

aiaVT



The aiaVT newsletter is published by AIA Vermont,
the Vermont Chapter of the
American Institute of Architects.

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president's column

*lauren davis, assoc. aia
2007 president aiaVT*

The 2006 AIA Vermont Annual Meeting was held at the Kirk Alumni Center, Middlebury College in early December. As was evident that evening, our organization is growing strong, and I believe the membership is energized by the board's commitment. The awards ceremony was a huge success. I would like to personally thank all who helped to make it possible. Over 80 members and guests enjoyed an impressive display of the 59 submissions and eight award-winning projects while socializing to the music of Left Eye Jump.

Following dinner Michael Hoffman introduced our new officers and board members. As the incoming President, I would like to extend a warm welcome to Shawn Brennan and Wendy Blakeman, and a sorry good-bye to our 'retiring' board member John Anderson. Due to everyone's hard work and determination, we have had a very successful year, which Michael presented through the annual report of activities and programs that we hosted and sponsored throughout 2006. Following this report, Steve Clark took us on a tour of the newly redesigned website, which further outlines our activities. I look forward to an even more eventful, prosperous and adventurous year ahead.

We would especially like to thank our sponsor Windows and Doors by Brownell for their continual support. This was their fifth year as our sponsors, and we have their commitment that we will be able to rely on them for many years to come. In addition we would like to thank Steve Clark for his continual commitment to the upgrading and maintenance of our website; Susan Weeks for her commitment to helping us with invitations, the digital display of all the submissions, and the power point presentation of the award winners; Michael Hoffman, Andrea Murray, and

cont.

Architectural Record/ in the Cause of Architecture
JANUARY 1930

Mass Production and the Modern House (Part 1) Lewis Mumford

<http://archrecord.construction.com/inTheCause/onTheState/0311mumford.asp>

DURING the last hundred and fifty years a great change has taken place in architecture. This change has nothing to do with the questions of superficial esthetics that agitated the architectural world: the quarrels between the classicists and the medievalists or between the traditionalists and the modernists are all meaningless in terms of it. I refer to the process whereby manufacture has step by step taken the place of the art of building, and all the minor processes of construction have shifted from the job itself to the factory.

How far this process has gone everyone is aware who has watched the composition of a building, and who knows how suddenly the whole work would stop if the architect were forced to design or specify with any completeness the hundred different parts, materials, and fixtures he draws

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1.07:1

cool things down, climate change activities heat up local meetings con- vening to oordinate legislative action

With the Vermont Legislature making global warming its number one priority this legislative session, Vermonters must ensure that the solutions lawmakers propose match the severity of the problem.

To seize this unprecedented opportunity in the Legislature, the Vermont Public Interest Research Group, along with VNRC's partners in the Vermont Energy and Climate Action Network and others, are hosting community meetings across Vermont to coordinate grassroots action.

The goal? Build the broad-based citizen support necessary to press for legislation that helps Vermont save energy, increase investments in renewable sources, and truly begin to combat climate change.

Attend one of the following meetings:

*-Rutland: Thursday, February 1, 6 pm
at the Dana Recreation
Center, Room 22*

*-Brattleboro: Monday, February 5, 7 pm
at the Marlboro College Center*

*-Norwich: Wednesday, February 7, 6:30 pm
at the Norwich Public Library*

*-Burlington: Thursday, February 8, 6 pm,
at Burlington City Hall*

*Contact Johanna Miller at VNRC for more information:
223-2328; jmiller@vnrc.org*

Andrea Swift who helped to hang the show; Middlebury College for the space; and, of course, our outstanding Executive Director, Hanne Williams, for her hard work and commitment to aiaVT- thank you.

In our persistent effort to increase public awareness of architects and architecture, we have organized a traveling show of all the entries to be exhibited throughout the state. The first show will be held at Norwich University beginning in late January, followed by exhibits at the Metropolitan Gallery in Burlington, the Statehouse in Montpelier, and a soon-to-be-determined location in the White River Junction/Woodstock area. Be sure to check out the calendar section of our website (www.aiavt.org) for further details regarding dates and opening receptions. We look forward to seeing you there!

from Sweet's Catalog. But what are the implications of this process? What results must it have on the status of the architect and the place of architecture in civilization? What further developments may we look forward to on the present paths: what alternatives suggest themselves?

