National Clearinghouse for Educational Facilities: The Institute’s Vision for 2013 and Beyond

Since 1998, the National Clearinghouse for Educational Facilities (NCEF) has served as the premier information source for individuals and organizations dedicated to the planning, design, building, and operating of schools for all levels of learning. NCEF, which currently is used by 1.5 million visitors per year, is a program of the National Institute of Building Sciences (Institute), a non-governmental, non-profit organization authorized by Congress to serve as an authoritative source of innovative solutions for the built environment.

In the 14 years of NCEF’s existence, the world of education facilities has faced tremendous challenges--from expanded theories of learning, to an explosion in telecommunication developments, to increased demand for energy-saving and sustainable buildings, to the pressures of a sustained economic downturn. Mindful of how these overarching challenges affect the built environment, the Institute has taken a focused look at NCEF and envisioned how it could be adjusted to better meet the changing needs of education and the facilities that serve it. The Institute believes that NCEF can and should continue its valued core role as a clearinghouse for everyone with an interest in educational facilities and at the same time grow to become a more interactive information hub for individuals and organizations with a strong stake in creating the educational facilities of the future.

From its inception by Congress in 1974, the Institute has developed many cooperative vehicles and relationships that could serve as models for the development of a stronger clearinghouse to best meet the changing needs of learners, educators and the facilities that support them. We have a strong network of subject matter experts and industry leaders who would help us design and sustain a new model for the clearinghouse, and who would welcome members of the education community as partners in this venture.

Following is the Institute’s vision for re-creating NCEF as an interactive information hub. It centers on:

1. The vision and purpose of NCEF
2. NCEF core functions
3. Enhancements
1. Vision and Purpose of NCEF
The Institute envisions NCEF continuing to serve as the predominant source for research-based information related to the planning, design, construction, equipping, operation and maintenance of public, private, pre-k through post-secondary and corporate educational facilities. Additionally, however, NCEF would expand its role to consolidating sources for research-based intelligence and serving as a resource for those organizations that contribute to its base as well as general users in the educational community.

In other words, NCEF would function as a “community” website hub and portal for all of its supporting organizations, offering peer-reviewed, research-based information to a specialized audience who would help to shape its direction and content. As such, NCEF could serve as the vehicle for connection and expansion among all disciplines concerned with creation and operation of educational facilities.

2. NCEF core functions
The Institute’s vision for NCEF centers on a new governance structure and the formalization of cooperation and engagement of supporting organizations. These are considered enhancements to the functions already performed by NCEF:

- **Portal for dissemination of existing research**
  Foremost of a clearinghouse’s functions is to serve as a portal for dissemination of existing research and this is the function that NCEF performs in a superlative manner. Regardless of the enhancements that NCEF undertakes in the future, serving as an information portal is and will continue to be its core function. NCEF will continue to add synopses of existing research, recommended readings and educational videos to its existing database of 18,500 records.

- **Energy and sustainability, and safety research**
  NCEF has stood at the forefront of guiding users to information about the planning, design, and maintenance of schools that are energy efficient, sustainable and safe. The clearinghouse currently has specialized categories for videos and other information on green schools and other sustainable topics. NCEF in its enhanced format would expand special sections to include additional high performance building attributes (see below).

3. Enhancements to the existing clearinghouse (PROPOSED)
Opening NCEF to a group of engaged participants will create a communications hub that will enable the sharing of information on a scale that organizations cannot achieve individually. Improvements to the existing clearinghouse could include:

**Awards Gallery that displays award-winning facilities and links to the offerers’ web sites.** It could include case studies of award-winning projects that display the best of school design as well as the metrics by which these projects have been selected. The gallery could feature:

- American Association of School Administrators Walter Taylor and Shirley Cooper Awards
- National School Board Administrators Architectural Awards
- AIA Honor Awards (architecture, interior, and urban design, when schools are selected); Committee on the Environment Top 10 Awards; Committee on Architecture for Education Design Awards
- Sustainable Buildings Industry Council Beyond Green High Performance Building Awards
- Council of Educational Facility Planners MacConnell Award

A conglomeration of “the best of the best” school designs could form the basis of an exhibition for the National Building Museum or similar venues.

