

The recent slowdown in construction spending is, unfortunately, a normal symptom of a downturn in the economy, and even more unfortunately, is an unwelcome reality in our business. Corporations hoard what cash they have, rather than spending on expansions and renovations. Churches and other non-profits see a reduction in donations and cannot afford to completely fulfill building programs. When housing slows down, the retail and other services which crop up around new neighborhoods also pull back. And when taxes, based on the value of homes and business properties as well as retail sales, are reduced, so does spending for schools, libraries, fire stations, and other municipal services.

SOME PERSPECTIVE ON THE ECONOMY

By Doug Hartman

I am by no means an economist, but it occurred to me recently that many in our business have never (or rarely) experienced a recession. The 20 somethings have known nothing but unbridled economic growth. The 30 somethings only remember the dot-com bust and 9/11 effect on the economy in 2000 (which by today's standards, did not have a very significant or lasting effect). You have to look back to the mid 70's, mid 80's, and the early 90's to see some really painful times when contraction in construction spending was equivalent to today's events.

As a young pup in 1976, armed with a MA degree from Illinois, I spent my last semester scouring the midwest for a job. I was fortunate enough to have a faculty advisor who pointed me toward Texas, where the economy (much as it is today) was not affected as negatively as most of the country. After interviewing in Houston, San Antonio, and Dallas, I was fortunate enough to land a temporary position with an apartment developer here in Dallas making a whopping \$300/week. I was in competition with another new hire and after 30 days, they would decide who would stay.

All of the above is not to reminisce about the past, but to offer some perspective for the future. Generally, economic cycles only last about 7-10 years and with the exception of the great depression in 1929 (which took nearly 30 years and a world war for the stock market to recover), the economy will hopefully begin a slow and sustained recovery next year, and the recent lay-offs can begin to be re-absorbed into the industry. The media wants to sensationalize everything these days, and claims this is worst economic downturn since the great depression. It has to go quite a ways yet to hit the 66% market decline after the 1973 Arab oil embargo.

The economic growth of the past 8 years has been so spectacular, that there just wasn't anywhere to go but down. As I recall hearing someone say about early medicine research "what doesn't kill you makes you stronger". Hopefully the results of this recessed will make us all better survivors. By the way, I did get to keep my job.

HOW DO YOU EVALUATE JUST HOW "GREEN" A BUILDING PROJECT IS?

By Doug Hartman

In its continued effort to be of service helping the construction industry organize construction documents and supporting data, CSI has launched a new program called GreenFormat. GreenFormat is a CSI format that allows manufacturers to accurately organize and report the properties of their products that affect sustainability. Users can then use GreenFormat to find products with properties that help them achieve their sustainable goals.

GreenFormat does not seek to determine whether a product is green. Instead, using a questionnaire, GreenFormat reports on the properties of a product, referencing specific industry standards. The verification of sustainable claims by relating questions to standards and certifications benefits both manufacturers and designers. GreenFormat is free for users searching the database for product information. Building product manufacturers pay a modest fee to list products in the database. For more information, log onto www.greenformat.com.

INSPEC ADDS STAFF TO SUPPORT SUSTAINABLE CONSULTING EFFORT

By Doug Hartman

Please welcome Michael Smith AIA LEED AP and Allen Cornett CSI CCCA LEED AP to the Inspec staff as sustainable design consultants. Mike, a licensed architect, and Allen, a licensed interior designer, bring with them an extensive background as project managers in architectural firms and a passion for applying sustainable design



practices. Fresh off of their attendance at the USGBC Green Building conference in Boston in mid November, both are anxious, as I am, to assist our clients in understanding and implementing the credit opportunities on LEED certified projects. Inspec is celebrating 5 years of providing sustainable design and construction consulting to our clients. Services offered range from simply "greening up" construction specifications, to taking over complete responsibility for collecting and submitting documentation and interfacing with USGBC on LEED certified projects.



USGBC CELEBRATES ITS 15 YEAR ANNIVERSARY

The USGBC has developed into an incredibly effective organization in championing the benefits of sustainable design and construction practices. While you may struggle to understand or to achieve specific credit requirements, and are sometimes frustrated by the delays in getting answers on credit interpretation and submittal reviews, the organization, which is driven by member consensus, has forever changed for the better, the way we design and build facilities. To watch a series of short videos celebrating the 15th anniversary of the organization, log onto the following link.

