The Wall Journal™

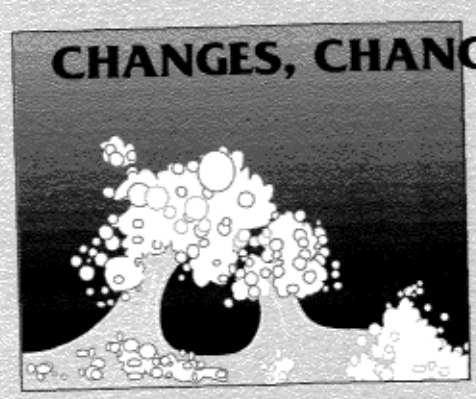
The International Journal of Transportation–Related Environmental Issues

7

May/June 1993

In This Issue...

It's been a wild and rocky boat ride for the first 6 issues, but "The Winds of Change Are Blowing...". Following are some of them:



1 We're expanding our coverage...

In addition to transportation-related noise and vibration, we are opening our pages to articles and paper summaries on the issues of Air Quality, Wetlands Conservation, Land Use, Hazardous Material Transport and any other environmental concerns associated with transportation.

(see page 2)

2 We're going Bi... 6 Bi-Monthly Issues a Year

JANUARY/FEBRUARY
MARCH/APRIL
MAY/JUNE
JULY/AUGUST
SEPTEMBER/OCTOBER
NOVEMBER/DECEMBER

More pages, not less. More articles, more features, more departments, more advertisers...and more time to put together the best Wall Journal we can. We've been spending too much time in just trying to get the Journal out of the shop.

Please read Editor's Corner on page 2 for details of the now and coming changes in The Wall Journal.

3 Departing Guest: *Soren Pedersen*

*(See **Letter**, page 11)*

4 Arriving Guest: *Roger Wayson*

(See article, page 13)

5

(See page 12)

Also In This Issue ...

We think that Steve Fehr, reporter for The Washington Post, wrote a well-informed article on Interstate Traffic Noise in the Nation's Capital Area, and we reprint it here for our readers. Starts on page 4.

The Wall Journal

The International Journal of Transportation-Related Environmental Issues

Volume Two, Number 7
May/June, 1993

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Submissions of papers, articles, letters, and photographs for publication should be addressed to The Wall Journal, P.O. Box 1286, Stafford, VA 22555-1286.

Editor
El Angove

Director of Publications
John G. Piper

All material submitted becomes the property of The Wall Journal, and may be edited for length, clarity and accuracy. Material will not be returned without special arrangements prior to submission. The Wall Journal will not be responsible for lost or damaged materials.

Published articles, comments, letters, papers and advertisements do not necessarily represent the views and/or endorsements of The Wall Journal. The authors of submitted material are solely responsible for the truth and accuracy of their submissions, and The Wall Journal cannot be held liable for any damages suffered by our readers as a result of their use of published material.

Circulation is made to government agencies, consulting engineers, scientists, universities, contractors, vendors and others with an interest in transportation-related environmental issues.

Subscription and advertising information are shown on the back cover page 16.

* * * * *

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Printed in the U.S.A.

Editor's Corner

by El Angove

We've splashed up the front page a bit in this issue to focus your attention on some important changes in the way we will be doing business in the foreseeable future.

First, we are not going to limit ourselves to traffic noise as the only transportation-related environmental issue, although it is certainly the most 'visible' of all. Many of you noise analysts are already wearing an 'air quality hat' as well as your 'noise hat'. Others of you are very much involved with wetlands concerns along with your noise abatement duties.

The Environmental Protection Act enacted by Congress in 1972 stipulated that we address the environmental concerns of "air, noise and water pollution'. It appears that a great many of our readers have interest in one, two or all three of these environmental concerns, and we invite you to use The Wall Journal for your forum. Please let us hear from you.

Second, several things have forced us to go to every-other-month publishing. Our advertisers (bless 'em) are buying so much space that 12 pages won't carry it. This means we have to go to 16, 20 or even more pages to space out the ads and add more editorial content. And that takes our staff (me) beyond the capability of turning out an issue every month.

Also, we need more time to search out and develop new stories, gather more factual material, and encourage more state and federal highway officials to contribute items which will be of interest to all.

Lastly, it simply costs a lot of money to put out a monthly publication. We can bulk mail a 20-page copy for the same price as a 12-page issue. Our printing cost will be higher per issue, but bi-monthly publication will cut cost about 40%. Postage and printing are our two principal costs and are the obvious nominees for cost-cutting. But, that has a further collateral benefit — the bi-monthly publication , which will permit an expanded format and greater variety of content.

We want more photographs, more charts and graphs, more pictorial displays. But, you will have to help us. We are almost totally reliant on our readers to supply the articles and photography which give life to The Journal.

We had a number of articles and features planned with Soren Pedersen. His articles on the Product Approval Process got a large response from our readers; Soren said he was deluged with mail. I hope we can get Soren back as a regular contributor in the not-too-distant future. Thanks very much for your past good works, Soren.

The good Dr. Roger Wayson will be with us next issue (and three or four more) with his classroom-oriented articles on the fundamentals of noise. This series is intended to provide entry-level education in acoustics for those of our readers who have little or no knowledge of the subject.

I hope we can persuade Roger to provide some upper-end dissertations on highway acoustics as well. ■

Next Issue: No. 8, July/August

PennDOT's I-476 – The "Most Environmentally-Sensitive Highway"

The Gore Hill Freeway – Design Award-Winning Urban Highway in Sydney, Australia

The Fundamentals of Noise – By Dr. Roger Wayson

And More – Hopefully, a Lot More. You have more than a month to get your Stories and Articles in.

Reader Registration is Important – See page 15

ON THE FLORIDA FRONT

By Win Lindeman, Florida Department of Transporttation

(Ed. Note: In Issue No. 6, Win Lindeman wrote in this column about a noise barrier report available, as follows):

The Price is Up!

Along with everything else, the price of sound barrier walls in Florida has risen over the past year. Based on an evaluation of noise barriers constructed in 1992, the average noise barrier is now costing the Florida Department of Transportation approximately $16.50 per square foot installed. In a report issued January 1, 1993, Win Lindeman noted that the increase from $15.00 per square foot in 1991 to $16.50 will be used in future cost estimates until new data come in to support a change. For a copy of the report, "Florida Noise Barrier Status Report", write me at FDOT, 605 Suwanee St., M.S. 37, Tallahassee, FL 32399-0450 or call me at 904 488-2914.

