COMMITTEE ON LEGISLATIVE RESEARCH
OVERSIGHT DIVISION

FISCAL NOTE

L.R. No.: 5001-01
Bill No.: HB 1290
Subject: Construction and Building Codes; Environmental Protection
Type: Original
Date: February 17, 2012

Bill Summary: Establishes requirements for environmentally sustainable construction for certain state funded buildings.

FISCAL SUMMARY

ESTIMATED NET EFFECT ON GENERAL REVENUE FUND			
FUND AFFECTED	FY 2013	FY 2014	FY 2015
General Revenue	$0 or (Unknown)	$0 or (Unknown exceeding $1,000,000)	$0 or (Unknown exceeding $1,000,000)
Total Estimated Net Effect on General Revenue Fund	**$0 or (Unknown)**	**$0 or (Unknown exceeding $1,000,000)**	**$0 or (Unknown exceeding $1,000,000)**

ESTIMATED NET EFFECT ON OTHER STATE FUNDS			
FUND AFFECTED	FY 2013	FY 2014	FY 2015
Road	(Unknown exceeding $100,000)	(Unknown exceeding $100,000)	(Unknown exceeding $100,000)
Total Estimated Net Effect on Other State Funds	**(Unknown exceeding $100,000)**	**(Unknown exceeding $100,000)**	**(Unknown exceeding $100,000)**

Numbers within parentheses: ( ) indicate costs or losses.
This fiscal note contains 9 pages.

ESTIMATED NET EFFECT ON FEDERAL FUNDS			
FUND AFFECTED	FY 2013	FY 2014	FY 2015
Total Estimated Net Effect on All Federal Funds	**$0**	**$0**	**$0**

ESTIMATED NET EFFECT ON FULL TIME EQUIVALENT (FTE)			
FUND AFFECTED	FY 2013	FY 2014	FY 2015
Total Estimated Net Effect on FTE	**0**	**0**	**0**

☒ Estimated Total Net Effect on All funds expected to exceed $100,000 savings or (cost).

☒ Estimated Net Effect on General Revenue Fund expected to exceed $100,000 (cost).

ESTIMATED NET EFFECT ON LOCAL FUNDS			
FUND AFFECTED	FY 2013	FY 2014	FY 2015
Local Government	**$0**	**$0**	**$0**

FISCAL ANALYSIS

ASSUMPTION

Officials from the **Department of Corrections, Department of Conservation** and **Department of Natural Resources** assume the proposal will have no fiscal impact on their organizations.

Officials from the **Missouri Department of Transportation (DOT)** state the silver level LEED certification portion of the proposal will impact the DOT significantly with building construction and major renovations due to increased costs of construction. The cost is unknown but expected to be greater than $100,000 annually.

Officials from the **Office of Administration (COA) - Division of Budget and Planning (BAP)** state the proposal should not result in additional costs or savings to the Division of Budget and Planning. They defer to the Office of Administration - Division of Facilities Management, Design and Construction for a fiscal impact.

Officials from the **COA - Division of Facilities Management, Design, and Construction (FMDC)** assume this bill would have an unknown fiscal effect on FMDC with major financial impacts in design, construction, operations, and the costs associated with certifying the initial project. There would be future ongoing costs associated with maintaining the certification, and the costs associated with outsourcing or staffing needed to meet the commissioning requirements to include the measurement and verification requirements.

To get an estimated cost factor FMDC reviewed the construction of the Lewis and Clark State Office Building, which was USGBC (United States Green Building Council) certified at the platinum level. The Lewis and Clark Building is a 120,000 square foot facility, constructed at a cost of $18,573,497 or $155 per sq. ft. Normal costs for a building of this size at that time would have been approximately $125 per sq. ft. or roughly a 24% increase. Other costs of $2,381,227 included design contract costs, commissioning agent costs and a special $60,000 fee for LEED certficiation.

Given that the legislation is seeking "silver" level and that "platinum" level was achieved, FMDC estimates a 15% increased in initial construction cost (platinum seems to be at 29%). It appears that the legislation requires all significant projects (new construction and renovation) to be addressed with these requirements.

A payback or life-cycle analysis should determine if the investment in the higher quality construction is justified. The impacts are determined by the scope of work of construction and renovations requirements.