Some of these questions can be answered: others will lead us to push beyond the current premises upon which the discussion of mass production and architecture is based.

II

By an ironic accident, the first use of fabricated parts in a building seems to have been ornamental: the plaster mouldings of the eighteenth century were introduced before the Franklin stove: but the age of invention ushered in a whole series of technical devices designed to increase the comfort or the efficiency of the dwelling house, and along with these improvements went a shift from handicraft to machine production. There are country districts in the United States where, until a few years ago, the kitchen sink would have been made of sheet zinc fitted over a box made by the carpenter, or where the ice-box might have been constructed in the same way. In the main, however, the shift was steady and inexorable: steam-heating, gas-lighting, electricity, baths, toilets, refrigerators, to say nothing of radio-connections and garages, have all led to the industrialization of architecture. Plaster, jig-saw, and cast-iron ornament, the first spontaneous gifts of industrialism, all happily diminished; but the technical improvements remained and multiplied.

In the great run of modern building, except in part the country homes of the rich, mass-manufacture has taken the place of local handicraft. The latter has remained in two places: the construction of the physical shell itself, and the assemblage of the individual parts.

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1.07:2



The AIA Vermont Honor Award (for a project that represents exceptional value beyond a single category and worthy of special recognition) went to Bread Loaf Corporation of Middlebury for the "Bridge Houses" student residences at Landmark College in Putney, Vermont. The Jury noted that the "strong simple plan was well integrated with the landscape, had superb material selection and was very well executed".

2006 awards for excellence in architecture

daniel johnson, aia

Eight awards for "Excellence in Architecture" were given at the Annual Meeting and Design Awards Presentation.

This year's awards were juried by the Connecticut Chapter of the AIA. The Jurors (Barbara L. Geddis – FAIA, Glenn Gregg – FAIA, and James R. Martin, AIA CT-AIA Design Chair) convened November 1st to review and critique a record number of entries, (over 60 portfolios were submitted). The Vermont AIA Board suggested ten possible categories for awards and the Jury responded by awarding one Honor Award, two Citations and five Merit Awards in six of the ten categories. The jurors, expecting to spend only a few hours on the portfolios were pleasantly challenged by the quality and depth of the entries. They ended up spending the better part of the day choosing the winning folios.

In discussing the award categories suggested by the Vermont AIA Board the jury remarked that this was probably the last year that Sustainability should be singled out as a special category. In light of this they chose to highlight sustainability in their review.

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Now, this change was coincident with the withdrawal of the architect from the grand body of building during the early industrial period. The new factories and bridges and railroad stations were largely the work of engineers, while the great mass of private dwellings became the province of the speculative jerry-builder who, with a few stereotyped plans, created the dingy purlieus of all our large cities. The radical change that had taken place passed almost unnoticed, until during the last fifteen or twenty years the architect was called in to design small houses for industrial villages. He was then confronted with two brute facts: if he designed houses for industrial workers in the fashion that he did for the upper middle classes, it turned out that the costs were so high that only the middle classes could afford to live in them: that was the fate, for example, of Forest Hills, L. I. On the other hand, when he accepted the price limitations laid down by the industrial corporation, or, as in Europe, the municipal housing scheme, he suddenly discovered that he was no longer a free man.

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1.07:3

waltham



Two projects were given Citation Awards to “Book End” the formative and future years of the movement. A Citation award was given to John Anderson Studio of Burlington for a Private Residence in Waltham, Vermont. The Jury recognized this submission for its “iconic and durable image that represented early solar architecture” and noted that “early sustainability sustains”. This project represented a new direction in the ‘80’s. “The bold and recognizable silhouette remains integrated and viable.”

rsevr



The opposing book end Citation went to William Maclay Architects & Planners of Waitsfield for a proposed project that represents the future of the movement. The Jury thought that the design of the George Aiken Center – Rubenstein School of Environmental and Natural Resources at the University of Vermont was “a textbook in sustainable concept and criteria.”

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rahill



Continuing on the Sustainable theme, Black River Design Architects of Montpelier won a Merit Award in the Sustainability category for the Buxton Classroom Building in Williamstown, Massachusetts. The Jury was impressed with the “successful transition from the existing to the new building and the “architecturally distinguished ingenious green details”.

westphalen



Dore & Whittier Architects of South Burlington earned a Merit Award in the Recent Public Project category for the Clinton Elementary School in Clinton, Massachusetts. The Jury gave high marks for a project that clearly stated “this is a public building for kids.” “The over-all scale and materiality of the building are very effective.”

