

Salt application rates, overall, averaged 160 tons of deicer per inch of snowfall. Each lane-mile treated required 13.4 tons. Cities experiencing heavy snow accumulation required 20.6 tons per lane mile.

A third of the cities polled stated that salt spreading equipment should be improved. Most want improvements in control and calibration of the equipment so that the application of the salt can be adjusted to the needs of the particular section of roadway.

Overall, those who have the responsibilities of keeping roadways usable, overwhelmingly endorse the use of salt. A total of 105 city officials said the benefits outweigh any negative side effects. Many said that they were ready to be quoted publicly, and none expressed opposition to the use of salt.

Reprint from *The American Magainze*

There is considerable disagreement as to whether there is a Federal interest in continuing the Federal-aid Secondary and Urban systems.

Although safety is of national significance, there is considerable controversy over the need for designated categorical safety funding to finance improvements.

Implicit in the development of Legislative concensus and the program thrust of FHWA is the recognition that our highway system has matured. The emphasis must now be on management of the system: assuring it is not allowed to deteriorate, improving system efficiency, improving operational techniques, improving safety. Over the last 15 years the FHWA has been promoting the systemic concept and developing technology and information needed for these management concepts.

By Dave Merchant



# MICHIGANITE



VOLUME XVI NUMBER 3

OFFICIAL PUBLICATION OF THE MICHIGAN SECTION OF THE INSTITUTE OF TRANSPORTATION ENGINEERS

## PRESIDENT'S COLUMN



LEBEL

This being my last opportunity to communicate with you through the MICHIGANITE, I thought I would review our accomplishments and disappointments and where I think we should be going in the future.

As a profession, our most significant obstacle is clearly the "drying" up of many state and federal safety program funding sources. As I indicated in our last issue, we perhaps should be focusing our efforts towards lower cost projects and activities with the highest "payoff" rather than directing our energies trying to preserve all programs at past levels. However, we MUST do a better job documenting those programs which are successful. We've been too complacent in the past - legislators will not support programs without objective documentation of their effectiveness. No one will do it for us. We must be aware of this need to work within the political process.

As a Section we were very active in support of the child restraint legislation which takes effect this April. We initiated and staffed public information booths and underwrote the purchase of several seats which were awarded in conjunction with these activities. In addition, we were active in the effort to convince our legislators that this law should be enacted and we intend to continue to support programs focusing on providing seats to the public at little or no cost. The Section Board has identified the entire activity as our official Section project. Our Technical Projects Committee, headed by Jon Crane, will summarize this project and we will submit it for award consideration to the district and international organization.

We have attempted to expand our meeting schedule, upgrade our technical programs, develop additional activities, include other locations as meeting site, experiment with luncheon meetings and keep meeting costs down. Based on the "feedback" we received, our experimentation has been successful. However, our meeting attendance is nowhere near where it should be. I am very concerned that if this trend is not reversed, the very fiber of our organization is in trouble and we will witness a general deterioration of all of our programs and activities. I view this need for increased participation in the Section activities as our greatest, immediate problem and challenge.

*Cont. on page 2*

## NEW SECTION BOARD ELECTED

At the Section Annual Meeting held at the Pontiac Silverdome on November 19, the 1982 Board was elected and sworn in. Robert DeCorte, a traffic engineer for the Automobile Club of Michigan, was elected President. The Vice-President will be the Transportation Engineer from the City of Troy, Richard Beaubien; and Ray Severy, the Assistant Director of Public Service for Lansing, will assume the duties of Section Secretary.

Two brand new names on the Board, but not new names around Section activities are Thomas R. Krycinski and Robert G. Lariviere.

Bill Lebel, our Immediate Past President, will stay on the Board and assist in the several duties in that capacity. Lebel's primary function will be to continue a project which he began two years ago--the Child Restraint Project. He will sit in on the Board meetings in an active role of advisor and chair the Nominating Committee.