(Since many of our readers are asking what noise barriers cost across the country, we felt we ought to get a copy ourselves. The following is our summary of the report, including a tabulation of the barriers).

Memorandum

Date: January 1, 1993

From: Win Lindeman, Environmental Administrator

Subject: 1993 Florida Noise Barrier Status Report

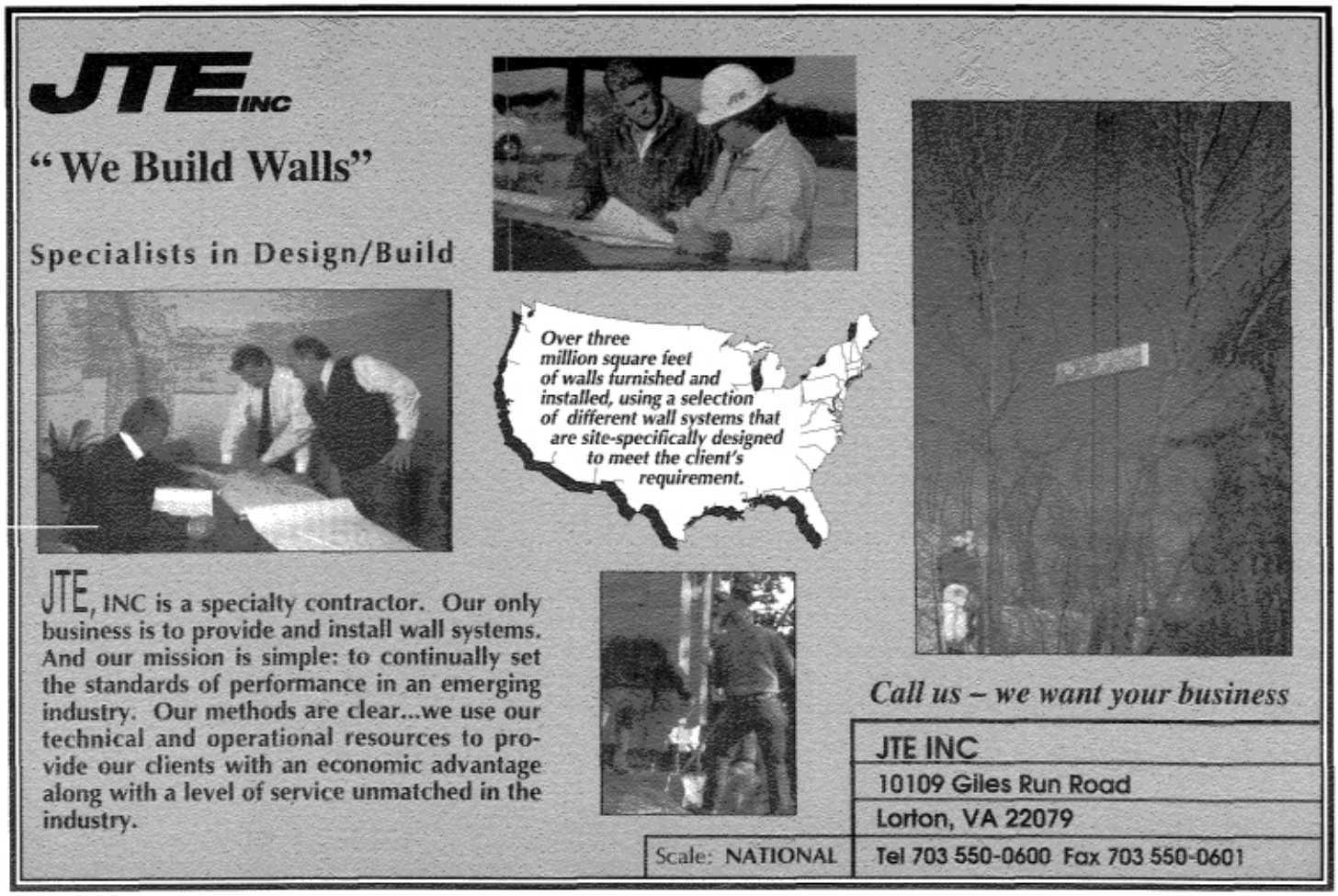
The purpose of this report is to update those noise abatement efforts that are complete (or nearly so) at this time. A special thanks goes to Ken Campbell, District 4 Noise Specialist, for keeping me abreast of the many projects going on in that area. While additional barriers are planned or just starting construction, the final dimensions and/or costs are unknown and therefore not included in this report.

The report contains information on physical dimensions of each barrier; the cost of each barrier and the percentage of the total construction project cost; job number and location; the contractor; existing background noise levels without the wall and predictions related to future noise levels with and without the wall; construction dates; measured effectiveness (where known); and any general information of value.

To date we have built 36 noise barriers with a total length of approximately 25,176 meters (82,543 feet), or 25.2 km (15.6 miles), at a total cost of $17,453,577. A 'typical' FDOT noise barrier is a precast concrete structure about 4 meters (13 feet) high, 699 meters (2,293 feet) long, costs $173/m^2 ($16.26/ft.^{2}) and averages $484,822. The cost per square meter of installed barrier has ranged from $19.70 to $248.76 ($1.83 to $23.11/ft.^{2}).

For cost projection purposes, FDOT has been using a figure of $161.00/m^2 ($15.00/ft.^{2}) installed price, regardless of the material type. Based on the most recent data, this number should now be elevated to $177.60/m^2 ($16.50/ft.^{2}). As additional data becomes available, this number may change.

(Continuation and table on page 12)



"Along Noisy Interstates, a Hue and Cry for a Wall"

By Stephen C. Fehr
Washington Post Staff Writer

This feature article appeared in the April 12, 1993 issue of The Washington Post and is reprinted here by special permission

In one Prince George's County neighborhood, the houses are so close to noisy Interstate 95 that the residents have to shout when they are talking outside. People don't have backyard picnics anymore and wouldn't dare open windows. Some sleep with earplugs.