“This coupled with a comfortable interior scale and attractive colors made for a very strong project.”

cont.

gbh studios



Truex Cullins & Partners were given a Merit Award in the Historic Renovation Category for Debevoise Hall at The Vermont Law School. The project has “spectacular color inside and out”. The “integration of furniture to the interior is on a par with the color selection, stunning”. They also commented on how “carefully and completely the project had been thought out.”

westphalen



Also at Vermont Law and also for Truex Cullins & Partners a Merit Award (this time in the Small Project Category) was given to for the Vermont Law School Gazebo in South Royalton, Vermont. This project had “charm, pure, simple elegance and was very inviting”.

cont.

freeman



Freeman-French-Freeman of Burlington was given a Merit Award in the Interior Architecture Category for The Burlington International Airport- North terminal. The Jury was impressed by the "interesting use of modernist materials" and also praised the bringing of "art to Architecture in a place where people spend a lot of time".

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aiaVT is edited by Andrea Murray, AIA. Published views are the author's and not necessarily the views of AIA Vermont or any other organization.

Please send articles, notices, letters, and graphic submissions to:

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AIA Vermont reserves the right to edit articles for available space and determine appropriate content prior to inclusion. Submissions must be received by the 15th of the month prior to publication.

the Home Depot Foundation 2007 Awards of Excellence for Affordable Housing Built

Responsibly program competition has been launched and nonprofits can obtain this year's program guidelines, timetable and a Letter of Interest (LOI) form to submit for program consideration by visiting the website.

For more information, please click here:
www.homedepotfoundation.org

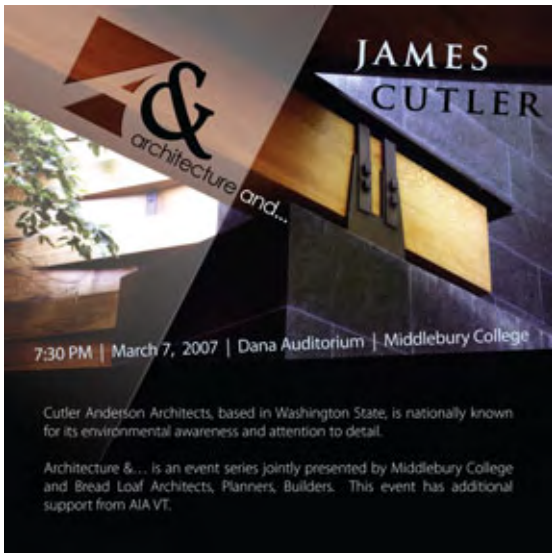
The deadline for submitting a LOI is March 31, 2007.

aiaVT welcomes

jessica braker, *assoc. aia of randolph*
karolina kawiaka, *aia of white river junction*
carol jean stenberg, *aia of burlington*

aiaVT welcomes back

neil husher, *aia of montpelier*



the farm energy handbook is now available!

*Vermont Environmental Consortium
is proud to announce the publication of the
first-of-its-kind, comprehensive guide
to renewable energy for farmers and rural landowners.*

We can save Vermont's farms and achieve energy security!

The Farm Energy Handbook, a project coordinated and edited by VEC at the request of the Agency of Agriculture, is now available. Written in consultation with 24 of Vermont's top experts, it's a 65-page, full-color overview of every energy technology, feedstock, and product that can be developed on Vermont farms. Also included are questions designed to help make early-phase decisions about which renewable energy product is most appropriate for your farm or land, a financial analysis of the options, and a list of additional information resources for each energy technology.

cont.

Every variation he wished to introduce which departed from current practice was prohibitive in cost: his design was in fact little more than a composition of standardized patterns and manufactured articles. The elements were no longer under the architect's control; for the carpenter on the job could not construct a kitchen cabinet as well or as cheaply as the factory, nor had he spent so much time in finding out exactly what compartments and divisions the housewife preferred. As for windows, doors, bathroom equipment, the architect either had to accept them as they came from the factory, or he had to do without them altogether.

