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SUMMARY: HOUSTON DESIGN/BUILD WORKSHOP

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October 1981

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ATLANTA, GEORGIA 30341

61 PERIMETER PARK

N SOLAR ENERGY CENTER

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ESUMMARY HOUSTON DESIGN/BUILD WORKSHOP FOR PASSIVE SOLAR HOMES:



Calculon Corporation

October 1981

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WORKSHOP SUMMARY

HOUSTON DESIGN/BUILD WORKSHOP FOR PASSIVE SOLAR HOMES

INTRODUCTION

The Southern Solar Energy Center (SSEC), in order to provide technical guidance on passive solar design principles for building professionals, held a one-day Design/Build Workshop in Houston, Texas, on August 7, 1981. One of the highlights of the workshop was a tour of the SSEC Houston House passive solar home, which had been designed and constructed under the joint auspices of SSEC, the Houston-based architectural firm Environment Associates, Doyle Stuckey Homes builders, the National Association of Homebuilders, and a team of prominent local advisors. A major purpose of this workshop was to provide "hands-on" training and education to designers and builders in the use of passive solar technology in new, single-family dwellings. The workshop addressed practical passive design features, economics, benefits, and cost incentives of passive solar energy uses.

OBSERVATIONS

As was true at the Louisville Workshop (May 15, 1981) the participants were most inquisitive about passive solar heating and cooling technology and eager to learn more about applications in home design and construction. At the Houston Workshop, many attendees sought detailed and specific construction and design information.

The majority of attendees found the workshop highly informative. A few expressed the view that more technical detail and state-of-the-art information would have enhanced their participation. Comments from several individuals indicated an interest in more information about costs, marketing, and passive cooling technology. As far as program content was concerned, it was suggested that future workshops make greater use of visuals, especially to display a variety of construction alternatives. There were no logistical or programmatic problems during this workshop.

EVALUATION

A total of 50 persons* participated in the Houston Workshop. Based on observations during the workshop and an analysis of evaluation forms (Exhibit B) completed at the end of the workshop by 20 attendees, the following conclusions may be drawn:

o <u>PROGRAM</u> -- The program content was generally considered to be very good, although some felt there was room for improvement. Comments included requests for more information on passive cooling, the use of more examples, more cost information, and tighter speech organization. There was unanimous agreement that the topics covered

*Including speakers and CALCULON support staff.

1

were both relevant and sufficiently varied to interest a broad audience. The Houston House tour captured the enthusiastic interest of all attendees. The timing of the workshop was acceptable.

- o <u>SPEAKERS</u> -- All speakers received good to excellent ratings by nearly all attendees. There were a few complaints that some talks were not sufficiently well organized and were, in some cases, too general. The visual presentations were praised, and there were a number of suggestions that more visuals be used, particularly to illustrate construction variations.
- SITE -- Nearly all of the participants found that the location was convenient. Those who reported on lodgings (Adam's Mark) stated that they were excellent. The meeting room was comfortable. The luncheon and refreshments were rated very good.
- O COMMUNICATION MATERIALS -- The attendees rated the advance material in the good to excellent range. They rated the meeting material kit as excellent. One participant suggested the inclusion of more "case history" material, and another recommended greater emphasis on passive solar cooling techniques. <u>Building With Passive Solar</u>, developed by the Southern Solar Energy Center, received considerable praise.
- o <u>PROFESSIONAL IDENTIFICATION OF ATTENDEES</u> -- The Houston Workshop was attended exclusively by architects and builders, with builders in the majority. Local governments were invited but did not attend. It was observable that some of the attendees were highly knowledgeable about passive solar technology. This group generally wanted greater technical detail to be included in the program.

2

Appendix A

SUMMARY AND ANALYSIS OF WORKSHOP EVALUATION FORMS

Total Responses: 20

4,

In Attendance: 50

SCORE: 4 - Excellent 3 = Good 2 = Fair 1 = Poor

PROGRAM	4.0	3.5	3.0	2.5	2.0	1.0	YES	NO	TOTAL RESP.
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COMMUNICATION									
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SPEAKERS									
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Appendix B

WORKSHOP EVALUATION

As a participant in the Design/Build Workshop for Passive Solar Homes, you are the best judge of its success. We would appreciate your taking a few minutes to complete this Workshop Evaluation Form. Your comments (good and bad) will help to plan future workshops. Thank you.