**Virtual Tours** of the top facilities and video interviews with their planners, designers and constructors could be used to enhance case studies or to highlight specific attributes or even product use within a building.

**White papers** that present new research ideas and projects. This work would be peer-reviewed by members of the newly formed NCEF Council of Advisors (see below).

**Monthly e-newsletter** that gleans top news from member organizations and “pushes” the most newsworthy content to members. (As an enhancement for a future date, NCEF might consider a bi-annual magazine, based on the model of the Institute’s successful *Journal of Building Envelope Design (JBED), Journal of Building Information Modeling (JBIM)*, and *Journal of Hazard Mitigation and Risk Assessment (JHAZ)*).

**New models for learning**, including interactive gaming and immersive learning techniques—as well as their spatial and environmental ramifications—could be a new arena of exploration for NCEF.

**Expanded areas of high-performance**, in addition to energy-savings, sustainability and safety, NCEF could expand its specialized areas of knowledge to include the other Institute-defined attributes of high performance buildings: accessibility, aesthetics, cost-effectiveness, functionality, historical preservation, productivity and resilience.

### 4. Governance and operating structure
NCEF would continue as a program under the auspices and direction of the Institute, and would continue to house its offices at the Institute’s headquarters in Washington, D.C. To encourage interactivity among the various facets of education facilities design, construction, operations and maintenance, the Institute would assemble a Council for the Clearinghouse similar to other councils currently in place at the Institute. This multidisciplinary Council would serve as advisors for NCEF. The major roles would be to:

- Participate in a bi-annual idea summit to exchange information on the state-of-the-art and the future of education facilities design
- Advise on and prioritize NCEF activities
- Peer-review white papers and selected works for featured publication on the NCEF site
- Approve advertisements for the NCEF site

Examples of organizational supporters could include:
- CEFPI (Council of Educational Facilities Planners International)
- AIA (Committee on Architecture for Education)
- AAF (American Architectural Foundation)
- ASC (American Schoolhouse Council)
- USGBC (U.S. Green Building Council)
- EPA (U.S. Environmental Protection Agency)
- AASA (American Association of School Administrators)
- NSBA (National School Board Association)
- SDSU (San Diego State University – National Center for the 21st Century Schoolhouse)
- CHPS (Coalition Collaboration for High Performance Schools)
- APPA (Association of Higher Education Facilities Officers)

Potential industry supporters could include:
- McGraw-Hill Construction (or McGraw-Hill Research Foundation)
- Reed Construction Data
- Builder representative: e.g. Lobar Construction (Penn.), Fontaine Bros. (Mass.), DeMatteis (New York)
- School Board of Education/Authority rep. (State): e.g. NYS School Board Authority
- Users’ representative: (National PTA?)
- NBC News Education Nation
- Architectural, Planning and Consulting Firms
- Construction and Program Management Firms
- FFE Industry Vendors

From the Council a 15-person Board of Direction would be seated to provide leadership to the Council.

5. Funding
Funding for the initial year of an enhanced NCEF would require approximately $250,000.
Support of the Council could be achieved at various levels. This offers sponsorship at various levels of commitment and financial support for the program.

Sustaining Sponsors – $10,000
Sustaining Sponsors provide significant support for the initiatives and goals of NCEF. These sponsors will be acknowledged publicly for their support on the website and in NCEF publications.

Contributing Organizational Support – $2,500
Open to organizations in the public interest or industry sectors desiring to provide additional support for and participation with the Institute to achieve the goals and objectives.

Private Interest Support – $500
Open to any individual in the Private Sector Categories including: Architects, Engineers, Contractors and Material and Product Suppliers

Public Interest Support - $250
Open to individuals in public sector organizations including: Federal Government, State Government, Colleges and Universities, School Systems (Public and Private) who wish to show their support for the goals and objectives of NCEF.