III

Needless to say, this revolutionary change had come about without any genuine renovation in design, and without any attempt to overcome the difficulties that the increase of manufactured articles brought with it. The chief of these difficulties, as Mr. Henry Wright was perhaps the first to point out, was that the building proper, without being cheaper in its own right, accounted for only forty-five to sixty per cent of the total cost, whereas a hundred years before it had represented, with its decoration and ornament, about ninety per cent of the total cost. Some accommodation to this condition was made; but the adjustment was a blind and fumbling one: now it came as jerry-building, a general cheapening of materials and workmanship, again it came as smaller rooms or fewer rooms per family, or finally, it came as an abandonment of handicraft on the remaining parts of the building, and the increase of ready-

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1.07:9



AIA Contract Documents
 Order your electronic document software from the AIA website, www.aia.org
 You can order paper documents by calling AIA New Hampshire, 603-357-2863.
 A price list is on line at www.aianh.org/tools/contractdocs.shtml

The book includes chapters on:

- Efficiency & conservation
- Anaerobic digestion
- Biodiesel
- Wood, grass, & corn kernel biomass
- Small wind power
- Microhydro power
- Solar photovoltaics, transpired air, & hot water
- Geothermal heating & cooling
- Crop ethanol & cellulosic ethanol
- Renewable energy credits & incentives

Though geared to farmers, the Farm Energy Handbook is also an indispensable resource for rural landowners, foresters, educators, students, regional planners, nonprofit administrators, and anyone wanting to learn more about this crucially important topic.

Due to grant terms, the book is being distributed without charge to all Vermont dairy farmers, legislators, and other policy makers. Others wishing to receive a copy pay \$10 each, the cost of printing and including postage. To request a copy, contact VEC at vec@norwich.edu or call (802) 485-2455.

The Farm Energy Handbook project was initiated by the Dairy Task Force and Ben & Jerry's Homemade and is part of ongoing initiatives of the Dairy Stewardship Alliance, funded by a USDA Risk Management Agency grant.

Kudos for this fine publication are due to its chapter contributors: Efficiency Vermont, Vermont Biofuels Association, Vermont Sustainable Jobs Fund, Vermont Agency of Agriculture, Biomass Energy Resource Center, Grass Energy Collaborative, Vt. Department of Public Service, Vt. Superintendent's Association, groSolar, Vermont Community Hydro, Independent Power & Light, NEGS2, Vermont's Alternative Energy Corporation, EXL Group, and NativeEnergy.



LECTURE
A&
 architecture and...
JAMES CUTLER
 Cutler Anderson Architects, based in Washington State, is nationally known for its environmental awareness and attention to detail.
 Architecture & ... is an event series jointly presented by Middlebury College and Bread Loaf Architects, Planners, Builders. This event has additional support from AIA VT.
 7:30 PM | March 7, 2007 | Dana Auditorium | Middlebury College

made equipment. Decoration had not so much vanished by itself, for lack of artistic talent, still less because of any doctrinaire prejudice against it: it had rather been absorbed, or at all events transformed into mechanical fixtures. The new costs of finance, mechanical fixtures, utilities, had to be met at some point in the design. Short of a proportional rise in the real income of wage-earners, there was no way of cementing the old requirements and the new in a single building.

In a word, building has shrunk, manufacture has expanded. One cannot suppose that this process will stop short at the shell. Apart from the fact that this has already been partly conquered—as yet, however, with no appreciable saving—in the mail-order wooden house, or in the sheet-iron garage, who doubts that the manufacturers of steel, aluminum or asbestos blocks, if not the large-scale motor manufacturers, looking for a new outlet for a market glutted

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1.07:10

with cars, will finally produce a light transportable shell, whose sections will be set up easily by unskilled labor? It would not be difficult to describe such a house: indeed, Mr. Buckminster Fuller in Chicago, and the Brothers Rasch in Germany have already gone a step beyond this. The chief difference between the factory-manufactured house and the current product of the jerry-builder in Flatbush or West Philadelphia would be that in the first case the design would possibly bear some living relation to the elements out of which it is composed. The mass-house would probably be placed on a platform, if not on a pedestal, in order to provide garage space and avoid the expensive cellar; the plans would be standardized; the pipes and fittings and fixtures would be integral with the walls and ceilings, joined together by a turn of the wrench; and the use of light insulating materials would both facilitate transportation and permit the design of large windows which would otherwise, in cold weather, make a great drain on the heating system.