<http://www.youtube.com/watch?v=AZPuTNLf5yc&fmt=18>

BUILDING A GREENER DALLAS

By Michael Smith, LEED AP

Back in April of this year, the City of Dallas passed a new building ordinance titled "Green Building Program". The mission of the ordinance is to lower greenhouse emissions 7% by 2012 and become carbon neutral by 2030. This will be implemented in two phases over the next three years. We have all gotten used to the ComCheck analysis and the third party verification of the building envelope design, however this will change significantly in the year to come.

Starting October 1, 2009, new commercial construction projects under 50,000 SF will have to prove energy efficiency of 15% better than required by the 2006 IECC. Energy modeling software such as ComCheck, Energy Plus, and Equest can be used. Systems that can be considered are Energy Star and LEED. Energy Star's Portfolio Manager (www.energystar.gov) can be utilized to show a rating of at least 75, which must be verified by a P.E. Another method is to follow and document compliance with (www.usgbc.org) LEED – New Construction v2.2 or Core and Shell v2.0 requirements for Energy and Atmosphere Credit 1, Optimize Energy Performance. This requires evidence that the design is at least 14% better than ASHRAE 90.1 – 2004. Other requirements include:

Water conservation 20% better than the EPA Act of 1992 is required.

Low slope roofs must have a minimum SRI of 0.65 initially and maintain an SRI of 0.50 after three years.

Tighter restriction on outdoor lighting will also be enforced. The maximum allowable lamp wattage for commercial lighting will be 250 watts. Lights are to be aimed down and be shielded or full cut-off type fixtures. Exceptions are allowed for security, stairs, signs, and athletic fields.

For new commercial construction over 50,000 SF, projects must comply with a minimum 85% of the credits for LEED certification.

This requires:

22 points for LEED New Construction,

20 points for LEED Core and Shell,

22 points for LEED for Retail,

25 points for LEED for Healthcare, and

25 points for LEED for Schools.

Energy conservation, water use reduction, and lighting restrictions are the same as for buildings under 50,000 SF.

In October 2011, all new commercial construction projects will be required to follow the compliance paths for LEED certification for new construction, core and shell, retail, schools, and healthcare. An energy efficiency of 17.5% better than ASHRAE 90.1 – 2004 will be mandated which achieves three points under LEED Optimize Energy Performance. Actual certification will not be required.

The impact on the permitting process is yet to be seen. A checklist from the green standard followed will have to be submitted prior to permit approval. The city has committed to adding six specialized staff over the next three years to review the green standards. Permits for LEED certification pursued projects will be given priority during plan review.

Dallas is setting an example for mandating sustainable projects to preserve our environment and well being of its citizens. One item to keep in mind is that the referenced standards are changing all the time. The International Code Council will be releasing the new 2009 versions of codes. The USGBC is releasing LEED 2009 mid year which reworks the credits on a weighting system. All this has the potential to complicate our profession more, but we have to remember that building greener communities is not only better for ourselves; it is creating a better environment for our children and generations to come. For more information, including download links for the actual ordinance and a power point presentation summarizing the process that lead to the ordinance, log onto to http://www.greendallas.net/green_standard.html.

PS – City of Plano is considering a similar ordinance which will go into effect January 1, 2009.

TAS UPDATE

By Mike Ranalletta

A lot has gone on this year regarding Texas Department of Licensing and Registration (TDLR) forms for Texas Accessibility Standards (TAS) and some important changes to making curb ramps on and off property meet federal and state codes.

Since the new Texas Accessibility Standards (TAS) forms were issued in the Spring of 2007, some changes have been made to their format and also the online registration of projects. First and most important, the Owner's signature is no longer required on the Project Registration form, and second, and most recent, the filing fee must be paid before an EABPRJ# project number will be issued. I know many of you breathed a huge sigh of relief when the requirement for an Owner's signature was removed, especially on projects with short schedules.

Understanding that it's not always possible for the person filing their project online to have access to company funds to pay the filing fee, Inspec will register your project online and pay the online registration fee. We can accept a check from the design firm or the Owner along with the drawings and other project forms at the time of submission. Although the registration online template requests the 8-digit Registered Accessibility Specialist (RAS) number simply entering my 4-digit number (0232) is sufficient and will allow you to continue filling out the form.