Their homes in West Laurel [MD] are fewer than 200 feet from the busiest highway on the East Coast, and for 10 years, they have asked the state to build 20-foot-high concrete walls to muffle the noise from about 145,000 cars and trucks a day.

"It's the most frustrating thing in the world to live with this every day and not get anyone to listen to you," said Mary Ann Cookerly, whose family bought its home in 1967. I-95 opened four years later on a route that was much closer to Cookerly's neighborhood than had been planned.

The battle for noise barriers taking place in Cookerly's neighborhood is being fought in dozens of other neighborhoods along almost every interstate highway in the Washington area. The demands for barriers, which have increased as suburban traffic has gotten worse in the last decade, reflect a grass-roots effort that unites residents and puts pressure on officials who have to explain why some neighborhoods get walls while others do not.

"It's a major issue because as traffic volume increases, the noise impact on a neighborhood grows," said Virginia Transportation Secretary John G. Milliken, who has rejected a request from his own neighbors in Arlington [VA] for noise barriers along Shirley Highway. "The noise is obtrusive, affects the quality of life, and people just don't like it."

At a time of tight government budgets, the West Laurel neighborhood is among the lucky ones: Maryland Gov. William Donald Schaefer joined about 50 residents to hear the noise in Cookerly's back yard on April 2 and announced -- to those who could hear him -- that the state finally would build barriers there at a cost of $2 million.

"I am very sympathetic to those neighborhoods that were there before the road was built," said Schaefer, who said he often drives to neighborhoods unannounced to listen to road noise. "But the roads and bridges aren't in the best shape. We've got to be careful how we spend our money."

The push by neighborhoods for noise barriers is forcing officials to stretch limited highway budgets. Virginia and Maryland officials say they do not have enough money to build and maintain roads, but each state is spending $5 million to $15 million a year on barriers to placate residents, some of whom knew there would be highway noise when they bought their homes.

"The people are putting the squeeze on," said Robert Armstrong, the Federal Highway Administration's noise expert. "In many neighborhoods it's almost like a volcanic eruption, where it builds and boils and eventually spills over."

About 40 states have put in noise barriers, Armstrong said. Virginia has 50 miles of them, with nearly two-thirds of the total in Northern Virginia. Maryland has 30

(continued on page 5)

IN THE MAINSTREAM OF NOISE

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Along Noisy Interstates, *from page 4*

miles of barriers, mostly in the Washington and Baltimore suburbs, and plans to build an additional 15 miles of them in the next few years.

Noise barriers could be going up in the District [of Columbia] for the first time after a consultant's study is completed this year. The most likely location is along the Southeast-Southwest Freeway.

Every other interstate highway in the area already has barriers, which are distinctive in design, material and height.

They rise anywhere from six to 40 feet on the Dulles Toll Road near Wolf Trap Farm Park. Barriers ring the Capital Beltway and are going up along newly widened Route 50 between Annapolis and Washington. More than a decade ago, Arlington residents would not allow Interstate 66 to be built inside the Beltway without noise barriers; now, Fairfax County residents along I-66 outside the Beltway want them too.

Built of concrete, wood, metal, fiberglass, brick or earth berms, the barriers are designed to reduce noise levels by 10 to 15 decibels, which are the standard measure of noise. Though the walls are not aesthetically pleasing, they do seem to work.

"The difference is incredible," said Barbara Kendrick, whose Timberview neighborhood near I-95 in Howard County got barriers in 1991, after a seven-year fight. "Before, the trucks and brakes would hurt your ears. You couldn't even call the kids in for dinner."

Before an area can be considered for noise barriers, the states require that residents live near an existing interstate highway that will be widened or near a planned highway. An average sound level reading of at least 67 decibels — the noise one might near from a vacuum cleaner about 10 feet away — qualifies an area for consideration.

Many areas are noisy enough to meet that standard, but the houses are too far apart for barriers to be built at what the states consider a reasonable cost. Dividing the cost of the barriers by the number of houses, Virginia limits the cost of the barriers to $20,000 per home. Maryland's limit is $40,000 per home.

"We had to draw the line somewhere to make them affordable," said Ahmet Anday, the noise analyst for Virginia's Transportation Department.

That explanation isn't good enough for many residents, who question the fairness of the limits. They worry that the value of their homes will drop if they do not get noise walls, although studies on the subject are inconclusive.

Jim Hardin bought a home last year in the Cabells Mill section of Centreville [VA] that is fewer than 100 feet from I-66. The state is planning to widen the stretch of I-66 near Hardin's home, and the average noise is 73 decibels.

But the cost of building the barriers would be about $31,000 a home, which state officials say is too expensive. Other nearby neighborhoods — where homes are built closer together and the cost of barriers per home is lower — probably will get barriers.

"That just doesn't pass the common sense test," said Hardin, whose neighbors recently began a campaign to get noise barriers. Hardin said state officials told him when he bought the house that noise barriers would be built, but Anday disputed that.

"I can appreciate his frustration — we all can — but as responsible stewards of taxpayers' money we had to set a limit someplace," Anday said.

Virginia officials also get heat from residents because, unlike Maryland, the state does not allow barriers to be built along

(continued on page 11)

Southern Pine Barriers Reduce Cost And Decibels

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Two Announcements:

One Academic...

With this issue, I am proud to announce a new feature series to appear in The Wall Journal under the sponsorship of the TRB Committee A1F04. Dr. Roger Wayson, Associate Professor at the University of Central Florida and member of the A1F04 Subcommittee, will present a series of articles on Noise Fundamentals under the banner of the 'A1F04 Institute of Noise'.

We have long felt that a need existed for educating people who have an interest in transportation noise and its abatement but have never received any formal education in this area. The Wall Journal has provided us with a way to fill this need. We hope that you the readers will find these articles enlightening and interesting

Dr. Wayson's first 'lesson' begins in the next issue (No. 8) of The Wall Journal (see notice on page 13). Please let us have your comments. ■

One Comedic...

Just as The New Yorker would not be The New Yorker without those great cartoons, we felt that The Wall Journal should also add some light touches to contrast the serious professional demeanor of the papers and articles.

Consequently, an ad hoc A1F04 subcommittee was quickly assembled to propagate and promulgate a standard shortform designation for the ubiquitous but rarely observed creature referred to as "reference energy mean emission level".