Thomas R. Krycinski, Chief Planner for the Office of Highway Safety Planning, was elected Treasurer. Krycinski held the post of Director during 1981. Robert Lariviere will assume the position of Director at Large. Lariviere is presently employed by the Michigan Department of Transportation as a Transportation Engineer. He previously chaired the Public Relations Committee. Both Krycinski and Lariviere have been very active in public affairs and they bring much experience to their new positions on the Board.

Jack W. Hoving retained his position as Affiliate Director. Hoving is presently Traffic Operations Supervisor for the City of Grand Rapids.

## THANKS HOWARD!

At our Annual meeting in Pontiac, our Board of Directors presented Howard Cox with a plaque honoring him for serving the Michigan Section in the capacity of editor for the Michiganite for some 13 years. That is a long time, and like a line from a country western song goes: "We've had some bad times, and we've had some good times". Howard, you've contributed to the good times and we hope you'll display your plaque in a special spot with pride equal to the pride we've had in the work you've done for us. Your board, and we're sure the entire membership, gives its whole hearted thanks to you for the fine job you've done.



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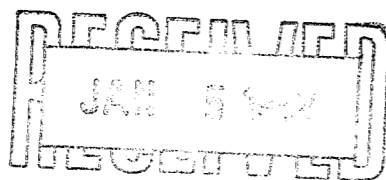
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Official Publication Michigan Section

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Membership - Mike Labadie  
Legislative - Tom Reel  
Public Relations - Bob Lariviere  
Program - Bob DeCorte

MICHIGAN SECTION ITE, TREASURER'S REPORT

|                            |            |
|----------------------------|------------|
| Balance: July 1, 1981      | \$4,266.62 |
| Receipts:                  |            |
| Dues                       | \$ 16.00   |
| Interest                   | 25.87      |
| July Meeting               | 3.00       |
|                            | \$ 44.87   |
| Expenditures:              |            |
| Postage                    | \$ 237.60  |
| Printing                   | 192.20     |
| Meeting                    | 433.58     |
| Safety Seat                | 45.75      |
|                            | \$ 909.13  |
| Balance: September 9, 1981 | \$3,402.36 |

Treasurer, Raymond O. Severy, P.E.

This newsletter is distributed to over 300 members and every county office in Michigan. Address communications regarding the Michiganite to the Editor: Robert V. DeCorte, 7441 Emerson Dr., Canton, MI 48187 313/453-3026.

EDITOR'S NOTE: The following is a letter from Bruce Madsen, Executive Director of the Traffic Improvement Association of Oakland County to the Director of the Michigan Department of Transportation.

At a recent meeting with the Executive Committee of the Traffic Improvement Association of Oakland County, our staff traffic engineer reported on activities and accomplishments of our countywide traffic engineering services project. During the discussion which followed, questions were raised regarding the decision to plant trees in the median strip of Telegraph Road between Square Lake Road and Fourteen Mile Road. Frankly, we found it incredible that these potentially lethal obstacles would be placed in the median of a high speed facility, particularly at a time when our county officials and many others are engaged in programs to remove roadside obstacles and provide for more "forgiving" recovery areas.

As you know, nearly 25 percent of traffic fatalities in Michigan involve vehicles which hit fixed objects. And, trees claim the highest number of casualties within the 17 categories of fixed objects - 153 fatal accidents and 4,558 personal injury accidents in 1979.

We certainly applaud the work of your department staff and the efforts of Bloomfield Township officials in having created a very attractive trunkline corridor. However, there are several other types of plantings which could have been used to produce the same esthetic qualities and which, at the same time, could serve as a more effective noise and glare barrier without posing the hazards which these trees will in another decade or so.

We are fully cognizant of the great hue and cry which would result from any attempt to remove the trees now in place. However, as I mentioned, all of us are genuinely concerned about this inconceivable highway "engineering" decision and strongly urge that staff involved in the design of future highway improvements be directed to plant no trees in roadway right-of-way and, instead, consider some of the many varieties of shrubs and bushes which have proven their worth as impact attenuators, noise and glare barriers and which would provide the esthetics that all of us appreciate.