SCORING

Please use this numerical scoring guide unless otherwise indicated (i.e., yes or no). 4=Excellent 3=Good 2=Fair 1=Poor

PROGRAM

1. 2. 3. 4. 5.	Content Were the topics relevant? Was the program varied enough? Was the solar home of interest and valuable in the overall scope of the Workshop? Was the timing of the Workshop (month/season) good?	yes yes yes yes yes yes (yes or no) yes (yes or no)						
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1. 2.	How well did each speaker present knowledge of his topic area? How well did he present his information?	Naismith <u>4</u> 3	Prince	Reed 3				
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1. 2. 3. 4.	Location (convenience). Lodging (if applicable). Meeting room set-up. Lunch and breaks.	3						
COMMUNICATION								
1. 2.	Advance promotional material. Meeting materials kit.	3						
OBSE	OBSERVATIONS							

In your opinion, what were the high and low points of the Workshop?

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PROGRAM

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<u>SPEA</u>	KERS	
1. 2.	How well did each speaker present knowledge of his topic area? How well did he present his information?	NaismithPrinceReed333333
WORK	SHOP SITE	
1. 2. 3. 4.	Location (convenience). Lodging (if applicable). Meeting room set-up. Lunch and breaks.	
COM	UNICATION	
1. 2.	Advance promotional material. Meeting materials kit.	
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In your opinion, what were the high and low points of the Workshop?



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PROGRAM

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PROGRAM

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1. 2.	How well did each speaker present knowledge of his topic area? How well did he present his information?	Naismith Prince Reed
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OBSERVATIONS

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Suggestions and comments: (use back if necessary) The substant in the 1 m 11

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PROGRAM

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OBSERVATIONS

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PROGRAM

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	and level of comptance demonstrated	presentat	lon, o-gai	reation
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PROGRAM

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COMMUNICATION

1. Advance promotional material. 2. Meeting materials kit.

OBSERVATIONS

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Suggestions and comments: (use back if necessary)
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- 2=Fair l=Poor

PROGRAM

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1. 2.	How well did each speaker present knowledge of his topic area? How well did he present his information?	NaismithPrinceReed333333
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OBSERVATIONS

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4=Excellent	3=Good	2=Fair
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Fair 1=Poor

PROGRAM

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OBSERVATIONS

In your opinion, what were the high and low points of the Workshop?

FIELD TRIPS

SLIDES

Suggestions and comments: (use back if necessary) MSED MORE COST INFORMATION



4=Excellent

3=Good

As a participant in the Design/Build Workshop for Passive Solar Homes, you are the best judge of its success. We would appreciate your taking a few minutes to complete this Workshop Evaluation Form. Your comments (good and bad) will help to plan future workshops. Thank you.

2=Fair

SCORING

Please use this numerical scoring guide unless otherwise indicated (i.e., yes or no).

l=Poor

PROGRAM 1. Content 2. Were the topics relevant? yes (yes or no) 3. Was the program varied enough? (yes or no) Was the solar home of interest and valuable in 4. the overall scope of the Workshop? 5. Was the timing of the Workshop (month/season) yes (yes or no) good? SPEAKERS 1. How well did each speaker present knowledge of Naismith Prince his topic area? 2. How well did he present his information? WORKSHOP SITE Location (convenience). 1. 2. Lodging (if applicable). Meeting room set-up. 3. Lunch and breaks. 4. COMMUNICATION 1. Advance promotional material.

OBSERVATIONS

2. Meeting materials kit.

In your opinion, what were the high and low points of the Workshop?

Low point - too much discussion on salability and cost effective ness which is a relative subject that promotes waste of valuable time that could be used for state of the art technology and opplanation. High point-kept my interest Suggestions and comments: (use back if necessary)

Spend more time on technology whether new or ob which promotes energy efficiency instead of cost politics and philosophy. Despite my complaints I really enjoyed it, Thanks alot. Keep it going.



