

PILE DRIVING CONTRACTORS ASSOCIATION

P.O. Box 19527 Boulder, CO 80308-2527 Tel: (303) 517-0421 Fax: (303) 443-3871 www.piledrivers.org

Email: membership@piledrivers.org

Published by: Lester Publications, LLC 2131 NW 40th Terrace - Suite A Gainesville, FL 32605 Main Line (877) 387-2700

President Jeff Lester | (866) 953-2189

General Manager Michael Winters I (877) 387-2700

Sales Director Bob Neufeld | (866) 953-2189

Managing Editor Lisa Kopochinski | (800) 481-0265

Art Director Jennifer Karton | (877) 953-2587

Graphic Designer Amanda Penner | (888) 953-2190

Advertising Representatives Debbie Angers, Debbie Keele, Rod Kulczycki, Louise Peterson, Michelle Raike

2004 Lester Publications, LLC. All rights reserved. The contents of this publication may not be reproduced by any means, in whole or in part, without the prior written consent of the publisher.

Printed in Canada Please recycle where facilities exist.

Visit the PDCA Web site at www.piledrivers.org.

For reprint information, contact Lisa Kopochinski, editor, at (800) 481-0265. For a media kit, visit www.piledrivers.org.

Piledriver is published quarterly.
Please contact us by mail at
P. O. Box 19527, Boulder, CO 80308-2527
Phone: 303-517-0421 | Fax: 303-443-3871
or by E-mail at membership@piledrivers.org.

Statements of fact and opinion are the responsibility of the authors alone and do not imply an opinion on the part of the officers or members of the Pile Driving Contractors Association. All rights reserved. Materials may not be reproduced or translated without written permission. Direct requests for reprint permission should be made to the Executive Director of the Pile Driving Contractors Association.

The subscription rate for members is \$18 which is included in the annual dues. The U.S. subscription rate for non-members is \$36 for one year and \$72 for two years.

Canadian subscribers: add \$5 per year. All other non-U.S. subscribers add \$10 per year.

PILEDRIVER

The Official Publication of The Pile Driving Contractors Association | Spring 2004 vol. 1, No. 2

Contents

Letter from the President By Wayne E. Waters	2
by Wayne L. Waters	∠
2004 PDCA Board of Directors and Committee Chairmen	1
and Committee Chairmen	4
Letter from the Executive Director By Tanya Goble	
PDCA 2003 Project Spotlight: Project of the Year: Metro Wastewater	
Treatment Plant, St. Paul, MN	10
The Rising Cost of Steel	16
Seismic Response of Driven Batter Pipe Pile Foundations	21
Vibratory Driver/Extractor Overview	27
Benefits of Driven Pile	32
Ed Waters and Sons Hosts Students	35
Member Profile: CS Marine Constructors	36
New Members	
Calendar of Events	39
Advertiser Index	40





COVER:

PDCA Project of the Year: Metro Wastewater Treatment Plant, St. Paul, MN. Photo courtesy of AET.