Curb Ramps

Ah yes, the lowly curb ramp. I've seen more ways to texture and color a curb ramp than I can count on both hands. Hopefully, with the Issuance of Technical Memorandum 08-01 in June of 2008, I won't have to take off my shoes and count even more. With TM 08-01, TDLR strongly urges that all curb ramps within the public right-of-way have the bottom two feet of the ramp covered with truncated domes in a contrasting color. All curb ramps out of the public right-of-way (on private property) to have the entire ramp surface covered with truncated domes of a contrasting color.

It's not always that easy, however: Municipalities may have a particular style of texture and/or contrasting color that they prefer. The Civil and Landscape detail sheets may differ on what type of contrasting curb ramp surface is required. The paving contractor on the project may have used a particular type of

continued next page TAS UPDATE

REFERENCE STANDARDS

By Kevin Wang

materials to be used, method of installation, and quality of workmanship for a parcel of work to be placed under contract; usually utilized in conjunction with working (contract) drawings in building construction." A specification is only as good as the both the accuracy of it guidelines and the criteria which it cites as measures of quality. This is where reference standards come into play.

Most of us are familiar with the alphabet soup of acronyms peppered throughout the various specification sections, including ASTM, GANA, SPRI, TCNA, NRCA, AWI, ASHRAE, etc. Most architects prefer to see those references in their specifications, with good reason. Those references are, in principle, incorruptible third-party authorities that qualify specific material, performance, and workmanship standards in no uncertain terms. However, if many of us were to be put on the spot and asked about the specific requirements of any particular standard, we might be hard-pressed to provide a response with much substance.

That does not mean that those references should be abandoned. Rather, it would be beneficial to have those standards at our disposal and become familiar with them where possible. Having those resources close at hand ultimately facilitates clarifications, and increased exposure to them only increases our overall knowledge of not just individual building components, but how building systems come together as a whole.

The following is a list of some of the most often used or valuable referenced standards, as well as available publications. The combined cost of all of the listed publications would be significant, and their purchase should be weighed against how useful to each individual company they would be. However, many useful resources are available at no cost. There are also manufacturers that may provide complimentary copies of certain publications that pertain to their particular focus, as discounted purchase prices are available to member companies. Additionally, the up-front cost of purchasing certain publications may be offset by the information they provide, minimizing later expenses once projects are under construction.

TAS UPDATE (Continued)

groove trowel on his last job and those ramps were approved, so he feels it is okay to use it on all projects. The last one is particularly tricky, especially if the building is multi-tenant and subject to inspections for future tenancies. The TAS inspector that approves the curb ramps today may not be the one that disapproves them tomorrow. So, it is important to make curb ramps compliant with TAS using truncated domes made up of a color that contrasts significantly with adjacent surfaces.

Proof Of Submission

We regularly get questions about the requirements for Proof of Submission. The five day requirement for submission is five business days.

Per the Administrative Rule # 68.50. (a) *An architect, interior designer, landscape architect, or engineer with overall responsibility for the design of a building or facility subject to §469.101 of the Act, shall mail, ship, or hand-deliver the construction documents along with a Proof of Submission form to the department, a registered accessibility specialist, or a contract provider not later than the fifth day after the plans and specifications are issued. In computing time under this subsection, a Saturday, Sunday or legal holiday is not included.*

One person's notion of reasonable quality may not be compatible with another. In many cases this is true when those two individuals happen to be an architect and a contractor. Disagreements between those entities are nothing new, nor the process of resolving them This is the reason for specifications, defined in the Dictionary of Architecture and Construction as, "A written document describing in detail, the scope of work,

materials to be used, method of installation, and quality of workmanship for a parcel of work to be placed under contract; usually utilized in conjunction with working (contract) drawings in building construction." A specification is only as good as the both the accuracy of it guidelines and the criteria which it cites as measures of quality. This is where reference standards come into play.