As a participant in the Design/Build Workshop for Passive Solar Homes, you are the best judge of its success. We would appreciate your taking a few minutes to complete this Workshop Evaluation Form. Your comments (good and bad) will help to plan future workshops. Thank you.

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PROGRAM

1. 2. 3. 4. 5.	Content Were the topics relevant? Was the program varied enough? Was the solar home of interest and valuable in the overall scope of the Workshop? Was the timing of the Workshop (month/season) good?	$\frac{3}{4\ell s}$ (yes or no) (yes or no) $\frac{4\ell s}{4\ell s}$ (yes or no)
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OBSERVATIONS

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in your opinion, what were the high and low points of the workshop?

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PROGRAM

 Content Were the topics relevant? Was the program varied enough? Was the solar home of interest and valuable in the overall scope of the Workshop? Was the timing of the Workshop (month/season) good? 	<u>4</u> <u>4</u> <u>Ves</u> or no) <u>4</u> <u>ND</u> (yes or no)
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WORKSHOP SITE	
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4=Excellent

As a participant in the Design/Build Workshop for Passive Solar Homes, you are the best judge of its success. We would appreciate your taking a few minutes to complete this Workshop Evaluation Form. Your comments (good and bad) will help to plan future workshops. Thank you.

2=Fair

SCORING

Please use this numerical scoring guide unless otherwise indicated (i.e., yes or no).

1=Poor

(res) or no)

Naismith

- PROGRAM

 1. Content

 2. Were the topics relevant?

 3. Was the program varied enough?

 4. Was the solar home of interest and valuable in the overall scope of the Workshop?

 5. Was the timing of the Workshop (month/season)
- 5. Was the timing of the Workshop (month/season) good?

3=Good

SPEAKERS

 How well did each speaker present knowledge of his topic area?

2. How well did he present his information?

WORKSHOP SITE

	Location (convenience).	Ч
	Lodging (if applicable).	_ H/
3.	Meeting room set-up.	4
4.	Lunch and breaks.	<u> </u>

COMMUNICATION

1.	Advance promotional material.	<u>· 3</u>
2.	Meeting materials kit.	5

OBSERVATIONS

In your opinion, what were the high and low points of the Workshop?
Generalities, alere forwerd on rather than specifics
much seemed to be protitive of that available in
Many consumer publications
Suggestions and comments: (use back if necessary)



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SCORING

Please use this numerical scoring guide unless otherwise indicated (i.e., yes or no).

PRO	<u>GRAM</u>	
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2.	Were the topics relevant?	VES (yes or no)
3.	Was the program varied enough?	yes (yes or no)
4.	Was the solar home of interest and valuable in	14
5.	the overall scope of the Workshop?	<u> </u>
5.	Was the timing of the Workshop (month/season) good?	
	good:	<u>yes</u> (yes or no)
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	•	
1.	How well did each speaker present knowledge of	Naismith Prince Reed
2.	his topic area?	4 4 4
۷.	How well did he present his information?	
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2.	Lodging (if applicable).	4
3.	Meeting room set-up.	4
4.	Lunch and breaks.	- y
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2.	Meeting materials kit.	
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OBSI	ERVATIONS	

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As a participant in the Design/Build Workshop for Passive Solar Homes, you are the best judge of its success. We would appreciate your taking a few minutes to complete this Workshop Evaluation Form. Your comments (good and bad) will help to plan future workshops. Thank you.

SCORING

Please use this numerical scoring guide unless otherwise indicated (i.e., yes or no).

4=Excellent 3=Good 2=Fair

l=Poor

PROGRAM

1. 2.	Content Were the topics relevant?	<u>3</u> (yes	s or no)	
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2.	his topic area? How well did he present his information?			
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3.	Lodging (if applicable). Meeting room set-up.	$\frac{NA}{1}$		
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As a participant in the Design/Build Workshop for Passive Solar Homes, you are the best judge of its success. We would appreciate your taking a few minutes to complete this Workshop Evaluation Form. Your comments (good and bad) will help to plan future workshops. Thank you.