What would be the advantages of the completely manufactured house? There are many potential ones. First of all, the mass-house, like the motor car, will be able to call to its design and construction a corps of experts, sanitary engineers, heating engineers, hygienists, to say nothing of professors of domestic science, who will have their minds focussed, not upon solving indifferently an indeterminate number of problems, but upon getting a perfect solution for a fixed and limited problem. These research workers will have the opportunity to deal with fundamental mechanical and biological facts, without the distraction of attempting to compose these facts into a traditional frame, conceived when industry and family life were on an entirely different basis, and when the inventions of the last century were still but vague grandiose dreams in the minds of Utopians like Leonardo and Johann Andreae.

The introduction of this council of experts would undoubtedly hasten the rationalization of the modern house. A dozen standard plans, with all minor deviations ruled out, would probably take the place of the competitive chaos that provides our more traditional forms of monotony and squalor, or, as in the well-to-do suburb, of standardized "variety" and fake elegance. No one would be able to pretend that individuality and personality are achieved by meaningless departures on the drafting board from standard dimensions: once the mechanical requirements were granted, an equally mechanical solution would follow. The charm of good building, the charm due to the carpenter's or the mason's feeling for his material and site, would disappear; but as compensation there would be the austere clarity of good machinery; and since this charm is already a sentimental memory in most of our building, it is an illusion rather than a reality that would be destroyed. Undoubtedly the result would be "hard"; but such hardness is surely preferable to the spurious "softness" of imitation half-timbers, imitation slates, and imitation fires; and it would constitute a real improvement over the actual quarters in which a great part of the population now live.

There is no need to go here into the various technical improvements that may be possible in the mass-house. It is enough to assume that such matters as artificial cooling and heating, the removal of dust, and the utilization of sunlight would receive competent attention, and it is even possible that entirely untried methods, such as the heating of walls by electric grids, or complete insulation from outside air would be tested, if not incorporated in the mass-house. Such dwellings would represent a real advance from the standpoint of hygiene and constructive soundness; and since a good part of our population needs to be re-housed, its present quarters being unsanitary, crowded, vile, ugly, and entirely out of key with the best features in the modern environment, the mass-house holds out, on the surface, very attractive promises. Does the architect shrink from the prospect? He had better not. As a profession he has permitted something far worse than the scientifically designed mass-house, namely the unscientific one of the jerry-builder, to appear; and since he has shown as yet no capacity to face or master the real problem of housing, he cannot in all conscience turn away from this spectacle.

IV

Let us grant, then, the mechanical advantages of the mass-house; and along with this its practicability. We must now ask another question: to what extent would the mass-production of such houses be a solution of the housing problem, and how far would this form of manufacture meet all the needs that are involved in the dwelling house and its communal setting? Those who talk about the benefits of mass-production have been a little misled, I think, by the spectacular success of this method in creating cheap motor cars; and I believe they have not sufficiently taken into account some of its correlative defects. Let us consider a few of these.

First of all: the great attraction of the manufactured house is the promise not only of efficiency but of cheapness, due to the competitive production of houses in large quantities. It is doubtful if this will prove to be a great element in reducing

the cost of housing. The reason is simple. The shell of the building is not the largest element in the cost; the cost of money, the rent of land, the cost of utilities, including streets, mains, sewers and sewage disposal plants, are among the major items on the bill. The two new spots where mass production would take the place of present methods, namely, in the shell itself, and in the assemblage of the parts, offer only a minor field for reductions. To cut the cost of the shell in half is to lower the cost of the house a bare ten per cent. The New York State Housing and Regional Planning Commission has shown that the lowering of the interest rate one per cent would effect as great a reduction; and the lowering of it to the level justified by the safety and durability of housing investments would reduce the costs far more drastically than the most ingenious cheese-paring on the structure.

Moreover, with respect to the other parts of the house, the fixtures, the mechanical apparatus, the finish, it remains true that while slight economies are possible through further standardization, a good part of these items is already produced by mass-methods—and most of the possible economies have been wrung out. Novelties in plan or design, such as those suggested in the Dymaxion house, should not obscure the fact that the great change in the shell is only a little change in the building as a whole. For lack of proper cost accounting our experimental architects have been butting their heads against this solid wall for years; but there is no reason why they should continue. Land, manufactured utilities, site-improvements, and finance call for a greater share of the cost than the "building" and labor. Mass production will not remedy this. To use cesspools instead of sewers, artesian wells instead of a communal water system, and cheap farming land instead of urban land, as some of the advocates of the manufactured house have suggested, is merely to camouflage the problem: and it is more than a little naive: for such expedients are temporary dodges, which may occasionally be favored by a sandy soil or inaccessibility to traffic, but they cannot count for two pins in any comprehensive and universal solution of the housing problem. There are many districts where an artesian well would cost as much as the house itself; and except in a communist society there are no spots on the earth where the Law of Rent is not operative—so that any large movement towards the open land, such as is now taking place fifty miles from New York, is immediately recorded in a conversion of farmland into building lots, with a swift rise in price. In short: the manufactured house cannot escape its proper site costs and its communal responsibilities.