Highway Subcommittee Chairman Ken Polcak has actually seen this elusive species in the field and has sketched its likeness on a cocktail napkin, which is reproduced on page 7. You'll be seeing more of this critter. ■

Domenick Billera may be reached by phone at 609 530-2834, or by fax at 609 530-3893.

More About the A1F04 Summer 1993 Meeting at Berkeley, California

It's not too late to return a completed vendor/sponsor form if you would like to reserve space at the July 11-14 Summer Meeting of the Transportation Research Board's A1F04 Committee. And, if you would like to enhance your firm's visibility and be given recognition in the conference program, you can sponsor a conference function at whatever amount affordable for your firm.

Each exhibit space will be approximately 60 square feet including a skirted 72" x 30" table, will cost approximately $175.00, and may be in place throughout the conference. Activities for sponsorship include a Welcoming Reception, breakfast and mid-morning coffee breaks, lunches, and buses for technical tours.

At this time, we are anticipating approximately 100 attendees from all parts of the country and possibly some international delegates. We would like your organization to participate by providing a vendor exhibit and/or sponsoring one of the scheduled activities.

For further information regarding exhibit space and/or sponsored activities, please contact Kash Gill, Julie Riffel, or James Nelson of Wilson, Ihrig & Associates, Inc. at:
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or fax (510) 652-4441.

We hope to see you in Berkeley. ■

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Reader Registration is Important
See page 15

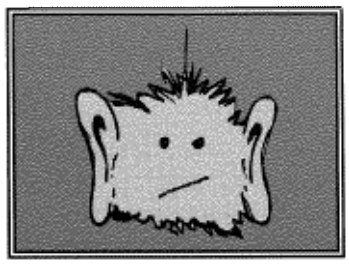
News Flash! Researchers from TRB Committee A1F04 Uncover New Facts on Endangered Species

Ken Polcak
Science Reporter

Recent research has uncovered new evidence on a previously little known creature with extraordinary and unusual characteristics. Thought to be endangered, the REMEL is neither mammal nor reptile, fish nor amphibian. Recent sightings in the states of Florida and California have led to detailed documentation of some specific characteristics and behavioral traits of these wild little devils.

The extent of their distribution worldwide appears much greater than once thought. The following entry from the latest edition of the Pseudo-College of Acoustical Knowledge "Field Guide to Unique and Unusual Wildlife", reprinted here by permission, describes this strange creature. (The sketches were made by your reporter from his personal sightings while on assignment along Florida's Interstate system).

REMEL ***(Remelis Decibelis).*** Of the Family Acousticus



a) Remel – Passive State

b) Remel – Agitated State

Description: An elusive, fuzzy creature of variable size and strength, which are tied strangely to the intensity of vehicular activity on roadways within their habitat. Though they exhibit no visible means of mobility, they have demonstrated the capability to move with a velocity in excess of 300 meters per second.

Their presence can only be detected through the use of sophisticated acoustical measurement equipment. Many subspecies are expected to exist , based on geographic location and other unknown factors.

Habitat: Along busy freeways, toll roads and other heavily trafficked highways.

Range: Currently identified only in the states of Florida, California, New Jersey, Georgia and Tennessee, but are likely to exist in all 50 states, and Puerto Rico. Also known to exist in the province of Ontario, Canada. Also thought to exist in Europe and Australia. In fact, they seem to be everywhere, if you just look for them.

Habits: They dwell in groups and can propagate wildly if unchecked. When agitated, they have been known to leap over tall obstacles and attack the ears of unsuspecting humans and other creatures.

Voice: They produce an irritating range of sounds, covering the full frequency spectrum.

Reproduction: Method unknown. Remels appear to be asexual, but to date have been too shy to be studied. More research is definitely needed. ■

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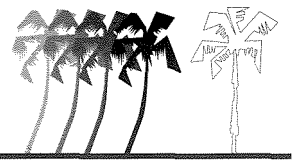
SUMMARIES OF PROFESSIONAL PAPERS

Presented at the TRB A1F04 Committee Summer Meeting in Honolulu, Hawaii July 8-11, 1990



This is a continuation of the chronicling of past research and test papers which were presented at the winter and summer meetings of the TRB A1F04 Committee onTransportation-Related Noise and Vibration. Unfortunately, abstracts of the papers from this particular session are not available. However, the paper titles and their authors provide a reference for those seeking information on a particular subject.

Parallel Barrier Effectiveness Dulles Airport Noise Barrier Project

Presented by: Bob Armstrong
Federal Highway Administration
400 Seventh St., NW, HEP-41
Washington, D.C. 20590
Tel: 202 366-2073
Fax: 202 366-3409

and: Gregg Fleming
US DOT/Volpe National Transportation Systems Center
Kendall Square
Cambridge, MA 02142
Tel: 617 494-2372
Fax: 617 494-2497

The Effects of Road Surface Texture on Traffic and Vehicular Noise

Presented by: George S. J. Glazier
Wilkinson Murray Pty Ltd
123 Willoughby Road
Crows Nest, NSW 2065
Australia
Tel: (61-2) 437-4611
Fax: (61-2) 437-4393

Reflective and Absorptive Noise Barrier Test

Presented by: Lloyd Herman
Vanderbilt University
P.O. Box 96-B
Nashville, TN 37235
Tel: 615 322-3696
Fax: 615 322-3365

Recent Research and Advancements in Sound Insulation Capabilities of Glazing and Windows

Presented by: Dana Hougland
David L. Adams Associates, Inc.
1701 Boulder Street
Denver, CO 80211
Tel: 303 455-1900
Fax: 303 455-9187

A Review of Current Building Codes Instituting Sound Insulation Requirements for Structures

Presented by: Dana Hougland
David L. Adams Associates, Inc.
1701 Boulder Street
Denver, CO 80211
Tel: 303 455-1900
Fax: 303 455-9187

Internal Consistency and Stability of Measurements of Community Reaction to Transportation and Other Noise

Presented by: Dr. R. F. Soames Job
Department of Psychology
University of Sydney
New South Wales, Australia
Tel: (61-2) 692-2859
Fax: (61-2) 692-4555

Analysis of Railroad Environmental Vibration and its Frequency Spectrum in Residential Area in China

Presented by: Ma Jun
Ministry of China
(Address, phone and fax not available. Contact The Journal if you wish us to find for you).