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Please use this numerical scoring guide unless otherwise indicated (i.e., yes or no).

4=Excellent 3=Good 2=Fair 1=Poor

PROGRAM

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Suggestions and comments: (use back if necessary)

MORE DETRILED INFORMATION

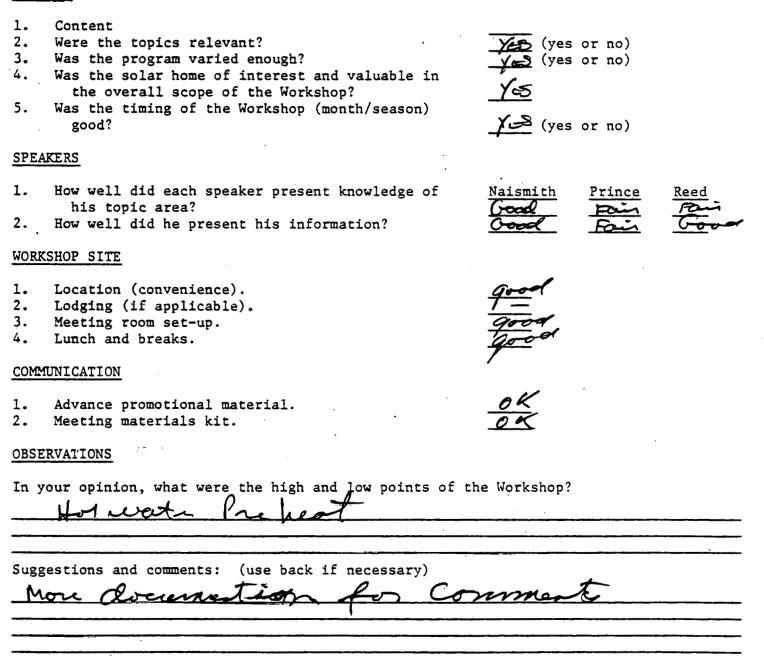


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SCORING

Please use this numerical scoring guide unless otherwise indicated (i.e., yes or no). 4=Excellent (3=Good) 2=Fair 1=Poor

PROGRAM



Agenda – August 7, 1981

7:30 am	Registration	2:45 pm	Building for Passive Solar
8:00 am	Passive Solar: Building for the		Homes: The Builder's Viewpoint
	Future		Speaker: Bob Reed
	Speaker: Jim Borden		Working with the architect,
	A state-of-the-art overview of		construction problems and
	passive solar energy and the building community.		marketing approaches.
		3:15 pm	Coffee Break
8:30 am	Passive Solar Concepts: Conservation and Insulation	2.20	Dessing Colons Malaina Ita Malain
	Speaker: Bob Naismith	3:30 pm	Passive Solar: Making It Work for You
	Techniques to reduce energy losses		Panel Discussion
	to get the most benefit out of		An audience participation session
	passive solar applications.		designed to answer your questions
9:30 am	Coffee Break		and provide a free-form discussion of potential problems and benefits.
9:45 am	Passive Solar Concepts: Cooling and Heating	4:30 pm	Adjournment
	Speaker: Bob Naismith		
	Step-by-step guidance to using simple techniques for designing and constructing passive solar structures.		
11:30 am	Group A [*] — Luncheon		
	Group B — Houston Solar House Tour		
12:45 pm	Group B* — Luncheon		•
	Group A — Houston Solar House Tour		
2:00 pm	Designing for Houston Passive	,	
	The Architect's Perspective		
	Speaker: David Prince		NAHB/SSEC
	Selecting the appropriate design		Design/Build Workshop
	approach, problem solving, compromising, and		for Passive Solar Homes
	architect/builder cooperation.		
	· · · · · · · · · · · · · · · · · · ·		

Appendix D

LIST OF PARTICIPANTS

ASMUS, Russ Sales Representative Dow Chemical 12700 Park Central Place Suite 600 Dallas, TX 75240

