# THE LONG ISLAND

# SOUNDER

February 2008

www.ashraeli.org

ASHRAE Long Island Chapter, Region 1...Founded in 1957

## American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc.

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## **President's Message**

Greetings! I hope many of you took advantage of having the ASHRAE Winter Meeting and AHR Expo so close to home this year. It's not too often that we have the convenience of the world's largest HVAC&R exposition brought to our doorstep.

I thought I might share some data with you:

More than 2,700 people took part in the Winter meeting.

#### At AHR Expo 2008: Total Visitor Attendance: There were international attendees representing 131 countries totaling: Exhibiting Companies: Total Exhibitor Personnel: **Total Registration**

39,298 (a show record) 6,778 1,885 19,824 59,122

All are awesome numbers. Much more than a singular event, it was full of technical committee meetings, technical programs and tours in addition to the exhibit of thousands of products many of which might help change the shape of our industry for the better. Like the Vince Lombardi trophy let's hope it doesn't take another 17 years to come to town.

CHAPTER MONTHLY MEETING							
DATE:	Tuesday, February 12, 2008						
TIME:	6:00 PM - Cocktails/Dinner						
	7:00 PM - Dinner Presentation						
	8:45 PM - Conclusion						
LOCATION:	Westbury Manor South Side of Jericho Tpke. 25 Westbury, NY 11590						
FEES:							
Members -	\$35.00						
Guest -	\$40.00						
Student -	\$15.00						
Reservati	Reservations requested, but not required.						

Call (516) 333-7117

At last month's meeting, Mr. James Tauby of Mason Industries gave a fantastic presentation on "Seismic Design & Application". The session offered 1 PDH credit for attendees.

This month we are excited to be hosting a joint meeting with SMACNA. Coupled with the technical session presentation offered by ASHRAE Distinguished Lecturer Ronald J. Wilkinson, P.E. on "Design, Construction and Commissioning of LEED Projects" we are certain to have a tremendous turnout. The session offers 1 PDH credit for attendees.

Thank you to Richard Rosner and Steve Friedman for their efforts to get February's program PDH credited. All our committee members are doing a great job working on their various assignments. As al ways, our hope is to fill the committees with as many members as possible. We are all volunteers and any help we receive is greatly appreciated. No gesture of help is too small.

> Peter Gerazounis, P.E. President - Long Island Chapter



## Long Island Chapter Officers & Committees

### ASHRAE 2007/2008 OFFICERS

POSITION	NAME	PHONE	FAX	EMAIL
President	Peter Gerazounis, P.E.	212.643.9055	212.643.0503	pgerazounis@mgjassociates.com
President-Elect	Steven Friedman, HFDP	212.695.1000	212.695.1299	sfriedman@lilker.com
Vice President	Steven Giammona, P.E.	516.827.4900	516.827.4920	srg@cameronengineering.com
Financial Secretary	Richard E. Gerbe	718.269.3753	718.269.3598	rgerbe@trane.com
Treasurer	Nancy Román	516.256.4800	516.256.3299	nroman@airdist.com
Secretary	Carolyn Arote	516.256.4800	516.256.3299	carote@airdist.com
Board of Governors	Brian Simkins	203.261.8100	203.261.1981	bsimkins@accuspecinc.com
Board of Governors	Andrew Manos	631.592.2660	631.630.8883	andym22@optonline.net
Board of Governors	John Nally	631.331.0215	631.928.4625	jn@atiofny.com