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	Organization Name	Price	(Member Price)
AAMA	American Architectural Manufacturers Association, (847) 303-5664, www.aamanet.org AAMA/WDMA/CSA 101/I.S.2/A440, NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights Updates	\$75.00 Free	(\$38.00)
APA	APA - The Engineered Wood Association, (253) 565-6600, www.apawood.org Various publications available online	Free	
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers, (800) 527-4723, www.ashrae.org ASHRAE Tools for LEED v2.2 Advanced Energy Design Guides	\$426.00 Free	
ASTM	American Society for Testing and Materials International, (610) 832-9500, www.astm.org ASTM Standards in BUILDING CODES, 45th Edition	\$948	
AWI	Architectural Woodwork Institute, (571) 323-3636, www.awinet.org AWI Quality Standards Illustrated 8th Edition	\$100.00	
BIA	The Brick Industry Association, (703) 620-0010, www.bia.org 102 - Technical Notes Set with Binder	\$60.00	(\$40.00)
CRRC	Cool Roof Rating Council, (866) 465-2523, www.coolroofs.org Various publications available online	Free	
GA	Gypsum Association, (202) 289-5440, www.gypsum.org Design Data - Gypsum Board (GA-530)	\$53.95	
GANA	Glass Association of North America, (785) 271-0208, www.glasswebsite.com GANA Glazing Manual (2004) GANA Glass Informational Bulletins Volume One (2008)	\$35.00 \$25.00	(\$25.00)
NAAMM	National Association of Architectural Metal Manufacturers, (630) 942-6591, www.naamm.org Various specific publications available	\$5.00 - \$35.00 each	
NRCA	National Roofing Contractors Association, (800) 323-9545, www.nrca.net The NRCA Roofing Manual	\$555.00	
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association, (703) 803-2980, www.smacna.org Architectural Sheet Metal Manual 2.0	\$761.00	(\$533.00)
SPRI	Single Ply Roofing Industry, (781) 647-7026, www.spri.org SPRI's Safety Guide SPRI Test Method For Strength of Modified Bitumen Cold Adhesive Laps In Peel & Shear Other Publications	\$8.00 \$10.00 Free	(\$3.50) (\$5.00)
TCNA	Tile Council of North America, Inc., (864) 646-8453, www.tileusa.com TCA Handbook for Ceramic Tile Installation	\$10.00	
UL	Underwriters Laboratories Inc., (877) 854-3577, www.ul.com Building Materials, Fire Protection, Roofing Materials and Systems and Fire Resistance Directories	\$290.00	
USGBC	U.S. Green Building Council, (800) 795-1747, www.usgbc.org Various LEED Reference Guides	\$200.00	(\$150.00)

BUILDING EFFICIENCY AND UPDATED MASONRY CAVITY WALL DESIGN

By Steve Brown

We've witnessed plenty of discussion lately regarding new recommendations and requirements for masonry cavity wall design. Last year's update of ASHRAE 90.1, with regard to masonry veneer cavity walls using cold formed metal stud backup framing, mandated a minimum R13 fiberglass batt insulation between the metal stud framing members and a continuous rigid insulation layer outside of the framing assembly (inside the drainage cavity). The updated ASHRAE

requirement echoes recent mandates by northern code officials and masonry institute committees relocating insulation from the framing cavity to the wall's drainage cavity.

Architect's have been challenged for some time now with questions regarding the use of faced insulation (vapor barriers), incidence of mold within walls, air barrier selection, the "bridging quality" of cold formed metal framing, and the resultant degradation of design versus actual "R" values in an enclosure wall's performance. The ASHRAE mandate moves positively towards addressing these challenges.

Impacting heavily on this is an article published in the ASHRAE Journal last year titled "The Perfect Wall." The article expands on the ASHRAE updated recommendations and requirements by introducing some significant wall design variations as well as examining the concept of common and continuous "control layers" within the wall, roof and floor slab. With respect to "wall design variations", the article introduces three wall conditions that ASHRAE identifies with three different building and construction types. Taken in their respective order of "construction quality" and performance they are as follows:

