citizen multiple residence over 4,000 square feet. **If certification is achieved, the Town will refund the certification fees paid to USGBC by the developer.** <http://www.usgbc.org/ShowFile.aspx?DocumentID=2164>

San Antonio, TX

On June 15, 2006, the San Antonio City Council adopted Ordinance #2006-06-15-0722 that approves Phase II of the City's Incentive Scorecard System and authorizes **administrative waiver or reduction of certain development fees** for projects reaching specified scores from the scorecard. Points are awarded for projects achieving LEED-NC or LEED for Homes certification.

Ordinance: <http://www.sanantonio.gov/clerk/minutes/2006/20060616.mht>

Scorecard and incentives: www.sanantonio.gov/incentives

Pasadena, CA

On December 19, 2005, the City Council passed an ordinance requiring all new commercial and residential construction to achieve the LEED Certified level at a minimum. This includes commercial construction of 25,000 square feet or more, residential buildings at least four stories high, and city buildings of 5,000 square feet or more. Developers who exceed the minimum certification will qualify for a rebate from Pasadena Water and Power. Additionally, developers who include affordable housing will earn a construction tax rebate of \$1000 per unit. The ordinance is effective beginning April 2006.

<http://www.ci.pasadena.ca.us/waterandpower/LEED%20Cert.pdf> (rebates for LEED certification)

San Diego, CA

San Diego Mayor Dick Murphy included requiring LEED Silver certification of all municipal projects among his 10 goals for the year in his 2002 State of the City Address. The city subsequently adopted LEED for all public projects over 5,000 sq ft in April, 2002. The city has also developed a sustainable building expedite program that uses LEED criteria and provides significant plan review and construction incentives.

Private sector buildings registering for LEED certification may be eligible to receive **technical green building training, support, and education**. Commercial projects achieving LEED Silver certification will benefit from **expedited discretionary processes**.

http://clerkdoc.sannet.gov/RightSite/getcontent/local.pdf?DMW_OBJECTID=09001451800a609a

Seattle, WA

In February, 2002, the City of Seattle passed a policy requiring LEED Silver certification of all city-owned projects and renovations over 5,000 gsf. The city is encouraging the private construction sector to incorporate LEED design standards into new and existing buildings by providing economic incentives.

On April 12, 2006, Mayor Nickels signed zoning legislation that gives a height or density bonus to commercial or residential projects that achieve at least LEED Silver certification and contribute to affordable housing.

Sustainable Building Policy

Washington, DC

The mayor will establish an incentive program for private residential and commercial buildings. Incentives will include an expedited permit review and may also include grants. The mayor will also establish a Green Building Fund for technical assistance and monitoring of green buildings, education, and incentive funding for private buildings.

<http://www.dccouncil.washington.dc.us/images/00001/20061201163509.pdf>