Road/Tire Contact Noise Research in Europe

Presented by: Claude Lamure
INRETS
109 Avenue Salvador Allende
Case 24-69675 Bron Cedex
France
Tel: (33) 78 26 90 93
Fax: (33) 72 37 68 37

Traffic Noise Attenuation Costs Based on Varying Noise Level Criteria for Major Freeway

Presented by: Karl Mezgailis
Roads & Traffic Authority of NSW
P.O. Box K189
Haymarket NSW 2000
AustraliaTel: (61-2) 218-6849
Fax: (61-2) 218-6872

Update of Traffic Noise Research Needs

Presented by: Ken Polcak
Office of Environmental Design
Maryland State Highway Administration
707 N. Calvert St., Room 312
Baltimore, MD 21202
Tel: 410 333-8072Fax: 410 333-3139

Active Noise Control

Presented by: Bela Schmidt
Louis Berger & Associates, Inc.
100 Halsted Street
East Orange, NJ 07019
Tel: 201 678-1960 Ext 471
Fax: 201 678-4420

NOTE: This summer session of the TRB A1F04 Committee was hosted by the Hawaii Department of Transportation. Pat Hironaga was the Conference Coordinator. He may be reached at: Tel 808 841-2876 or by fax at 808 847-5857.

Psychoacoustic Effects of a Rapid Shift in Frequency and Intensity of the Noise Source for Adjacent Sections of Transverse-Grooved & Open-Graded Asphalt

Presented by: David Still
Gannett Fleming, Inc.
P.O. Box 1963
Harrisburg, PA 17105-1963
Tel: 717 763-7211 Ext. 2428
Fax: 717 697-4591

Criteria for the Design of Sound Insulation in Homes Around Commercial Airports

Presented by: Eric Stusnick
Wyle Laboratories
2001 Jefferson Davis Highway, #701
Arlington, VA 22202
Tel: 703 892-6700
Fax: 703 892-2649

The Pros and Cons of Various Techniques for Financing Noise Remedy Programs

Presented by: Ronald Tulis
KPMG Peat Marwick
P.O. Box 8007
San Francisco International Airport
San Francisco, CA 94128
Tel: 415 571-7722

Roadway Noise Model Observations

Presented by: Emery W. Tuttle
Engineering-Sciences, Inc.
75 N. Fair Oaks, P.O. Box 7107
Tel: 818 440-6123
Fax: 818 440-6195

On Traffic Noise

Presented by: Paul Wang
Environmental Management Agency
County of Orange
12 Civic Center Plaza
Santa Ana, CA 92702
Tel: 714 834-2978
Fax: 714 847-4772

Road Covers on Elevated Structures

Presented by: C. L. Wong
Environmental Protection Department
Hong Kong Government
Wanchai Tower, 45/F
5 Gloucester Road
Wanchai, Hong Kong
Tel: 594-6522
Fax: 827-8200

Sound Power Levels of Road Vehicles Measured by the Square-Integrating Technique

Presented by: Koichi Yoshihisa
Faculty of Science and Technology
Meijo University
1-501 Siogamaguti, Tempaku
Nagoya, Japan 468
Tel: (052) 832-1151
Fax: (052) 833-5850

■

Notice to Suppliers

STATE OF WISCONSIN
DEPARTMENT OF
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The Wisconsin Department of Transportation is Seeking Proposals from Interested Vendors for Prequalification of Noise Barriers for the Department's Certification Method of Acceptance Program

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C.O. Materials - Materials Center
3502 Kinsman Boulevard
Madison, WI 53704
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This packet will contain:

1. Appendices specifying requirements which must be met to prequalify a noise barrier.

2. Form EL8(R) Product Evaluation.

3. Sample plans describing a freeway segment for which a noise barrier design must be submitted for the products to be prequalified and a sample plan for a bridge within the freeway segment. The design must show methods of attaching the barrier to the existing bridge.

Interested parties are encouraged to submit an application as soon as they have evidence of satisfactory compliance with required tests. To be considered for a specific letting the application must be received not later than fifteen weeks prior to the specific letting for which the vendor wishes to supply the noise barrier.

By order of:

Fred R. Ross, P.E.
Administrator
Division of Highways

Notice to Our New Readers

If this is the first copy of The Wall Journal you have received, welcome.
This is your introductory copy. If you find The Journal interesting,
and would like to receive further issues,
please read about Reader Registration on page 15.
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since we are in the process of updating our mailing database.
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The Bulletin Board

Remember This?

We ran this column in Issue No.5 with a reader's comments on a previous article, and the author's response. That's the way we hoped it would work. This column space can be reserved for you and others, in as much space as it takes to print every one. Essentially, it is a free personal ads column. If you have something to sell, or wish to buy something, or wish to exchange information, or want to know if anyone has done research on a certain subject, here's the place to get your message in front of more than 2,000 readers of every issue. Simply mail your message of 100 words or less to The Wall Journal, P.O. Box 1286, Stafford, VA 22555-1286. ■

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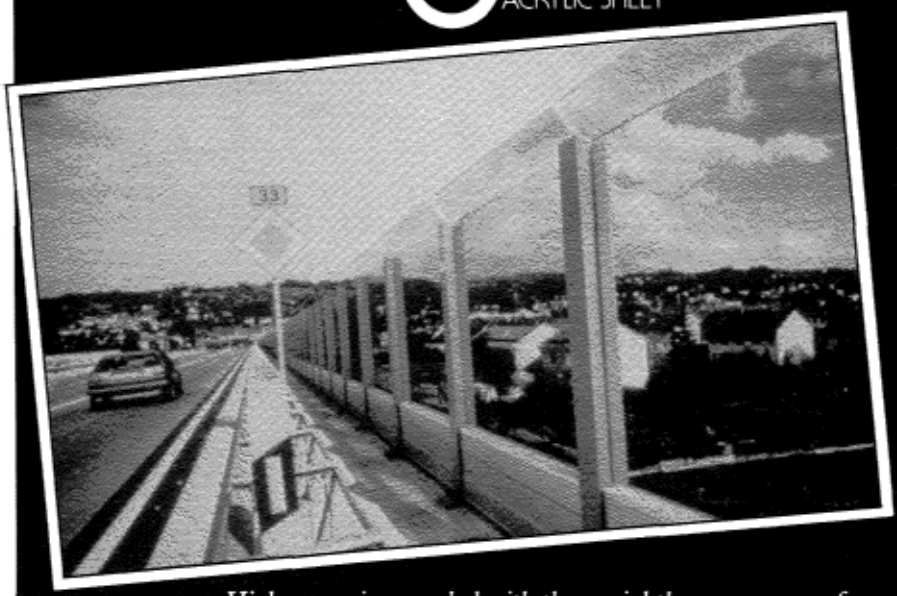