1. The **"institutional wall"** applicable to long life span "public" buildings with unique environmental requirements such as museums, art galleries, libraries and court buildings. These buildings have masonry backup walls (mandatory) with an applied air barrier/vapor retarder and exterior rigid insulation applied within the wall's drainage cavity. It's "old time" wall design, but with the materials available today it performs better than any other design, and is thus preeminently suited to prestigious buildings with long life spans. Further, the "institutional wall" design is unique in that it offers optimum performance anywhere, in any climate.
2. The **"commercial wall"** relates to the building type we see most often - commercial, and is most in need of correction. A proliferation of new materials has brought about many variations and "improvements" to metal framing backed, masonry cavity wall design, however until recently this system has not performed very well. A point of fact is this design was strongly discouraged, if not outright banned from use, in northern climates due to material failures and poor performance. Improvements in masonry anchor design, mortar mixes, sheathing and vapor retarders have made things better, however the aforementioned "bridging" by cold formed framing members has caused the design to be less than "high performance", which is not acceptable in this age of high energy costs. ASHRAE's recommended design deletes batt insulation from the framing space altogether and uses rigid exterior insulation in the drainage cavity over an applied air barrier or vapor retarder. Use of masonry anchors that seat in the web space of the cold formed framing, and works well in shear, allows for a longer reach anchor and thus compensates for the insulation in the drainage cavity and allows for adequate BIA required cavity clearance. Using this design the metal framed masonry cavity wall can be used anywhere – North or South – without concern for low performance and anchorage failure.
3. The **"residential wall"** is again a type of wall design that we often see and is similar to the commercial wall with the exception assuming use of wood framing. Wood, being relatively "non-conductive", allows the use of batt insulation (un-faced, i.e. - without a vapor barrier in southern climates) in the wall's framing space. ASHRAE, however recommends we "split" the "R" requirements for the wall and use of rigid exterior insulation in the drainage cavity – just less of it. The thinner layer of rigid insulation allows the use of conventional masonry anchors and helps to account for the less stringent construction tolerances found in this building type. Done in this manner the design will work anywhere – North or South - however ASHRAE strongly recommends that the framing space NOT be insulated in extreme cold climates even with wood framing.

All three of the ASHRAE recommended wall design types share a common quality and advantage over previous designs in that the wall's "control layer" is located on the exterior side of the building. The "control layer" consists of four elements – rain control, air control, vapor control and thermal control. Locating the control layer on the building's exterior side provides the best protection for the buildings structure and optimum performance for the building's environmental system. We've heretofore located three of these four "control layer" elements on the exterior side, however – with the exception of masonry backup cavity walls – the insulation has traditionally been on the inside of the building. Things associated with "damage" to the building's structure (expansion, contraction, corrosion, etc.) are all temperature related thus making locating the insulation on the exterior side a critical advantage – insulation won't protect the building's structure if it's on the inside with the structure.

Another more intrinsic quality of locating the wall "control layer" on the exterior side of the wall is how it now aligns with the roof system's "control layer." This is a huge advantage when we're trying to deal with the transition from wall system to roof system with regard to the "control layer" and it's components like the air barrier or vapor retarder and roof membrane and the need to make them "continuous". It would work best if we were using a "protected membrane" roof system where the membrane component of the "control layer" is located under the insulation (same as our wall system) and in line with the building wall's system. Unfortunately we don't use protected membrane roofs enough, (putting the membrane on top of the insulation is less expensive), perhaps green architecture's ever increasing demand for energy efficiency in our designs will change this short sighted perspective.

Similarly, having the wall system's insulation on the exterior is also in line with best practice for the building's floor slab in that the slab's "control layer" is also on the exterior side of the building structure and thus in line with the wall's. Taken in total we can now design building enclosures with masonry cavity walls that are pretty much free of gaps or "breaks" in "control layer" continuity, with no occurrences of "thermal conductivity" to reduce performance. Looks like a win-win in our present world of required energy efficiency.

“WIND UPLIFT RESISTANCE”

By Rhonda Lisa Sellers

speed. We are typically asking for the FM Approvals' Windstorm Resistance Classification – that number more commonly expressed in increments of 15 pounds per square foot (psf) ranging from 1-60 to 1-180 or greater - which represents the fire class rating of 1 (Class 1) and the wind uplift resistance in pounds per square foot (psf). How is it determined? Who determines it?

FM Global (www.fmglobal.com), an engineering-driven, policyholder-owned insurance company (Factory Mutual Insurance Company), produces Loss Prevention Data Sheets including, but not limited to, the 1-28, *Design Wind Loads*, used to determine design uplift loads as a basis for selecting the uplift rating and design recommendations for deck securement and the 1-29, *Roof Deck Securement and Above-Deck Roof Components*, providing design and installation recommendations for deck and above-deck roofing components, such as membrane roofing, insulation, vapor retarders, fasteners, and recover assemblies. Both 1-28 and 1-29 facilitate determining the fastening patterns for roofing systems, including the additional securement needed at the corners and perimeter where uplift forces are higher than those in the field of the roof. Data Sheet 1-28 addresses corner/perimeter definitions and dimensions. Data Sheet 1-29 outlines roof perimeter/corner fastening methods that supplement the FM *Approval Guide* listings, which contain field-of-roof securement requirements and, in some cases, specific corner/perimeter fastening methods.