### ASHRAE 2007/2008 COMMITTEES

COMMITTEE	NAME	PHONE	FAX	EMAIL
Programs & Special Events	Steven Friedman, HFDP Richard Rosner, P.E.	212.695.1000 631.737.9170	212.695.1299 631.737.9171	sfriedman@lilker.com rrosner@csfllc.com
Membership	Carolyn Arote	516.256.4800	516.256.3299	carote@airdist.com
Chapter Technology Transfer (CTTC)	Andrew Manos	631.592.2660	631.630.8883	andym22@optonline.net
Newsletter Editor	Liset Peña	212.643.9055	212.643.0503	lpena@mgjassociates.com
Resource Promotion	Steven Giammona, P.E.	516.827.4900	516.827.4920	srg@cameronengineering.com
Historian	Richard E. Gerbe	718.269.3753	718.269.3598	rgerbe@trane.com
Student Activities	Brian Simkins Carolyn Cammalleri	203.261.8100 631.549.1000	203.261.1981	bsimkins@accuspecinc.com ccammalleri@lilker.com
Webmaster	Richard E. Gerbe	718.269.3753	718.269.3598	rgerbe@trane.com
Nominating	Michael Gerazounis, P.E.	212.643.9055	212.643.0503	mgerazounis@mgjassociates.com
Reception & Attendance	Robert Morgigno	631.331.0215	631.928.4625	rm@atiofny.com
PR & Engineering Joint Council of Ll	Richard E. Gerbe	718.269.3753	718.269.3598	rgerbe@trane.com
Golf Outing	Peter Gerazounis, P.E. Steven Friedman, HFDP	212.643.9055 212.695.1000	212.643.0503 212.695.1299	pgerazounis@mgjassociates.com sfriedman@lilker.com

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## Chapter Monthly Meeting - Program for 2007/2008

September 11, 2007 * At Westbury Manor Dinner Presentation - The Fundamentals, Design & Applica- tions of Geothermal Systems - <b>3PDH</b>	February 2008 NATIONAL ENGINEERS WEEK DINNER
September 28, 2007 Contemporation September 20, 2007 Contemporation September 28, 2007 Contemporation Septem	March 11, 2008 Dinner Presentation - TBD
October 9, 2007 * At Westbury Manor Dinner Presentation - Alternative Dispute, Resolution & Litigation MEMBERSHIP PROMOTION NIGHT	April 8, 2008 FIELD TRIP - Newsday Plant Melville, NY (See April Program Section for Details)
November 13, 2007 * At Westbury Manor Dinner Presentation - Fan Fundamentals/VFD's - 1PDH RESOURCE PROMOTION & STUDENT ACTIVITIES NIGHT	May 5, 2008 * Cherry Valley Club, Garden City, NY ANNUAL GOLF OUTING
December 11, 2007 Holiday Party - Westbury Manor	May 13, 2008 Dinner Presentation - Variable Refrigerant Flow Systems- 1PDH
January 8, 2008 * At Westbury Manor Dinner Presentation - Seismic Design & Application - 1PDH Joint Meeting with ACCA	June 10, 2008 * At Westbury Manor PAST PRESIDENTS & OFFICER INSTALLATION
January 2008 Z	June 2008 - TBD ASHRAE Annual Meeting
February 12, 2008 * At Westbury Manor JOINT MEETING WITH SMACNA Dinner Presentation - Design, Construction & Commissioning of LEED Projects - 1PDH - DISTINGUISHED LECTURER MEMBERSHIP PROMOTION NIGHT	
August 2008 - Chapter Reg	jional Conference Region I

## PAOE POINTS FOR 2007/2008

Chapter Members	Membership Promotion	Student Activities	Research Promotion	History	Chapter Operations	СТТС	Chapter PAOE Totals
313	35	290	0	125	590	300	1,340

## **February Program**

## You are cordially invited to our February 2008 Meeting...



**Dinner Presentation** 

*"Design, Construction and Commissioning of LEED Projects"* 

Presented by

Ronald J. Wilkinson, P.E. Vice President of Operations Dome Tech Commissioning Services DISTINGUISHED LECTURER



DATE:	TUESDAY, FEBRUARY 12, 2008							
Time:	6:00 PM – Cocktails and Hors D'ouevres 7:00 PM – Dinner Presentation 8:45 PM – Conclusion	Fee:	\$ 35.00 Member \$ 40.00 Guest \$ 15.00 Student					
Location:	WESTBURY MANOR (516) 333-7117 Jericho Tpke (South Side), 3/10 of mile east from Glen Cove Directions are posted at @ www.ashraeli.org.	ho Tpke (South Side), 3/10 of mile east from Glen Cove Rd., Nassau County, NY.						
Presentation:	This month's presentation is a solid overview of the installation detailed review of the commissioning requirements from the ergy and Environmental Design (LEED) program. Commission certification and extra commissioning earns the project extra reviews the overall requirements of LEED and focuses on or Presentation includes an annotated Power Point manual for references for further learning. Presentation covers LEED v quirements. This seminar will earn professional engineers 1 PDH.	US Gree sioning is a credit fo ommissio all partici	n Building Council's Leadership in En- a requirement for the desirable LEED r higher LEED ratings. The program ning tasks, costs and timing in particular. pants that includes and extensive list of					
About our Speaker:	Ronald J. Wilkinson, P.E. is a Distinguished Lecturer and a nationally published author and speaker on commissioning quality assurance procedures for the building construction industry. He is an AIA Continuing Education Lecturer, produced the first USGBC LEED commissioning training program and continues as a member of the LEED faculty. He earned his BSMAE from the Illinois Institute of Technology in 1971 and his master of Public Administration from the Evergreen State College in 1985. He is also a licensed Professional Engineer at Atkinson Kovin Feinberg Consulting Engineers in New York City, NY.							