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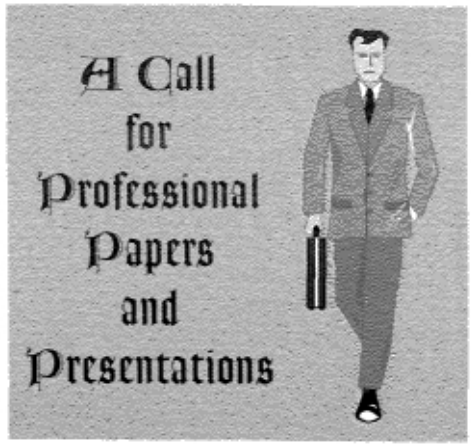

TRB ANNUAL MEETING
January 9 - 13, 1994
Washington, D.C.

Professional Papers and their Presentations on Transportation Noise (Highway, Aircraft, Railroad and Light Rail Transit) and Land Use Planning related to transportation noise, to be presented in the sessions held by TRB Committee A1F04 at the 73rd Annual Meeting of the Transportation Research Board.

This Call is directed to all professional personnel, both government and private, who are engaged in the issues of mitigating the adverse effects of transportation noise and vibration. This Call is not restricted to A1F04 Committee members.

Submit Papers to:
Ken Cook
TRB Staff Liaison
National Academy of Sciences
2102 Constitution Avenue, N.W.
Washington, D.C.
Tel. 202-334-2966

Information May Also be Obtained From:
Domenick Billera
New Jersey Dep't. of Transportation
Tel. 609-530-2831

Dr. William Bowlby
Vanderbilt University
Tel. 615-322-3683

Win Lindeman
Florida Dep't. of Transportation
Tel. 904-488-2914

James Nelson
Wilson, Ihrig & Associates
Tel. 415-658-6719

Ken Polcak
Maryland State Highway Administration
Tel. 410-333-8072

Along Noisy Interstates, from page 5

existing noisy highways where no improvements are planned. Maryland is one of 16 states with such a program, although the houses in those areas must have been built before the highways, as is the case with the West Laurel neighborhood.

Sherman W. Pratt, one of several South Arlington residents fighting for barriers along the Shirley Highway, said, "Our argument is that we are more impacted being an urban area than in outlying areas, where the sound walls are going up like mushrooms."

Even though it has more neighborhoods eligible for noise barriers than Virginia, Maryland does not have the money for them. Some residents, such as those in a section of Bethesda near the Capital Beltway, are offering to help pay the cost of noise walls through higher property taxes.

Transportation officials said they have little sympathy for people who move next to a highway or where one is planned and then ask the state to build noise barriers. State and local officials are getting numerous requests for noise barriers from residents along the planned Fairfax County Parkway; members of the Fairfax County Board of Supervisors say they are reluctant to get into the noise barrier business.

"Is it the responsibility of the public sector to spend a lot of money to protect you when you bought a home there?" asked Shiva Pant, Fairfax's transportation director.

Hal Kassoff, Maryland's highway administrator, said that in neighborhoods that existed before a highway was built, requests for noise barriers often come from people who recently have moved there.

"When you move next to a road," he said, "you need to be aware of the potential for future growth there." ■

Ed. Note: The above reprint is of the body text in the article only, and does not include photos or other information in a sidebar titled "Understanding Highway Noise", which shows some common sounds and their comparison with highway noise.

The Washington Post have asked us to notify our readers that further reprinting of this article must have the express written permission of The Washington Post. If you wish to have reprints or further information, please write us and we will forward your requests to our contacts at The Washington Post.

Letter from a Departing Correspondent

Soren Pedersen

Dear Friends:

As of April 26, I will be temporarily reassigned for one year to the Corporate Policy Branch of our ministry. With the pressures of raising a family, new duties and an increased workload, my spare time has been quickly eaten away. This leaves me with no other choice but to postpone the continuing series of articles I had planned to write for The Wall Journal. Hopefully, in a few months when the dust settles, I will be able to re-evaluate my time and possibly pick up where I left off.

Although I intend to reduce my involvement in the transportation noise field, I will still be working with Drs. William Bowlby and Roger Wayson at the Advanced Traffic Noise Modeling Courses. I also will chair the Canadian Acoustical Association's Annual Conference in Canada October 4-8, and intend to complete a few other projects I have been working on, such as the development of software to aid the noise barrier designer.

I would like to thank all of you for your support and assistance over the years and a special thanks to El Angove for making this much needed publication possible. If any of you need to contact me, please write or call El at The Journal and he will see that I get the message.

Sincerely,

Soren Pedersen

(Soren Pedersen is a former Design Development Analyst for the Ministry of Transportation of Ontario, Canada.)

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Florida Noise Barrier Status Report, *from page 3*

Editor's Notes:

The Table at right was condensed by The Wall Journal from data contained in Win's Noise Barrier Status Report. For each of the 37 projects listed, the full report has a full page of data and comments, including a detailed description of the location of each wall. If you are in Florida and wish to see these walls, it will be a simple matter to locate them on a street map.

Virtually all of the walls have aesthetic treatments of texture and color. A large number of these walls have a fractured-fin finish on the highway side with a raked finish on the residential side, in sandalwood color. Some walls are painted, some are stained. Other formliner finishes include brick, grapestake and cast-in graphics such as gulls and sailboats. All of this is detailed in the full report.

The total of these 36 walls is approximately 1,200,000 square feet.

(More from the Florida front on the following page).