SALT DEICING CUTS ACCIDENTS BY 75%

A study by The American City Magazine has revealed that four times as many vehicular accidents occur on streets untreated by deicing salts as on those protected by the deicing materials. It disclosed some vegetation damage caused by salt use, principally to grass and three cities had changed their tree-planting standards because of the deicing operations.

The survey, conducted by Research Director John Scott, covered 116 cities in 20 northern states that have a total population of nearly 10.7 million. Of these, 39 were in heavy snow-belt areas, with 50 inches of snow, or more, annually; 40 were in the moderate area, 30-49 inches; and 30 experienced light snow falls of less than 30 inches.

In the minds of those surveyed, the arguments against salt raised by environmentalists and ecologists cannot outweigh the benefits gained by making the roadways safe for traffic during dangerous snow and ice periods.

Every one of the cities used salt to some degree, 28% of the cities used salt exclusively. Sand came second, (47%) and calcium chloride was third, (37%).

Cities in heavy snowfall areas use sand as a supplement to salt, but never use sand exclusively.

We are at a critical point in the Federal-aid Highway program. Cost estimates show a need for at least \$248 billion over the next 15 years just to keep the 3.8 million miles of roads in this country at the same level of standards that existed in 1979. About \$190 billion would be needed for the Federal-aid systems. Revenues based on gas tax and road use are declining due to more fuel-efficient vehicles and a lesser growth rate than anticipated. At the same time inflation of construction costs has increased even more drastically than the cost-of-living. The Highway Trust Fund is due to expire September 30, 1984, and action is needed to extend it, modify, or otherwise provide funding for the Federal-aid Highway program.

Congress and the Administration are in basic agreement on some issues:

1. Needed Interstate system construction must be defined and then funded so that it will be completed.
2. The large investment in the Interstate must be preserved by providing (4R) funds for restoring, resurfacing, rehabilitation, and reconstruction of that system at an increasing level.
3. The 271,000 mile Federal-aid Primary system must be continued to link the States and Regions together and provide mobility and interstate commerce.
4. There is a continuing critical need to replace and rehabilitate substandard bridges.

*Cont. on page 12*



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We have and will continue to work toward up-grading and expanding of the MICHIGANITE. We have changed our format, which you have probably noticed, and have taken action to hold down costs. Publishing and mailing the MICHIGANITE is a significant expense; but the Board believes that it affords the greatest opportunity to communicate with our total membership. The Board recognizes that advertising revenue must be increased if we are to continue to publish a quality MICHIGANITE. Their support is essential. Suggest to vendors or other potential advertisers that we would like their support. The costs are nominal and continued vitality of the MICHIGANITE is in the best interests of all who service the transportation engineering community.

I would like to thank all who supported me these past years on the Section Board, particularly past and present officers and those who served on committees. What success we have, and will achieve, is absolutely dependent on the willing and active participation of our membership. I look back on my involvement as challenging and satisfying. I encourage you to ask yourself "Am I doing my part to sustain and advance my profession?"

HEY LOOK ME OVER!

Beginning with this issue, the Michiganite will sport a brand new look. Not that anything was wrong with the old look, but it just seemed like a good time to make a change.

With Howard Cox retiring as Michiganite Editor, we were forced to find a new printer. The one we selected made several suggestions based on our request for a quality, inexpensive and timely newsletter. Some of the suggestions include this tan, thinner paper. This met our most rigid specification: inexpensive.

We have created a separate page for our Section's Board, Calendar of Events, Committee Chairmen, the Table of Contents and a new feature, "Editorial". This space is reserved for you to tell all of your fellow members what you think about anything relating to ITE or "transportation" in it's most general terms. When you haven't told us what YOU think by writing us, then we'll fill in the space by telling you what WE think.