## **Board of Governors Meeting Minutes**

A meeting of the Board of Governor was held on Tuesday January 8th, 2008 at the Westbury Manor. Present at the meeting were Peter Gerazounis, Steven Friedman, Steve Giammona, Rich Gerbe, Nancy Roman, Brian Simkins, Carolyn Arote, Alan Georke, Andy Manos and John Nally. The meeting was called into session at 5:12 by President Peter Gerazounis.

<u>Programs</u>- Steve was deciding on the speaker for the February meeting, since out Distinguished Lecturer had backed out. He had two choices, one being a LEED lecture and one being on IAQ. It was voted that LEED should be this months topic, and that we should try to pre-book the IAQ lecture for early next year.

<u>Golf Outting</u>- The event has been booked as far as time and date is concerned, and we would discuss in February how we plan to move forward in booking the foursomes and donations. We need to look at Sponsorship to help cover the increasing cost of the even.



<u>Resource Promotion</u>- Steve Giammona stated that we currently have \$3,500 in Resource Promotion monies. We still have a long ways to go, but in March he plans the real push, and phone calls to begin. He believes we will make the target.

<u>Membership</u>- Carolyn Arote discussed that she has not gotten many upgrades this year. We are hoping that society makes it possible to upgrade on line, which currently you can not do.

<u>Treasurer-</u> Nancy Roman reported that our Commerce account has \$9,961.00 and the Merrill Lynch account has \$7,805.00. This has been described as lower than usual, and we need to make sure it does not get much lower.

<u>Student Activities</u>- Brian Simkins Reported the students were off for winter break in January, so there is not much activity at all. February is Student Activities Night, so hopefully a few more students will attend. As for the scholarship we usually give out we will be looking at all applications we get, and then deciding by vote who the recipient will be. Brian will also be looking into sending an e-mail to the membership asking if they want to be added to a list of people students can contacts when graduating and looking for a job.

Chapter Technology Transfer- Andy Manos reported he is continuing to hand out the Surveys each month.

Historian- Rich Gerbe reported we are on course for PAR score this year.

<u>Webmaster</u>- Rich Gerbe plans on fixing the small glitches with the Website, but so far most people seem to like the new and improved look. He was looking into one possible bill that might still be outstanding.

#### Carolyn Arote Chapter Secretary

## Membership

We are pushing for people to upgrade their membership this year. It only takes a few minutes of your time so please fill out the form today. Please go to <u>www.ashrae.org</u> and fill out your application today. Also if you have any friend in the industry you would like to get involved please bring them down to the next meeting. All are welcome, and all it takes is one meeting to see the advantages being a member has to offer.

Carolyn Arote Chapter Secretary

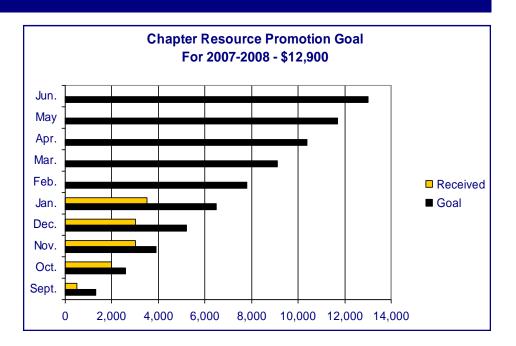
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## **Research Promotion**

Contributions can be mailed to:

Mr. Steven Giammona, P.E. Ashrae Research Promotions c/o CAMERON ENGINEERING & ASSOCIATES, LLP 100 Sunnyside Boulevard, Suite 100 Woodbury, NY 11797