The second hole in the program is the fact that mass-production brings with it the necessity for a continuous turnover. When mass-production is applied to objects that wear out rapidly, like shoes or rubber tires, the method may be socially valuable, although the late Thorstein Veblen has shown that some of these potential economies are nullified by the commercial habit of weakening the materials in order to hasten the pace of destruction. When, however, mass methods are applied to relatively durable goods like furniture or houses, there is great danger that once the original market is supplied, replacements will not have to be made with sufficient frequency to keep the original plant running. Our manufacturers of furniture and motors are driven desperately to invent new fashions in order to hasten the moment of obsolescence; beyond a certain point, technical improvements take second place and stylistic flourishes enter. It will be hard enough, in the depraved state of middle class taste, to keep our mass houses from being styled in some archaic fashion, pseudo-Spanish or pseudo-Colonial, as the fad of the day may be; and once mechanical improvements bring diminishing returns this danger will be a grave one.

There is still another defect in the manufactured house, just the opposite of the tendency to foist new style, in order to increase the turnover. One might call this the model T dilemma. Mass-production, just because it involves the utmost specialization in labor-saving machinery and the careful interlinkage of chain processes, suffers, as I have pointed out elsewhere, from rigidity, from premature standardization. When the cheapening of the cost is the main object, mass production tends to prolong the life of designs which should be refurbished. In the case of the dwelling house, the continuance of obsolete models would possibly be as serious as the rapid alterations of style; and it is hard to see how mass production can avoid either one or the other horn of this dilemma.

V

What, then, is the conclusion? So far as the manufactured house would base its claim upon its social value, that is, upon the possibility of lowering the cost of housing to the point where new and efficient dwellings could be afforded by the owners of Ford cars, its promises are highly dubious. Granting every possible efficiency in design or manufacture, the mass-house, without any site attachments, would still represent an expenditure of from six to ten times the amount invested in automobiles of similar grade; and this leaves us pretty much in our present dilemma. The new houses might well be better than the present ones—they could scarcely be worse. But, if better, they would not be radically cheaper,

cont.

1.07:11

and since a new cost, a cost that is excessive in the motor industry, namely competitive salesmanship, would be introduced, the final results promise nothing for the solution of our real housing problem—the housing of the lower half of our income groups, and particularly, of our unskilled workers. The manufactured house no more faces this problem than the semi-manufactured house that we know today.

This does not mean that the processes of manufacture will not continue to invade the modern house; nor does it mean that the architect's present position in relation to the problem is a happy one. The question is whether he is able to devise an approach to the housing problem and to house design which will bring with it all the efficiencies promised by the Brothers Rasch or by Mr. Buckminster Fuller, and which will at the same time give scope to the particular art and technique of which he is master. Is there perhaps a more radical approach to the problem of housing than the engineer and the mechanically-minded architect have conceived? I think there is; for though Mr. Fuller for example believes that he has swept aside all traditional tags in dealing with the house, and has faced its design with inexorable rigor, he has kept, with charming unconsciousness, the most traditional and sentimental tag of all, namely, the free-standing individual house. If we are thorough enough in our thinking to throw that prejudice aside, too, we may, I suspect, still find a place for the architect in modern civilization. I shall deal with the alternative to the purely mechanical solution of our problem in a second article.

**FEATURED ENERGY-EFFICIENT PROJECT:
STATE OFFICE BUILDING
BENNINGTON, VERMONT**



Photo: Jeff Clarke Photography, Inc.

"All the energy saving measures used in this building survived life cycle cost analysis. What's not to like about lowering overall costs while also reducing environmental impacts?"

*David E. Burley, Director of Engineering
Department of Buildings & General Services,
State of Vermont*

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