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ASSUMPTION (continued)

Additional FTEs will be needed to review the various aspects of the silver-level certification, monitoring costs of all buildings and to comply with the requirements of a five, ten and fifteen year third party commissioning. Some of these FTEs may need to be LEED accredited when performing designs affected by this bill this will need to be addressed in the qualification of the additional FTEs. The position(s) title should include Professional Engineer (civil, electrical, mechanical, structural engineering or engineering management).

FTE needs have not been determined, depending on the scope of work of the initial study to the actual project workload to the certification to the monitoring and evaluation up to fifteen years after the project.

Due to the current economic situation, **Oversight** is presenting costs as $0 or Unknown exceeding $1 million.

In response to a similar proposal, SB 22, 0252-01n (2011), officials at the **Missouri Western State University** assume that this proposed legislation would result in added costs to the university. The design fees would be higher and there are on-going costs under the green globe process. With the average size of project at Western it would appear there would be an on-going cost of $8 to $10,000 per year for up to fifteen years on each project. ($10,000 x 15 = $150,000) The University designs to the current local codes which are at or near a LEED silver level. The added cost comes from the process to file, monitor and apply for the recognition.

In response to a similar proposal, SB 22, 0252-01n (2011), officials at the **Metropolitan Community College** assume this legislation would add 3% -5% to the cost of any construction project. The dollar amount cannot be determined but each inspection would cost between $10,000 and $15,000.

In response to a similar proposal, SB 22, 0252-01n (2011), officials at the **University of Missouri** assume the University has a sustainable design policy that promotes compliance with LEEDS features based on lifecycle analysis but without the additional cost to pursue LEEDS certification. The cost for LEEDS Silver certification is reported to add from 2-5% to the total project cost. Mandating LEEDS Silver certification will cost the University projects at least $2,000,000 annually, resulting in losting critical program space and features.

In response to a similar proposal, SB 22, 0252-01n (2011), officials at the **Northwest Missouri State University** assume no impact at this time as no capital projects are planned in the near future. However, if projects are added this would add as much as 10% to the cost of the project.

In response to a similar proposal, SB 22, 0252-01n (2011), officials at the **Truman State University** are unable to determine a cost for this proposal.

ASSUMPTION (continued)

In response to a similar proposal, SB 22, 0252-01n (2011), officials at the **Linn State Technical College** assume an unknown impact.

In response to a similar proposal, SB 22, 0252-01n (2011), officials at the **Lincoln University** assume this legislation will have an impact on major construction projects at the University. It will require the University to meet a minimum of a silver LEED rating for new construction or substantial renovation projects, or two Globes using the Green Globes Rating System. While this is a very worthwhile purpose and generally, a direction the University should be headed in as related to sustainable products, "green" initiatives, and energy efficiency, to mandate this will increase the cost of construction (until it becomes the norm).

There is a lot of paperwork to certify buildings under LEED, which is expensive both on the front end with the design fees and then secondly with the construction. The overall philosophy is that by going LEED, energy costs will decrease using efficient products and the construction work will be done in an environmentally friendly way. The legislation also mentions developing and implementing a process to monitor and evaluate energy and environmental benefits associated with each major project one year after occupancy and continue for fifteen years thereafter. This monitoring/evaluation work will cost as well each year because it will probably need to be done by some kind of mechanical commissioning company.

It is difficult to determine the annual cost this legislation will have. LEED projects can perhaps drive construction costs up 10-20% or higher, until the practice becomes the norm for all projects.

In response to a similar proposal, SB 22, 0252-01n (2011), officials at the **Missouri State University** assume this legislation requires certification by one of several agencies. It needs to be pointed out that certification cannot be assured during the design or construction of a project. Only after the facility is complete will the certifying agency either accept or deny the project and provide the certification.

This legislation impacts any new construction over 5,000 SF, or renovation of a facility that involves 50% or more of the existing square footage. Any new construction undertaken by the university is typically in excess of 5,000 SF. For a renovation project to be impacted it would have to be a significant renovation of a facility and often we do not renovate 50% of a building at one time due to existing constraints.

This proposed legislation requires a third party commissioner to be hired during the design process. This can easily add 1% to the construction costs. Registering the project with one of the certifying agencies and paying to complete all necessary paperwork can easily add another 0.5% to the construction costs. This legislation also requires a third party to revisit the facility 5, 10, and 15 years after the completion of the project. This could easily add several thousand

ASSUMPTION (continued)

dollars to the operational costs of the facility each time the review is required.