Steven Giammona, P.E. Research Promotion Chairman



## Long Island Chapter - Past Presidents

1958	H. Campbell, Jr. PE	1983	Leon Taub, PE
1959	Clyde Alston, PE	1984	Raymond Combs
1960	Sidney Walzer, PE	1985	Edward W. Hoffmann
1961	Sidney Gayle	1986	Jerome T. Norris, PE
1962	William Kane	1987	Abe Rubenstein, PE
1963	Louis Bloom	1988	Michael O'Rouke
1964	Milton Maxwell	1989	Mel Deimel
1965	Will Reichenback	1990	Robert Rabell
1966	Joseph Minton, PE	1991	Gerald Berman
1967	Irwin Miller	1992	Donald Stahl
1968	Walter Gilroy	1993	Ronald Kilcarr
1969	Charles Henry	1994	Jerald Griliches
1970	William Wright	1995	Walter Stark
1971	Louis Lenz	1996	Joe Marino
1972	Ronald Levine	1997	Norm Maxwell, PE
1973	Henry Schulman	1998	Alan Goerke, PE
1974	Myron Goldberg	1999	Frank Morgigno
1975	John N. Haarhaus	2000	Michael Gerazounis, PE
1976	Richard K. Ennis	2001	Ray Schmitt
1977	Kenneth A. Graff	2002	Steven M. Stein, PE
1978	Evans Lizardos, PE	2003	Andrew Braum, PE
1979	Albert Edelstein	2004	Claudio Darras, P.E.
1980	Ralph Butler	2005	Craig D. Marshall, P.E.
1981	Robert Rose, PE	2006	John Nally
1982	Timothy Murphy, PE		



## **Student Activities**

Our next Student Activities night is this February please help make this a successful event by inviting all engineering students to attend. A free meal always helps.

It's that time of year again when students start hitting their Carrier Services offices looking for you. Please let me know if you have internships available and we will help you find candidates. This is a great opportunity for you and our young engineers to see what our industry is all about. Please let us know what we can do to help make this a successful process for everyone.

I had the pleasure of meeting Thomas Fields, PE with Lilker Associate last ASHRAE meeting and he introduced me to the ACE Mentor Program. The ACE Mentor Program of Greater



New York helps students discover the rewards of careers in architecture, engineering and construction. Since founding, they have grown from three teams with a total of 90 students mentored by professionals from 17 firms to 21 teams involving 518 students and 230 mentors from New York City, Long Island and Westchester.

I look forward to learning more about ACE and to see how ASHRAE and ACE can work together in the future. Please visit <u>http://www.acementor.org/610</u> to learn more.

I am on my way to a Science Fair. This is a great opportunity to have ASHRAE literature available. There is plenty of grade appropriate information please let me know if you need any material or if you would like us to stop by and drop it off.

Please visit: <u>http://www.ashrae.org/students/</u> for more information on all the Student ASHRAE activities and opportunities.

Brian Simkins Student Activities Committee



## **CTTC - LIFE CYCLE COST ANALYSIS**

Engineers and other business decision makers often perform complicated analyses to develop detailed owning and operating costs (think of energy simulations or in-depth construction cost estimates), yet make final decisions based on simple economic tools such as "simple payback." This method only works if an alternative has a short or long payback period compared to some baseline. It does not account for inflation; the cost of borrowing money; variations in periodic costs and savings; salvage value; future one-time costs to maintain or repair equipment; nor opportunity costs. Most importantly, simple payback omits an important benefit; it does not account for savings that occur after the initial equipment cost is recouped (e.g. savings after the simple payback period).

After all of the hard work is done developing accurate owning and operating costs-including installation costs, annual energy costs, maintenance costs and other recurring costs-economic decisions should be based on a comparably robust economic tool such as Life-Cycle Cost Analysis (LCCA). As the name implies, LCCA looks at more than just the first costs and savings that occur up to the time of simple payback, it looks at all costs and benefits that occur over the project's lifetime. It also accounts for variations in the magnitude and timing of recurring costs. By ensuring that all economic factors have been considered, LCCA reduces financial risk and affords decision makers with a more definitive picture of the relative benefits and costs of alternatives. LCCA is based on the time value of money, which recognizes a dollar to-day is worth more than a dollar a year from now. The future value *F* of an amount *P* invested today at interest rate *i* is *P* (1+*i*). After two years, the investment will be worth P(1+i)2, and after *n* years, *F* equals P(1+i)n.