The advertisements have been moved around and placed where they will be more pleasing and better balanced. There is also a special group of articles taken from the newsletters of other Section's in an effort to let you know what is happening around other sections of ITE.

I know for a fact that there is a lot of writing talent out there in the transportation world. If you have some of it we would like to hear from you. If you have a suggestion about the technical programs, one of the committees, a new idea about a Section project or are the first to hear of a member's promotion, baby, wedding, or retirement, let us know so we can include it in the following issue. If you have any comments about this new look of the Michiganite, good or bad, we'd like to hear from you.

IMSA

Jere Meredith and Paul Fosburg of Grand Rapids, have been negotiating with the Office of Highway Safety Planning, and feel that IMSA will receive funding to conduct another school. These schools will be three days long and will be held in the following general locations, one in Grand Rapids, two in Detroit, and one in Northern Michigan. The target date for the first school is January 26-27-28, 1982, in the Holiday Inn, Farmington Hills, Michigan.

*Reprint from IMSA*

## NEW TRAFFIC SOFTWARE PACKAGES AVAILABLE

A substantial amount of resources has been invested in the development of various traffic simulation and optimization software. These resources can be justified on the basis of the fuel conservation potential of better operational techniques. FHWA has promoted the use of many of these software packages to State and local agencies. With the myriad of simulation and optimization programs available from FHWA, a brief description of the various packages follows. The programs descriptions that follow are in various stages of development:

(D) Developmental-Program functions are specified, the structure is designed, the program is coded, but there are currently no program users.

(T) Testing-Program development is completed and is being tested to determine it's validity and usefulness.

(O) Operational-Validated versions of the program are available and in use.

The models are generally categorized as Simulation or Optimization.

### A. Simulation Models

1. Microscopic (Models individual vehicles - for small areas)
  - a. NETSIM (O)-For urban networks to evaluate management strategies and signal timing alternatives.
  - b. INTEAS (T)-For freeway corridor evaluation and control strategies.
2. Macroscopic (models platoon vehicles - for larger areas)
  - a. TRAFLO (T)-For urban networks and freeways at lesser costs than microscopic.

- b. SIGOP & TRANSYT - Signal timing optimization programs to evaluate management strategies.
  3. TRAF (D)-Integrated model containing NETSIM, TRAFLO, FRESIM (part of INTRAS), and ROADSIM (microscopic for rural 2-lane) as subroutines
  4. FREQ (O)-Freeway simulation based on speed, volume and density to evaluate priority lanes
- B. Optimization Models
1. Single Intersection
    - a. SOAP (O)-Develops signal timing plans. Training available.
  2. Bandwidth Arterials
    - a. Passer II (O)-Signal timing plans that optimize bandwidths on arterials. Training available.
    - b. MAXBAND (T)-Same as above for three intersecting arterials.
  3. Stop and Delay - Arterials and Networks
    - a. SIGOP III (T)-Signal timing to minimize delay, stops and queues and estimates fuel consumption and emissions.
    - b. TRANSYT (O)-Signal timing to minimize stops and delays. Training available or planned.
      1. TRANSYT 6C - Includes fuel consumption output.
      2. TRANSYT 7F (T)-Americanized for input and output formats. Fuel consumption and time space diagrams.
  4. System for Arterials
    - a. AAP (D)-Integrated model containing SOAP, PASSER II and TRANSYT 6C. Training in FY 82.

### STATES CRASH PICTURE CONTINUES TO IMPROVE

With most of 1981 now past history, it is becoming apparent that traffic crashes, especially fatal crashes, will be substantially lower this year than they were in 1980. Reported motor vehicle fatalities were down by almost 200 at the end of October, compared with the same time period in 1980. Specifically, some 1,245 persons have been killed so far in 1981 versus 1,439 in the previous period. Early and preliminary State Police figures also indicate a trend toward fewer total crashes and a reduction as well in the personal injuries.