BARRIER LOCATION	COMPLETED	TYPE	LENGTH	HEIGHT	AVG HT	$/SQ FT
I-75 By-Pass @ Tampa	1983	Earth Berm	1345'	8'		[3.37/cy]
I-375, St. Petersburg	1979	C.I.P. Concrete	882'	6'		2.67
I-375, St. Petersburg	1979	C.I.P. Concrete	535'	5'-10'		14.39
I-275, St. Petersburg	1980	C.I.P. Concrete	1492'	8'		13.66
I-175, St. Petersburg	1980	Concrete Block	901'	8'		1.83
I-275, St. Petersburg	1980	C.I.P. Concrete	1930'	8'		15.06
I-275, St. Petersburg	1984	Precast "Fanwall"	1331'	8'		17.40
I-375, St. Petersburg	1977	C.I.P. Concrete	1223'	3'-8'	8'	20.01
I-175, St. Petersburg	1978	C.I.P. Concrete	1780'	3'-10'	10'	14.35
I-275, St. Petersburg	1987	Armco Steel	295'	8'		20.00
I-95, Broward County	1991	Precast Concrete	3440'	12'-18'	15.5'	19.47
I-95, Broward County	1991	Precast Concrete	4825'	8'-21'	15.5'	19.47
I-95, Broward County	1991	Precast Concrete	2110'	12'-19'	16'	19.47
I-95, Broward County	1991	Precast Concrete	2103'	10'-18'	13'	19.47
I-95, Broward County	1991	Precast Concrete	540'	13'		19.47
I-95, Broward County	1992	Andres Prec Conc Comb	2600'	8'-22'		16.37
I-95, Broward County	1992	Andres Prec Conc Comb	5200'	11'-19'		16.37
I-95, Broward County	1992	Andres Prec Conc Comb	1838'	5'-8'		16.37
I-95, North Miami Beach	1988	Precast "Fanwall"	5661	3'-21'	15'	12.50
I-95, North Miami Beach	1988	Precast "Fanwall"	4000'		16.5'	12.50
I-95, North Miami Beach	1988	Precast "Fanwall"	1917'		13.3'	12.50
S.R. 60, Vero Beach	Inc.	Concrete Block	1102'	10'		12.30
S.R. 808, Boca Raton	1982	Concrete Block	1606'	12'		13.65
I-95, Palm Beach County	1992	Precast Concrete	720'	14'		23.11
I-95, Palm Beach County	1992	Precast Concrete	1875'	11'		23.11
I-95, Palm Beach County	1992	Precast Concrete	2575'	16'-22'	16.5'	12.80
I-95, Palm Beach County	1992	Precast Concrete	2750'	12'-17'	14.5'	13.29
I-95, Palm Beach County	1992	Precast Concrete	1090'	14'-18'	15'	13.29
I-95, Palm Beach County	1992	Precast Concrete	5205'	10'-17'	15.5'	13.29
I-95, Palm Beach County	1992	Precast Concrete	4400'	14'-17'	16'	13.29
I-95, Palm Beach County	1992	Precast Concrete	1930'	14'-15'	14'	13.29
I-95, Palm Beach County	1992	Precast Concrete	2575'	15'-17'	16'	13.29
I-95, Palm Beach County	1992	Precast Concrete	1150'	16'-17'	16'	13.29
I-95, Palm Beach County	1992	Precast Concrete	4133	14'-22'	16'	13.29
I-95, Palm Beach County	1992	Precast Concrete	2830	18'-22'	18'	13.29
I-95, Palm Beach County	1992	Precast Concrete	1520	12'-15'	13'	13.29
I-95, Palm Beach County	1992	Precast Concrete	3710	16'-17'	16.5'	13.29

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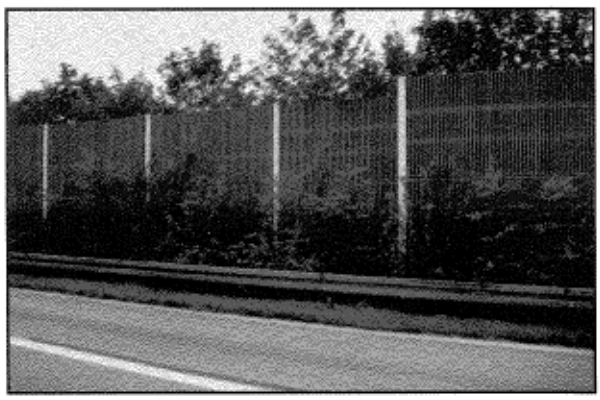

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(See page 15)

Announcements from Florida DOT

PC Version of STAMINA 2.0 Released in Florida

A long-awaited PC version of STAMINA 2.0 is now available from the Florida Department of Transportation. The program, called STAMINA 2.1, is the creation of Ken Graham, a computer engineer in the Office of Information Systems of FDOT. Some of the features of the program include menu driven screens; on-screen graphical display of the roadways, barriers and receivers; display printout on nearly any printer; updated reference energy mean emission levels (REMELs) based on Florida research; expanded speed range (20-70 mph); and compatibility with nearly any PC system that supports MSDOS 3.0 or higher.

Of course the OPTIMA program is also included in the package and it too can be seen on-screen as well as being printed off. This new PC version will be the only one approved for use on highway noise studies in Florida for the FDOT. To obtain a copy of this program along with the user's manual, write or call Ms. Elena Davenport,Florida Department of Transportation, 605 Suwanee St., M.S. 14, Tallahassee, FL 32399-0450, phone 904 488-3503. ■

Revised Wetland Evaluation Technique (WET) PC Program Available

A new version of the WET 2.0 computer program is now available through the Office of Information Systems in Tallahassee. Called WET 2.1 (isn't that a surprise?), the program contains a number of modifications generated by the U.S. Army Corps of Engineers. Part of the ENGMENU package, WET 2.1 can be requested from Ms. Elena Davenport by contacting her at 904 488-3503, SC 278-3503, or E-Mail SS942ED. As always, there is no charge to FDOT employees. Consultants or non-DOT employees interested in this program may contact Elena about cost and shipping information. ■

Florida Research Update Unveiled

In a report released January 1, 1993, FDOT identifies the environmental research activities of the agency. Entitled "Environmental Research Implementation Notebook", the 100-page report serves as an annotated bibliography of environmental research activities conducted by and for the FDOT. Covering areas such as noise, air, construction effects, stormwater runoff, ecology, and cultural resources, the report illustrates the scope of the research project, the results and any reports generated by the research. For a copy of this report, contact Win Lindeman at FDOT, 605 Suwanee St., M.S. 37, Tallahassee, FL 32399-0450 or call 904 488-2914. ■

Introducing Our Next Arriving Guest 'Speaker'

Roger L. Wayson, Ph.D., P.E.