BASS, Doug Vice President The Eagle Insulators, Inc. 553 West 22nd Houston, TX 77008

BURNS, Bill Owner Falcon Billagee Building Corp. P.O. Box 4046 Brownsville, TX 78520

CAGLE, Gregory Owner Gregory Cagle Realtor Deridder, LA 70634

CARRINGTON, Tim Construction Superintendent Carrington Group 5609 Adams Austin, TX 79756

CHAVERS, Darryl Sales Representative Dow Chemical 12700 Park Central Place Suite 600 Dallas, TX 75240

COLLING, Jerry Purchasing Director Woodhaven Developers, Inc. 6865 Airport Drive Riverside, CA 92504 COSTANZA, Joe Drafting Manager Merco Builder Center P.O. Box 639 Natalbany, LA 70451

DeGOLA, Frank Vice President The Eagle Insulators, Inc. 553 West 22nd Houston, TX 77008

DODGE, Wayne President Dodge Homes, Inc. 116 Vivian Drive Lafayette, LA 70508

FOSHEE, James N. Project Manager Zest Homes, Inc. 8210 Windy Dunes Drive Houston, TX 77071

GENTRY, Tim President Gentry Homes P.O. Box 17094 Austin, TX 78760

HAYLSIP,Claudia Home Designer & Builder 1111 Bay Street Texas City, TX 77590

INGLE, Susan Designer John Ingle Company 2145 West Park Plano, TX 75075 JACOBSON, Lester Owner Lester Jacobson Builders 1007 N. Main Taylor, TX 76574

JOBE, William B., Jr. Owner B. J. Construction Rt. 3, Box 30 Ardmore, OK 73401

JONES, Wyatt M., Jr. President Brazoria Construction 211 Flag Lake Road Clute, TX 77531

KOENIG, Oliver H. Oliver H. Koenig Contractor 611 Ball Airport Road Victoria, TX 77901

MACKENNEY, Steven W. Project Manager George MacKenney Builders, Inc. P.O. Box 697 Missouri City, TX 77459

MEANS, Victor, Jr. Executive Vice President First Southwest Property Corp. 216 Temple National Plaza Temple, TX 76501

McELROY, Ron Coordinator Carrington Group 5609 Adams Austin, TX 78756

NELSON, Rod President Rod Nelson Homes, Inc. 887 Landa New Braunfels, TX 78130 NEWSOM, James Marlin President Newsom Construction, Inc. 302 Plantation Drive Lake Jackson, TX 77566

PARIS, Irin M. Director of Construction Friedman & Associates 777 S. Post Oak Road, Suite 775 Houston, TX 77072

RHODES, Ray President City & Town Builders, Inc. 2700 Sherrill Park Court Richardson, TX 75081

SCOTT, K. E. Marketing Manager Texas Electric Service Co. P.O. Box 970 Fort Worth, TX 76101

TRAVER, John National Energy Watch Representative Gulf States Utilities P.O. Box 2951 Beaumont, TX 77704

THORNHILL, Jim Vice President Thornhill Construction Co. 1320 Rowlett Rowlett, TX 75088

TURNER, Phyllis Vice President Turner Development, Inc. 7118 S. Birmingham Place Tulsa, OK 74136

TURNER, R.C. President Turner Development, Inc. 7118 S. Birmingham Place Tulsa, OK 74136 TUTTLE, BILL Sales Manager Sun-X International 702 Ashland Houston, TX 77007

VAUGHAN, Bob Owner Vaughan Construction Co. 1105 Rue De La Paix Hammond, LA 70401

WEISSENBORN, Steve Construction Manager Timber Con, Inc. 2 North Park East, Suite 223 Dallas, TX 75231

WILSON, Robert G. Vice President - Purchasing Moore Homes, Inc. P.O. Box 710 Sugarland, TX 77478

WISE, Randy, Owner Wise Construction Company P.O. Box 884 Niceville, FL 32567

ZIMMERMAN, Hal M. President Zest Homes, Inc. 8210 Windy Dunes Drive Houston, TX 77071 CHRISTENSEN, Kent NPC Builders/Realtors Houston, TX