FM Approvals (www.fmapprovals.com), a member of FM Global, conducts a wind-uplift test, a static test in which air pressure is applied to the underside of a roof and deck specimen mounted on a test frame to measure the pressure at failure or delamination of any component of the roof assembly (test is not applicable to loosely laid and ballasted roofing or protected membrane roofing). Increased test deck size over the years has resulted in requirements for a greater fastener density and, in some cases, a reduced sheet width. Other factors considered in determining roof design pressure and minimum wind classification ratings include, but are not limited to, basic wind speed, surface roughness exposure of surrounding terrain, roof height and slope, field of roof area design pressure, and topographic factors.

FM Approvals also offers “RoofNav,” a software application accessible via the Internet 24 hours a day with access to roof-specific portions of FM's *Approval Guide* and FM Global's most current Property Loss Prevention Data Sheets. RoofNav assists in configuring and installing roofing assemblies meeting FM Approvals' requirements, searching for products in FM Approved assemblies, identifying FM Approved product substitutions, obtaining project-specific wind/hail/fire ratings reports, and generating Contractor Package reports. Online training and a “service desk” are available as well.

Since FM Global provides property loss prevention advice that significantly lowers costs in losses, FM requirements and tested assemblies (from deck to cover) are often specified as a standard of construction even for projects not FM Global insured. Registering at FM Global's website permits complimentary access to the Property Loss Prevention Data Sheets, portions of the *Approval Guide*, and RoofNav. When architects and engineers employ RoofNav, if higher loads result from the applicable code-referenced wind design guidelines, the higher loads should be selected for the roofing system design.

Other sources of wind design guidelines are the American Society of Civil Engineers (ASCE), the Structural Engineering Institute (SEI), the Single Ply Roofing Industry (SPRI), Underwriters Laboratories (UL), and Roof Consultants Institute Foundation (RCIF). ASCE/SEI and SPRI have IBC-referenced and IBC-adopted standards and guidelines respectively: ASCE/SEI 7, *Minimum Design Loads for Buildings and Other Structures*; SPRI RP-4, *Wind Design Standard for Ballasted Single-Ply Roofing Systems*; SPRI ES-1, *Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems*. SPRI also offers the *Wind Load Design Guide for Low-Sloped Flexible Membrane Roofing Systems*. UL publications include UL 580, *Tests for Uplift Resistance of Roof Assemblies* (more frequently applied to metal roof panel assemblies); UL 1897, *Uplift Tests for Roof Covering Systems*; UL *Roof Materials and Systems Directory*. Still another source is RCIF's Publication No. 01.01 *Wind Loads on Low Slope Roofs*.

“What wind uplift resistance is to be specified for the roofing system?” we often ask our clients. No, we are not asking for wind

A NEW FACE IN OUR OFFICE

by Marie Hartman

If you called our office in the past few months, your call was answered by the cheerful voice of Terri Gibson, the newest addition to the INSPEC staff. Terri fulfills the role of full-time Administrative Assistant to the four Specifications Consultants. She brings energy, enthusiasm, organizational skills and excellent client service skills to her job. Terri's previous work experience includes administrative positions at Dr Pepper, FastSigns, Wellness International, and JCPenney Company Retail Advertising Division.



She is a native of Plano, Texas, and has two darling daughters named Hailey (5) and Courtney (10). When she's not hard at work trying to please spec writers and clients, she enjoys spending time with her children, home décor, and home organization projects.