Why is this occurring? Although precise answers are hard to come by, it seems clear that improvements in such areas as the roadway environment, vehicle design, emergency medical services, police traffic training and public awareness efforts in the areas of seat belt use and drunk driving have had a positive impact on these figures. Some contend that Michigan's bleak economy is somehow playing a major role in the improved crash picture. *Reprint from FORMATS*

### WELCOME!

We are happy to announce the following new members of the Michigan Section of ITE:

|                 |   |                               |
|-----------------|---|-------------------------------|
| Edith Barrett   | - | Cadillac Plastics Co.         |
| Joseph Bassil   | - | MDOT                          |
| Thomas Biasell  | - | City of Farmington Hills      |
| James Bliskey   | - | City of Oak Park              |
| Richard Cole    | - | City of Royal Oak             |
| Tim Dewitt      | - | 3M Company                    |
| George Ferraro  | - | Wade Trim and Associates      |
| William Hartwig | - | MDOT                          |
| Robert Lavoie   | - | City of Pontiac               |
| Jack Mathiasen  | - | 3M Company                    |
| Thomas Mullin   | - | Reid, Cool & Michaelski, Inc. |
| Cecil Ursprung  | - | Marketing Displays, Inc.      |
| William Wallace | - | Arrow Striping                |

## MICHIGAN LEGISLATURE REVIEWING NEW TRANSPORTATION PACKAGE

The Michigan Legislature is reviewing five bills that would increase the revenues in the Michigan Transportation Fund for highways and transportation as well as redirect funds to the Comprehensive Transportation Fund (CTF) for direct distribution to transit authorities.

Introduced by Representatives Mary Brown and Martin Buth, and championed by the Michigan Road Builders, the Michigan Municipal League, county road associations and public transit authorities, the five-bill transportation package is currently being debated in the House Taxation Committee.

The bills, HB 4936-4940, all amend existing legislation. HB 4937-4940 are tie barred; all must be passed in order for any to go into effect. HB 4936 may be passed independent of the others.

HB 4936 amends Public Act 204 of 1967 which created SEMTA and the Secretary of State to collect \$2.50 for each vehicle registered and \$6.00 for each title transferred in the counties of Wayne, Oakland and Macomb and remits the revenues quarterly to SEMTA.

HB 4936 would place the SEMTA tax revenue in the Michigan CTF so that the revenue can be accounted for in the aggregate, along with all other highway user taxes, to meet the requirements of Article 9, Sec. 9 of the State constitution.

HB 4937 amends the Motor Fuel Tax Act. The bill would convert the gasoline and diesel taxes from 11 cents per gallon to 11 percent of the wholesale price. Liquefied petroleum gas taxes would shift from nine cents per gallon to 11 percent of the whole sale price as well. The present gradual gasohol tax increase from the present six cent per gallon to 11 cents per gallon in 1985 would be retained.

HB 4938 would automatically allocate 62 percent of the net CTG directly to regional transportation agencies. The bill would also provide the accounting and allocation of the SEMTA tax monies outlined in HB 4936, allowing monies held in escrow since March of this year to be released to the CRF.

*Reprint from SEMTA*

### LEGISLATIVE REPORT *By Tom Reel*

The legislature has been active in a number of safety-related areas during the current fall session. Some highlights are noted as follows:

**Motorcycle Helmets** - Two bills to repeal the state's motorcycle rider helmet law (HB 4659-60) have for all practical purposes, been defeated by the House of Representatives. Although both measures are technically still on the House calendar for reconsideration, the initial defeat of HB 4659 by 20 votes on November 4 was a clear indicator to the proponents of these bills that a favorable vote on either measure will be most difficult to obtain. Two key factors in the minds of those legislators voting against the repeal were the fiscal implications of increased rider deaths and injuries and the experience in the state of Louisiana which recently reinstated its helmet law.

**Motorcycle Safety Education** - A related proposal, HB 4675 would establish a motorcycle safety education fund and require beginning riders to successfully complete a motorcycle safety education course prior to licensing. This bill, introduced by Rep. Ernie Nash in May, is currently in the House Education Committee. Funding of the program is major stumbling block to passage of this measure. On the Senate side, however, Sen.