STIVERS, David Stivers Construction Co. P.O. Box 42394 Houston, TX 77042

BUTLER, Steve Butler Homes, Inc. Houston, TX

MEEKS, Daniel E. City of Pasadena Energy Planner P.O. Box 672 Pasadena, TX 77501

Appendix E

SPEAKER AND STAFF LIST HOUSTON DESIGN/BUILD WORKSHOP FOR PASSIVE SOLAR

Jim Borden Southern Solar Energy Center 61 Perimeter Court Atlanta, Georgia 30341 (404) 458-8765

Bob Naismith President Potomac Energy Group 401 Wythe Street Alexandria, Virginia 22313 (703) 683-5001

Bob Reed, Vice President Doyle Stuckey Homes 911 Bunker Hill P.O. Box 19546 Houston, Texas 77024 (713) 468-8247

David Prince Environment Associates 2777 Allen Parkway #207 Houston, Texas 77019 (713) 528-0000 Chris Nelson National Association of Home Builders 15th & M Street, N.W. Washington, D. C. (202) 822-0324

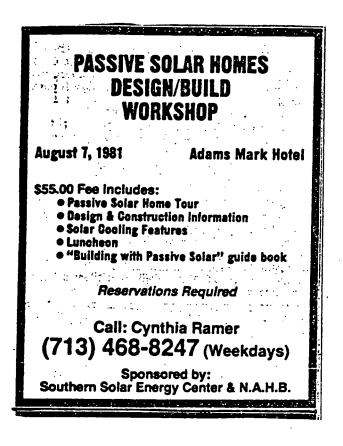
Bill Moorehouse Charles G. Stott & Co., Inc. 1680 Wisconsin Avenue, N. W. Washington, D. C. 20007 (202) 333-5200

Richard Humphries, Executive V.P. Home Builders Association of Houston 6120 Tarnef Houston, Texas 77036

Charles R. Beek CALCULON Corporation 1301 Piccard Drive Rockville, Maryland 20850 (301) 258-5300

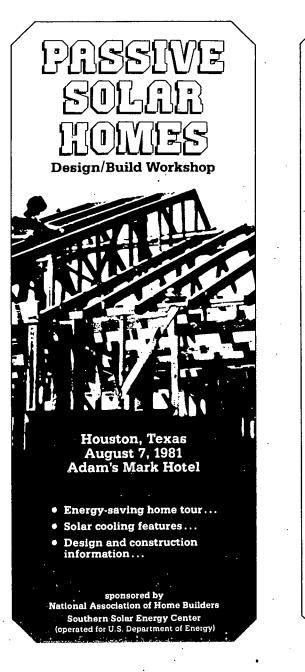
Mary E. McGowan CALCULON Corporation 1301 Piccard Drive Rockville, Maryland 20850 (301) 258-5300

Appendix F



HOUSTON CHRONICLE - August 2, 1981

Appendix G



Soaring energy costs have triggered profound changes in consumer preferences and buying patterns. Witness the disastrous performance of the U.S. automobile industry.

The message to business is clear: IMPROVE THE ENERGY EFFICIENCY OF YOUR PRODUCTS, OR BE LEFT BEHIND.

As building business professionals, you are, involved in producing the biggest energy-consuming product most Americans buy — their homes. Today it is good business to make that product as energy efficient as possible.

Including passive solar techniques in the homes you build will improve their marketability by offering lower heating and cooling energy costs to potential buyers. The techniques are available and simple to incorporate. No special equipment, materials, or highly specialized construction skills are required. The techniques can be included in all styles from traditional to contemporary. This workshop informs you on how to minimize building costs in putting passive solar techniques to work for you.

- You get a first-hand look at how a passive solar home is designed and constructed, and how it works...
- You get expert advice on special problems, information on passive solar techniques, design approaches, construction tips, marketing... and

• You receive a valuable passive solar application guide for southern builders.

Don't miss this stimulating and informative workshop!

DON'T BE THE ONE THAT'S LEFT BEHIND...