Proposed “Green” Changes to Plano Building Code

by Doug Hartman

Effective January 1, 2009, the City of Plano is intending to implement the following additional requirements:

1. Construction and Demolition Debris Recycling program. You pay a deposit (ranging from \$0.15-\$0.25/s.f.) at permit time, and if you demonstrate that you recycled at least 60% of your construction waste, you get your deposit back when occupancy permit is issued. Lower performance yields a lower credit.
2. For all commercial projects 6,000 s.f. and larger:
 - a. Low slope roofs must have an SRI of 0.65 and a thermal emittance of 0.75 (ie - white and tan only)
 - b. Roof slopes of 2:12 or greater to have an SRI of 0.25 (light colored asphalt shingles and metal roofs only; no more clay tile or concrete tile, or dark colored shingles or metal roofs)
 - c. Achieve a 15% reduction in energy consumption below 2006 IECC.
 - d. Reduce potable water consumption to 20% below current code standards.
 - e. Only LED or fluorescent fixtures allowed for exterior lighting.

USGBC TO RELEASE LEED 2009

By Allen Cornett, LEED AP

With 2008 coming to an end, so is two years of U.S. Green Building Council (USGBC) reworking the LEED Green Building rating systems, the certification process, and the LEED Online website. The goal is to establish continuity between the rating systems, speed up the certification process, and provide a more user friendly website.

The growing number of project applications has created a backlog in the certification process. To aid in expediting the certification process, USGBC will turn over administration of the certification process to the Green Building Certification Institute (GBCI) in January of 2009. In addition ten certification bodies have been chosen to work with GBCI to provide an ISO compliant certification process.

The introduction of LEED 2009 (also referred to as LEED v3) will have continuity between rating systems, as well as a weighted value for the number of points associated with credits. More points are available with a higher concentration in credits that will have a greater impact on the environment. ASHRAE 62.1 and ASHRAE 90.1 will now use the 2007 versions, while ASHRAE 55 will remain under the 2004 version. Below can be found a list of major changes found in the Core & Shell and New Construction/Major Renovation rating system scorecards:

- SSc2 Development Density & Community Connectivity - 5 points available as opposed to 1 point.
- SSc4.1 Alternative Transportation: Public Transportation Access - 6 points available as opposed to 1 point.
- SSc4.3 Alternative Transportation: Low-Emitting & Fuel-Efficient Vehicles - 3 points available as opposed to 1 point.
- SSc4.4 Alternative Transportation: Parking Capacity - 2 points available as opposed to 1 point.
- WEp1 Water Use Reduction, 20% Reduction - New mandatory 20% water use reduction.
- EAp2 Minimum Energy Performance - 10% (more efficient) new buildings or 5% (more efficient) for existing buildings as opposed to meeting ASHRAE/IESNA 90.1-2004. Note percentage more efficient is based on ASHRAE/IESNA 90.1-2007 as the baseline.
- EAc1 Optimized Energy Performance - 19 points available as opposed to 8 points (12% - 48% more efficient than ASHRAE/IESNA 90.1-2007).
- EAc2 On-Site Renewable Energy - 7 points available as opposed to 3 points (1% - 13% of energy provided by on-site renewable sources)
- Remainder of Energy & Atmosphere credits 2 points available per credit except EAc5 Measurement & Verification 3 points available as opposed to 1 point.
- MRc1.1 Building Reuse, Maintain 75% exterior walls, floors and roof - 2 points available as opposed to one point.
- IDc1.5 added as a fifth Innovation in Design credit that could be attempted.
- Regional bonus credits - 4 points available (to be developed by local USGBC chapters)

USGBC will have workshops and reference guides available in February for LEED 2009. In March LEED 2009 goes live. Projects registered in the current LEED systems will have the option to remain in their current LEED system, or upgrade to LEED 2009 during the transition period. In addition GBCI has revised the LEED® AP credentialing program. A link below provides a timeline as well as a description of the credentials available.

Link to USGBC LEED 2009 timeline:

<https://www.usgbc.org/ShowFile.aspx?DocumentID=5176>

Link to USGBC LEED 2009 FAQ:

<https://www.usgbc.org/ShowFile.aspx?DocumentID=5177>

Link to Message from USGBC's President, CEO & Founding Chair:

<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1849>

Link to GBCI and certification bodies news release:

<http://www.usgbc.org/Docs/News/CBs%20072908.pdf>

Link to GBCI LEED credential changes:

<http://www.gbci.org/DisplayPage.aspx?CMSPageID=83>

Link to LEED Letter from Rick Fedrizzi:

<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1895>

Links to USGBC LEED 2009 information

[LEED 2009 Public Comments & Responses](#)

[LEED 2009 Final Scorecards](#)

[Credit & CIR Alignment](#)

[Weightings](#)

[Regionalization](#)

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