The same formula can be inverted to determine the present value *P* of a payment *F* that will be made n years in the future: P = F/(1+i)n. This equation is the heart of the LCCA method. Essentially, the life-cycle cost of a project is determined by totaling up the present value of all future payments associated with it. The life-cycle cost is equal to the amount of capital that must be invested today to make all of the future payments at the time they are required. In the LCCA method, the rate at which an investment could earn interest is called the discount rate because it is the rate used to discount future payments to present value.

Chapter 36 of the 2007 ASHRAE Handbook HVAC Applications Volume includes a simple example of this analysis. A municipality is evaluating two methods of providing chilled water for cooling an office building–Alternative 1, to purchase chilled water from a central chilled water utility service in the area, and Alternative 2, to install a conventional chiller plant. Since the municipality is not a tax-paying entity, the evaluation does not need to consider the impact of taxes.

The first-year price of the chilled water utility service contract will be \$65,250 per year, and is expected to increase at a rate of 2.5% annually.

The expected life of the chiller and cooling tower, which will cost \$220,000, is 20 years. A major overhaul (\$90,000) of the chiller is expected to occur in year ten. Annual costs for preventative maintenance (\$1,400), labor (\$10,000), water (\$2,000) and chemical treatments (\$1,800) are all expected to keep pace with inflation, which is expected to average 3% annually over the study period. The annual electric cost (\$18,750) is expected to increase at a rate of 5% per year. The municipality uses a discount rate of 8% to evaluate financial decisions. Assuming a study period of 20 years, which option has the lowest life-cycle cost?

The tables shown compare the two alternatives. Note that for Alternative 1, the only cost is for the chilled water contract. The cost in year two, \$66,881, is 2.5% higher than in year one to account for inflation. To determine the present value of the year two payment, the discount rate of 8% is used per the given formula [F/(I+i)n=P] or \$66,881/(1+0.08)2=\$57,340. The present values of the other payments are calculated in a similar manner.

Alternative 2 includes the immediate (year zero) cost of purchasing and installing the chiller, as well as the cost of energy and maintenance, and the major plant renovation required in year 10. The present value of each payment is calculated using the discount rate as above. For the values provided, alternative 1 has a 20-year life-cycle cost of \$769,283 and Alternative 2 has a 20-year life-cycle cost of \$717,100. Therefore, Alternative 2 is the more attractive option in this example.

## CTTC - LIFE CYCLE COST ANALYSIS (Cont'd from Page 9)

Year											
	0	1	2	3	4	5	6	7	8	9	10
First costs		\$-	S-	S-	ş-	S-	\$-	S-	\$-	\$-	S-
Chilled water costs		\$65,250	\$66,881	\$68,553	\$70,267	\$72,024	\$73,824	\$75,670	\$77,562	\$79,501	\$81,488
Replacement costs		\$-	\$-	S-	\$-	S-	\$-	S-	\$-	\$-	S-
Maintenance costs		\$-	S-	S-	\$-	S-	\$-	S-	\$-	\$-	S-
Net Annual Cash Flow		\$65,250	\$66,881	\$68,553	\$70,267	\$72,024	\$73,824	\$75,670	\$77,562	\$79,501	\$81,488
Present Value of Cash Flow		\$60,417	\$57,340	\$54,420	\$51,648	\$49,018	\$46,522	\$44,153	\$41,904	\$39,770	\$37,745
						Year					
		11	12	13	14	15	16	17	18	19	20
First costs		\$-	Ş-	S-	\$-	\$-	\$-	S-	\$-	\$-	Ş-
Chilled water costs		\$83,526	\$85,614	\$87,754	\$89,948	\$92,197	\$94,501	\$96,864	\$99,286	\$101,768	\$104,312
Replacement costs		\$-	S-	S-	\$-	\$-	\$-	\$-	\$-	\$-	S-
Maintenance costs		\$-	S-	S-	\$-	\$-	\$-	\$-	\$-	\$-	S-
Net Annual Cash Flow		\$83,526	\$85,614	\$87,754	\$89,948	\$92,197	\$94,501	\$96,864	\$99,286	\$101,768	\$104,312
Present Value of Cash Flow		\$35,823	\$33,998	\$32,267	\$30,624	\$29,064	\$27,584	\$26,179	\$24,846	\$23,581	\$22,380
	\$769,283										