Alcohol-related traffic accidents dropped by 16 percent in Oakland County during the first year of the Alcohol Enforcement and Education Project, according to the Traffic Improvement Association (TIA) of Oakland County.

"That 16 percent reduction means there were 1,000 fewer alcohol-related accidents during our first project period than during similar periods in 1978 and 1979," said Jerry Feddersen, project manager. "It also means there were almost 500 fewer accidents in which a death or serious injury occurred."

Since the program began in April, 1980, there have been 10,000 drunk driving arrests in Oakland County. The Sheriff's Department has increased its arrest rate by 110 percent and all county law enforcement agencies have increased their rate by 25 percent.

Using National Safety Council estimates on accident costs, the first year reduction totals nearly \$5 million which is four times the cost of the entire four-year project.

The project, jointly administered by TIA and Oakland County Sheriff's Department, emphasizes increased drunk driving enforcement and a comprehensive public information and education program to achieve its objective of accident reduction.

"We have a special alcohol enforcement team made up of a Sheriff's deputies, state and local police which patrols over 120 miles of Oakland County's highest alcohol-related traffic accident areas," said Feddersen. "This specially trained team operates during the times-of-day and days-of-the-week when most of these accidents occur."

TIA also conducts a comprehensive media campaign during the fall and winter holiday season. One of the special promotions this year will be the display of Michigan's only mobile breath testing unit at shopping malls. "The upcoming holiday season is the time of year when most alcohol-related traffic accidents occur, and we're hoping our program in Oakland County can help reduce this toll," said Feddersen.

*By Jerry Feddersen, T.I.A.*

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## FHWA REPORTS AVAILABLE

FHWA has recently distributed a research report entitled "Accident Analysis - Breakaway and Non Breakaway Poles, Including Sign and Light Standards Along Highways". The research, which was conducted at Southwest Research Institute, identifies the pole (utility, luminaire, small signs) problem, determines the accident and severity rates associated with each, and evaluates the cost-effectiveness of breakaway versus non-breakaway poles.

The report contains quite a bit of basic information on urban versus rural and intersection experience. A copy of the Executive Summary can be obtained by contacting Morrie Hoevel (517-377-1842) of FHWA's Michigan Division Office.

The FHWA has recently published a research study that should be of interest to traffic engineers and traffic operations personnel. The title of the research is "Stop, Yield, and No Control at Intersections". The purpose of the research was to determine the operating characteristics, including associated hazards, with various forms of control at low volume intersections.

The study was made at 140 intersections in Texas, Florida and New York and showed that less than 20% of all drivers voluntarily stopped, regardless of the control type, and that the more restrictive control (stop) did not produce significantly lower accident rates. The lowest travel time resulted from the utilization of yield controls.

A copy of the report can be obtained for a small fee from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. Ask for report FHWA-RD-81/084.

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## FUTURE OF FEDERAL "402" FUNDS

The term "402" Federal Funds are those monies which must be utilized by the states for Highway Safety activities through a program entitled the "State & Community Highway Safety Program". The only requirement was that activities funded through this program must fall under one of the 18 Highway Safety Standards as described in the annual Highway Safety Plan.

When the Reagan administration came into power, three substantial changes were made to the "402" program. First, the funding was reduced a drastic 50% (although this isn't so drastic when one considers the fact that it was originally scheduled to be eliminated). Second, no planning and administration charges, for offices that administer the funds (such as OHSP) would be eligible for federal participation, and lastly, funding would be limited to four major areas: police traffic services, emergency medical services, traffic records and alcohol-related projects.

Through this whole process the engineering portion of our program was scheduled to be completely eliminated. In the end, it appears that funding will be provided although it will be reduced more than non-engineering activities, in fact by approximately two-thirds. At this time we are not sure of the level of commitment which Congress will provide. It was thought that surely by now, two months into the start of the fiscal year, we would know our level of funding. That just is not the case and our funding is still somewhat up in the air. Of course this makes it most difficult to predict the future of our federally funded program.