Dr. Roger Wayson will join us in our next issue to present a series of paper lectures on Noise Fundamentals under the banner of the 'A1F04 Institute of Noise'.

Dr. Wayson has over 20 years experience in traffic noise analysis and control, first with the Texas State Department of Highways and Public Transportation, then with Vanderbilt University, and since 1990, on the faculty at the University of Central Florida. He has also served as a traffic noise consultant since 1985.

He has conducted noise studies and research for numerous state, federal and local clients, including specialized instruction in traffic and construction noise analysis. He recently completed a vehicle noise emission level study for Florida DOT.

Dr. Wayson chairs the Air and Waste Management Association Committee on Traffic Noise, is vice-chair of an ASCE transportation environmental committee, and is active in other ASCE and TRB noise-related committees. He is also a specialist in meteorological and air quality analysis.

Domenick Billera, chairman of the A1F04 Committee on Transportation-Related Noise and Vibration, together with other committee members, have persuaded Dr. Wayson to bring his classroom technique to the pages of The Wall Journal, to give our readers who are new to the field of noise abatement an introductory 'course' in the fundamentals of noise.

We trust that you will find this series interesting and educational. ■

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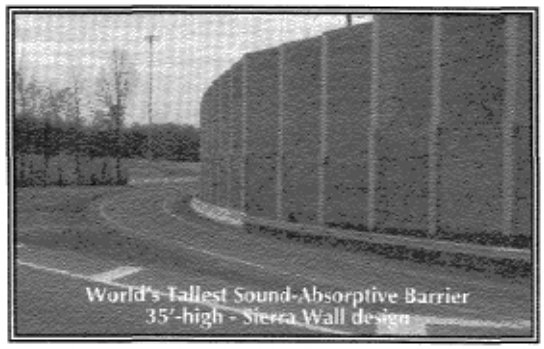

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* Directory Service

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We will be happy to furnish complete addresses, telephone and fax numbers, and name of personal contact for any of the above consulting firms.

This directory will be updated as may be required from time to time, and will be published frequently for the benefit of those government officials and others seeking the services of professional consulting engineers with expertise in environmental problems associated with transportation systems. ■

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Why Registration is Important

We are trying to reach a targeted audience of readers with a real interest in the environmental issues stated on the front page of The Journal. Only when you register, can we ascertain that you are one of those readers. More than that, we cannot afford to keep mailing issues to those persons with no interest in reading them, who probably toss the issue in the wastebasket. Also, we are required to verify our mailing list to advertisers (our principal financial support) who place their ads and spend their money expecting to reach attentive readers. One thing more, The Wall Journal mailing list will not be sold or otherwise made available to anyone for any purpose.

Who Pays and Who Doesn't

We wish we could circulate The Wall Journal free to anyone who requested it. However, simple economics prohibit that. The Wall Journal was conceived as a medium for better communications among government officials involved in the abatement of transportation-related environmental noise. We felt that charging a fee for this service would inhibit, rather than promote communication. Hence, the free subscription.

On the other hand, we felt that the private sector would be willing to pay a nominal subscription price for having access to this communication, and that vendors, contractors, manufacturers and others would pay to advertise their services, thus providing funding for the bare cost of publishing. Without that, all this is impossible.

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For **government officials**, simply copy this page and fill in the blanks in the box at right and fax or mail to us. Your free subscription will continue. For the **private sector**, please do the same, but also please put your check in the mail (see page 16). Thanks.

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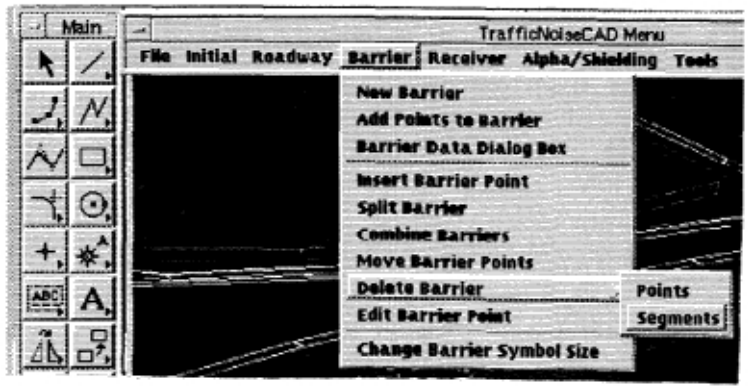
TrafficNoiseCAD
for Intergraph's MicroStation

Still creating STAMINA 2.0 files manually? Ever chased a bad coordinate? Wondered if the x-y-z values in a consultant's file were correct? Gotten lost in a sea of alpha factors? Tired of reading output files and scribbling Leq values on your plans? Want to visualize files as you create them?

Well, welcome to **TrafficNoiseCAD**. For starters, try viewing a current STAMINA file for a complex site -- in plan, elevation and 3-D. Graphically move an errant point. Run STAMINA. Display all Leq values on the drawing and make a quick laser print. Plot the roadway segment Leq data for a tough receiver on your drawing.



Now, create a new file with your digitizing table. No digitizer? Then, load a roadway design file (or DXF from other CAD software) and grab x-y-z points with your mouse. Fill in other data in pop-up dialog boxes. Point and click to graphically assign alpha factors. Done with your barrier design? Stretch the STAMINA barrier points to their proper heights. Produce a quick perspective view and give it to your artist for an accurate rendering. Take a long lunch, you've earned it.

Interested? Call us at **Bowlby & Associates, Inc.**, 2014 Broadway, Suite 210, Nashville, TN 37203-2425. Phone: (615) 327-8130, Fax: (615) 327-8137.
TrafficNoiseCAD works within your copy of MicroStation 4.0.x on 80386/87 or 80486 machines.

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