Alternative 1: Purchase chilled water from utility

#### Alternative 2: Install chiller and tower

Year 0 1 2 3 4 5 6 7 8 9 10 \$220,000 \$-S-5-\$-5-\$-\$-\$-S-First costs 5-\$19,688 \$21,705 \$23,930 \$26,383 \$27,702 \$29,087 \$18,750 \$20,672 \$22,791 \$25,127 Energy costs \$90,000 Replacement costs S-\$-\$-\$-\$-5-\$-\$-\$-\$15,200 \$15,656 \$16,126 \$16,609 \$17,108 \$17,621 \$18,150 \$18,694 \$19,255 \$19,833 Maintenance costs Net Annual Cash Flow \$220,000 \$33,950 \$35,344 \$36,798 \$38,315 \$39,898 \$41,551 \$43,276 \$45,077 \$46,957 \$138,920 Present Value of Cash Flow \$220,000 \$31,435 \$30,301 \$29,211 \$28,163 \$27,154 \$26,184 \$25,251 \$24,354 \$23,490 \$64.347 Year 15 17 11 12 13 14 16 18 19 20 First costs \$32,069 \$30,542 \$33,672 \$35,356 \$37,124 \$38,980 \$40,929 \$42,975 \$45,124 \$47,380 Energy costs Replacement costs Maintenance costs \$20,428 \$21,040 \$21,672 \$22,322 \$22,991 \$23,681 \$24,392 \$25,123 \$25,877 \$26,653 Net Annual Cash Flow \$50,969 \$53,109 \$55,344 \$57,678 \$62,661 \$65,320 \$68.099 \$71,001 \$74.034 Present Value of Cash Flow \$21,860 \$21,090 \$20,350 \$19,637 \$18,951 \$18,290 \$17,654 \$17,042 \$16,452 \$15,884 \$717,100 20-year Life Cycle Cost

## Andrew Manos

Chapter Technology Transfer Committee Chair

## **CLASSIFIEDS**

Bladykas Engineering, P.C. is seeking talented engineers and designers for HVAC, plumbing and fire protection system design. The firm offers a fast-pace, multi-project environment with a broad range of interesting and challenging projects. All experience levels considered. AutoCAD proficiency required. Unlimited growth potential. Competitive salary and benefits. Close proximity to LIRR and major highways. Bladykas Engineering, P.C., 25 Newbridge Road, Suite 210, Hicksville, NY 11801. Fax: (516) 433-4944, info@Bladykas.com

Lilker Associates Consulting Engineers, P.C is currently seeking junior and mid-level Mechanical/HVAC Engineers for our Long Island Office. Due to expansion and growth, we are in need of talented, motivated individuals who seek a friendly working environment with opportunities for professional advancement to work on a wide variety of interesting projects. We offer very competitive salaries, medical and dental benefits packages, 401K plan and other amenities. Our LI office is conveniently located right off the Long Island Expressway in Melville. Candidates interested in this position should send their resume and cover letter by fax to (212) 842-0482 or email to info@lilker.com, attn: Human Resources.



#### Page 11

#### THE LONG ISLAND SOUNDER



boiler

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## ADVERTISEMENTS

VRV.-WI

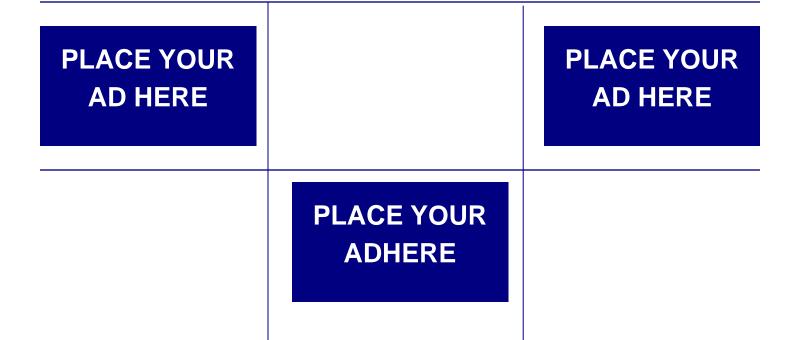
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866-4DAIKIN



If you would like to place an advertisement in The Long Island Sounder please contact our Chapter Treasurer, Ms. Nancy Román @ 516-568-6500 or via email nroman@adehvac.com for further details. Thank you.