The OHSP has reviewed current projects for cost savings which we've then reprogrammed for new activities in an effort to "boost" the amount of available federal funds. Within the engineering-related area of the plan, emphasis will continue to be placed on the Michigan Accident Locating Index System (MALI) and the Michigan Dimensional Accident Surveillance System (MIDAS) model which are two traffic record activities essential to our program's needs.

Assistance will once more be available to local communities and counties through a project funded through our Department of Transportation, although at a reduced level. Assistance is in the form of sign inventories and accident analysis studies.

A limited amount of funding is available to go directly to local communities desiring to undertake sign inventories. Additionally, funding is available for traffic-engineering equipment (such as counters), sign erection and removal equipment and portable pavement marking equipment. Funding is also available for one traffic engineer.

Three training efforts will be offered this fiscal year. One is the traditional basic traffic engineering seminar offered through MSU by Dr. Adrian Koert and aimed at non-engineers who are performing engineering-related functions in local communities. However, advanced traffic engineering-related courses which have been provided in the past will not be funded by this office any more. Another course funded with the City of Grand Rapids through the international Municipal Signal Association (IMSA) will be offered this year. It will provide training in the areas of signs and signals. Lastly, seminars aimed at acquainting local governmental officials with highway safety considerations will be offered through Wayne State University. However, a second seminar which brought traffic engineering-related topics directly to local communities, and which was offered through Wayne State

4 University, will not be funded this year. *Cont. on page 9*

## FEDERAL "402" FUNDS *Cont. from page 4*

This is a thumbnail sketch of what is available. Our office will be most happy to discuss these activities with you (517/322-1942). I would encourage that you do all that is economically feasible within the area of Highway Safety with local funds. The issue of liability remains as a big one for you and necessitates it.

I'd like to note that there is too much confusion within the current administration to predict anything in the future on Federal funding. Recent events within the administration haven't helped any. One thing we can be sure of - the name of the game is budget cuts.

By Tom Krycinski

## SOME ADVERTISERS TAKE ADVANTAGE

On May 21 of this year, ITE and IMSA held their 4th Annual Product Technical Session at the Southfield D.P.S. garage. As a special incentive, the Michiganite offered the Vendors two ads in the Winter and Spring issues at half the normal price.

All fifteen vendors expressed an interest in the program and were contacted to obtain information for their ad. Carrier and Gable, MMM and Unistrut made minor changes within their existing ads. We added two new advertisers and welcome them:

Dan McCarthy, Area Manager for  
Energy Absorption Systems, Inc.

Jack Wiitala, President, Traffic and Safety Controls Systems, Inc.

The following is a list of ten vendors that, though they expressed an interest in our offer, have not as yet furnished us with additional information for their ad.

Bemis & Sons, Inc.  
Cadillac Plastic and Chemical Co.  
Interstate Material Supply Company  
Marketing Displays  
W.R. Meadows, Inc.  
Pathmaster  
Traffic Control Corp.  
Traffic Control Products  
U.S. Standard Sign Co., Inc.  
Walker Hydraulic Tool Co., Inc.

## ENGINEERING SHORT COURSES

Again this year, Dr. Adrian Koert will be presenting four Traffic Engineering Short Courses. There will be a small registration fee of \$65.00 for the eight session course. This small charge is necessitated by the reduction in grant money available for the program. The following is a schedule of courses:

\*MSU: Feb. 22,23 March 1,2,8,9,15,16  
\*U of M: Jan. 27,28 Feb. 3,4,10,11,17,18  
\*WMU: Jan. 25,26 Feb. 1,2,8,9,15,16  
\*Oakland Univ.: Feb. 24,25 March 3,4,10,11,17,18

For additional information, contact Dr. Adrian Koert, Highway Traffic Safety Program, Michigan State University, Room 58-A, Kellogg Center, East Lansing, MI 48824 (517) 355-3270.