In response to a similar proposal, SB 22, 0252-01n (2011), officials at the **University of Central Missouri** assume the University has no pending construction projects. However, the University estimates that any future projects under this proposal would have a four to twelve percent increase in costs due to this proposal.

For fiscal note purposes only, **Oversight** is including additional construction costs resulting from LEED Silver certification requirements for colleges and universities in the General Revenue Fund. **Oversight** is ranging the costs from $0 to Unknown, depending on funding approved by the Legislature.

FISCAL IMPACT - State Government	FY 2013 (10 Mo.)	FY 2014	FY 2015
GENERAL REVENUE			
Costs - COA-FMDC			
Increase in personnel and construction costs	$0 or (Unknown)	$0 or (Unknown exceeding $1,000,000)	$0 or (Unknown exceeding $1,000,000)
Costs - Colleges/Universities			
LEED Silver certification and increases in construction costs	($0 to Unknown)	($0 to Unknown)	($0 to Unknown)
ESTIMATED NET EFFECT ON GENERAL REVENUE FUND	**$0 or (Unknown)**	**$0 or (Unknown exceeding $1,000,000)**	**$0 or (Unknown exceeding $1,000,000)**
ROAD FUND			
Costs - DOT			
Increase in construction expenses	(Unknown exceeding $100,000)	(Unknown exceeding $100,000)	(Unknown exceeding $100,000)
ESTIMATED NET EFFECT ON ROAD FUND	**(Unknown exceeding $100,000)**	**(Unknown exceeding $100,000)**	**(Unknown exceeding $100,000)**

FISCAL IMPACT - Local Government	FY 2013 (10 Mo.)	FY 2014	FY 2015
	$0	**$0**	**$0**

FISCAL IMPACT - Small Business

No direct fiscal impact to small businesses would be expected as a result of this proposal.

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FISCAL DESCRIPTION

This bill establishes requirements for environmentally sustainable construction for state-funded buildings. In its main provisions, the bill:

(1) Requires all major state-funded facility projects to be designed, constructed, and at least certified as receiving two globes using the Green Globes Rating System or the silver standard as established by Leadership in Energy and Environmental Design (LEED);

(2) Defines "major facility project" as a state-funded new construction project with more than 5,000 square footage, a renovation project involving more than 50% of the square footage or occupancy displacement, or a commercial interior fit-out project with more than 7,000 square feet of leasable area;

(3) Exempts a correctional facility constructed for the department of Corrections or Mental Health and certain buildings that do not have air conditioning;

(4) Specifies that a project certified as receiving two globes must earn at least 20% of the available points for energy consumption and a project certified as meeting the LEED Silver standard must reduce energy use by 24% over certain professional standards for new buildings and 20% for existing buildings. The Office of Administration may waive these requirements if costs to meet these requirements are not economically feasible;

(5) Allows the Office of Administration to petition the General Assembly to require all major facility projects to be certified to a high-performance building rating system standard in addition to or in lieu of the systems in these provisions. However, any alternate rating system adopted by the General Assembly cannot be less stringent than the systems in the provisions of the bill;

(6) Requires all major facility projects which were certified at the LEED Silver or two globes standard or higher to be inspected by a third-party commissioning agent and requires the agent to report his or her findings to the Office of Administration and the department or departments occupying the facility;

(7) Requires the Office of Administration to develop and implement a process to monitor and evaluate the energy and environmental benefits of each project;

(8) Requires all qualified existing facilities to meet the energy performance goals of the Energy Star Program and try to earn an energy star rating of 70 within certain periods of time as specified in the bill; and

DESCRIPTION (continued)

(9) Requires the Office of Administration to submit a report regarding major facility projects and Energy Star data of qualified existing buildings to the House of Representatives and the Senate committees on energy and environment.

This legislation is not federally mandated, would not duplicate any other program and would not require additional capital improvements or rental space.

SOURCES OF INFORMATION

Office of Administration -
Division of Budget and Planning
Division of Facilities Management, Design and Construction
Department of Natural Resources
Department of Corrections
Missouri Department of Transportation
Missouri Department of Conservation
Lincoln University
Missouri State University
Truman State University
University of Missouri
Missouri Southern State University
Metropolitan Community College
Linn State Technical College

Mickey Wilson

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Director
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