Speakers_

Bob Naismith

Bob Reed

David Prince

Jim Borden Y Program Manager Passive Solar Programs Southern Solar Energy Center Atlanta, Georgia

President
 Potomac Energy Group
 Alexandria, Virginia

Vice President Doyle Stuckey Homes Houston, Texas Builder: Houston Passive Solar Demonstration House

Environment Associates, LaVerne A. Williams AIA, and Partner, Architects: Houston Passive Solar Demonstration House



Agenda – August 7, 1981

Hotel Reservation Form

Workshop Registration Form

7:30 am Registration 8:00 am Passive Solar: Building for the Future Speaker: Jim Borden A state-of-the-art-overview of passive solar energy and the building community. **Passive Solar Concepts:** 8:30 am **Conservation and Insulation** Speaker: Bob Naismith Techniques to reduce energy losses to get the most benefit out of passive solar applications. 9:30 am **Coffee Break Passive Solar Concepts:** 9:45 am Cooling and Heating Speaker: Bob Naismith Step-by-step guidance to using simple techniques for designing and constructing passive solar structures. 11:30 am Group A* -- Luncheon Group B-Houston Solar House Tour Group B* — Luncheon 12:45 pm Group A-Houston Solar House Tour 2:00 pm **Designing for Houston Passive** Solar: The Architect's Perspective

Speaker: David Prince Selecting the appropriate design approach, problem solving, compromising, and architect/builder cooperation.

The Builder's Viewpoint Speaker: Bob Reed Working with the architect, construction problems and marketing approaches. 3:15 pm Coffee Break 3:30 pm **Passive Solar: Making It Work** for You **Panel Discussion** An audience participation session designed to answer your questions and provide a free-form discussion

of potential problems and benefits.

Building for Passive Solar

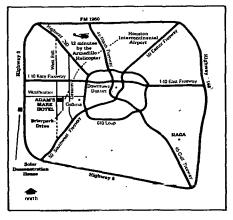
4:30 pm Adjournment

Homes:

*Participants will be split into two groups for touring.

Location Map

2:45 pm



The Workshop will be held at ADAM'S MARK HOTEL 2900 Briarpark Drive at Westheimer Road Houston, Texas 77042 Toll Free: (800) 231-5858 In Texas: (800) 392-2400

An elegant choice for your stay in Houston. Free transportation provided to the famous Galleria Mall, ten minutes east of the hotel. Adjacent to Carillon West Shopping Village. Dine, dance, or socialize in the hotel's four distinctly different lounges or restaurants. Helicopter service (12-minute ride) is available to the Houston International Airport.

For overnight accommodations, fill out the reservation form and send it along with the Workshop Registration Form. We'll be glad to make your reservations, but require your reservation form no later than August 1. Overnight accommodations are not included in the registration fee.

name		
organization		
address	· · · · · · · · · · · · · · · · · · ·	
<u></u>		
telephone		
date of arrival	time of arrival*	date of departs
 reservations will b notified 	e held only until 6:00 pr	n on arrival date uni
Room Rates		

Weekdays:

singlo or double

Weekend Special: single or double \$72.00 per night

(Friday, Saturday, Sunday) \$36.95 per night

If you are interested in attending the **PASSIVE** SOLAR HOMES Design/Build Workshop, please fill out the registration form below and send it with your check (payable to CALCULON Corporation) to:

Bob Reed, Vice President **Doyle Stuckey Homes** 911 Bunker Hill Road P.O. Box 19546 Houston, Texas 77024

Nominal fee for workshop is \$55.00. Fee includes:

- Attendance at workshop talks
- Participation in panel discussion
- · Guided tour of demonstration home · Bus transportation to and from demonstration home
- · Morning and afternoon breaks (coffee, tea, soft drinks, danish, etc.)
- Luncheon
- · Guide book: Building With Passive Solar
- · Imprinted workshop briefcase with passive solar information fact sheets.

Due to space limitations, the workshop is limited to 100 persons. Participants will be accepted on a first-come, first-serve basis. MAIL TODAY!

name		
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