### Projected 2013

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As the program grows, Additional support of enhanced programs, such as an education awards gallery with outreach to the National Building Museum and the cost of editing a monthly e-newsletter could be funded through sale of advertising to the web site. A preliminary exploration indicates that advertising for a NCEF site could generate $50,000 in revenue annually. (All advertising would be vetted as appropriate by the Council Board of Direction.)

### 6. Initial Milestones

- **May 16:** The Institute would like to hold an invitational kick-off meeting on Wednesday, May 16, just prior to the AIA national convention in Washington, D.C.

- **October 1:** Concurrent with the federal fiscal year, NCEF would begin operations under its new structure.
• **January 2013:** The NCEF Advisory Council would hold its first full meeting in conjunction with the Institute’s Annual Meeting.

### 7. Institute cooperative models for success

With its mission to create an interface among the building industry’s public and private entities to support advances in building science and technology, over the last three decades the Institute has developed successful models for cooperative efforts that can be employed to create a more interactive, user-driven clearinghouse. These models include:

- **Governance model: Consultative Council**
  The Consultative Council provides an unbiased forum for discussion among key organizations representing major aspects of the building community, including from its designers and constructors to product manufacturers to policymakers and code enforcers. The Consultative Council advises the Institute by making findings and recommendations for presentation to the President of the United States on developing and applying science and technology to improve the built environment. Established by Congress in 1974 and reorganized into its current format in 2009, the Consultative Council offers a model of multidisciplinary oversight and overarching discussion and consensus-based direction that could be pressed into service by a revamped NCEF.

- **Peer review model: BETEC’s BEST Conferences and JBED publication**
  The Building Enclosure Technology and Environment Council (BETEC), created by the Institute in 1978, offers two examples of successful peer review processes that could serve as models for NCEF’s peer review of its white papers and other select content. The first is peer review of papers for presentation at its biennial Building Envelope Science and Technology (BEST) Conferences, for which calls for entry are placed, abstracts reviewed by subject matter experts (who later serve as session chairs for papers in their areas of expertise) and final papers reviewed by additional subject matter experts. Articles chosen for the biannual *Journal of Building Envelope Design (JBED)* likewise are peer-reviewed in draft stage for inclusion in the magazine and then peer-reviewed again in final stage. Most often, members of BETEC serve as the reviewers.

- **Premier information/portal model: Whole Building Design Guide**
  The Institute’s Whole Building Design Guide (WBDG) is a comprehensive, Internet-based portal to a wide range of federal and private sector, building-related guidance, criteria and technology that serves as a large-scale model for NCEF. It creatively links information across traditional professional disciplines to encourage integrated thinking and “whole building” performance and is organized into three major categories: design, project management, and operations and maintenance. Like most of the Institute’s councils and activities, it encompasses the efforts of federal agencies, private sector businesses, non-profit organizations and educational institutions. The WBDG includes a
comprehensive library of over 12,000 design criteria, other construction documents and executable programs from federal and private organizations. It serves over half a million users downloading 5 million documents per month.

- **Advisory council roles:** HPBC, BETEC, MMC, bSa, SBIC, NCGBCS
  The Institute houses a number of councils that could serve as models for how the NCEF Council of Advisors would function. These include the High Performance Building Council, Building Enclosure Technology and Environment Council, Multihazard Mitigation Council, buildingSMART alliance, as well the Sustainable Buildings Industry Council and the National Council of Governments on Building Codes and Standards, both of which recently joined the Institute. Each of these councils represent a multidisciplinary group of individuals with an abiding interest in a particular aspect of the built environment, who work together collaboratively to advance building science and technology through consensus-driven action.

It is said, famously, that “it takes a village to raise a child.” Today, it takes the full community of knowledgeable professionals willing to share knowledge and know-how to create places and experiences that empower future generations to reach their highest potential. The National Clearinghouse for Educational Facilities intends to be the heart and hub of that community.