## WHO KNOWS?

A politician is a man who knows a very little about a great deal and keeps knowing less and less about more and more until he knows practically nothing about everything, whereas, a finance director is a man who knows a great deal about very little and who goes along knowing more and more about less and less until finally he knows practically everything about nothing. A traffic engineer starts out knowing practically everything about everything, but ends up knowing nothing about anything due to his association with politicians and finance directors.

Reprinted from *World Highways*, June 1981

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## ENFORCEMENT AS A NECESSARY COMPONENT OF TRAFFIC SAFETY

by Glenn Graig  
Commissioner, Calif. Highway Patrol

Traffic safety enforcement, as does the teaching profession, operates on a system of incentives (rewards) and sanctions. The rewards are, however, largely intangible. The avoidance of traffic citations and accidents must, therefore, be based almost entirely on a sanction basis.

For a system of sanctions to have maximum effect it must be certain, timely, and it must fit the crime. In too many instances, not just traffic safety, the system is none of these. Enforcement is faced with the problem of simply not enough officers on the road to make apprehension of the violator certain. Drivers, therefore, take too many liberties with traffic law hoping to spot the black and white before it spots them.

Two landmark experiments were conducted in California in the 1960's - Operation 101 and Operation 500. These experiments included an increased level of enforcement at specific locations while the remaining locations remained constant. The results indicated that this increased enforcement did, in fact, reduce violation and accidents in the target areas. It also showed that there was a point of diminishing return where additional enforcement manhours had no significant impact on driver behavior.

Enforcement did not operate alone in this experiment. It was augmented by massive doses of public information on this project through various advertisement campaigns and it points out the significant relationship that must exist between enforcement and the other 5 E's in the traffic safety equation in the reduction of traffic violations and traffic accidents.

America has the lowest accident death rate in the world. Perhaps this suggests that there is a more professionalized traffic law enforcement program in this country which has helped, along with superior engineering and education, in reducing this rate. The biggest difference between American drivers and



drivers throughout the world is discipline, and this discipline is created and nurtured by such a superior traffic law enforcement program.

We are alarmed by the high number of accident deaths, as well we should be. But, we should not overlook the great strides that have been made in reducing this rate. What we have been doing does work, but we must do it better to achieve further progress.

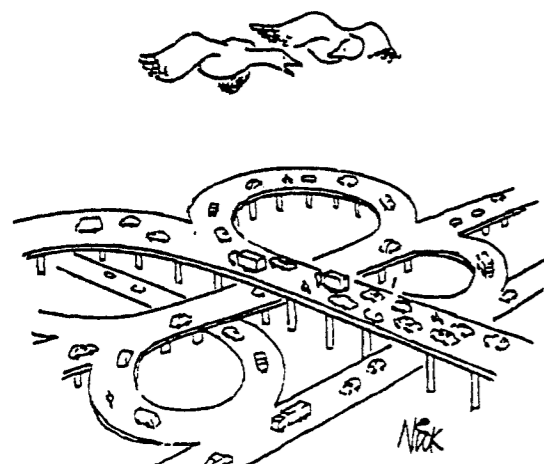
The day cannot be foreseen that enforcement will not play an active role in traffic safety, for there will always be those portions of the population for which the carrot is appropriate and those which require the paddle on the backside.

(Reprinted from: Proceedings, 33rd Annual Meeting, Western District I.T.E., July 1980)

### "FATHER OF MIDAS" MOVES

Dr. Thomas Maleck, who was the originator of the elaborate Michigan Dimensional Accident Surveillance System (MIDAS), has announced he will be leaving MDOT January 1, 1982. He will be working on research and teaching at MSU.

The work he has done on the MIDAS project is truly unique and innovative. MDOT has plans to continue with the MIDAS Project but it's progress is tentative as of now. Maleck's enthusiasm will surely be missed on the project. We wish him well in his new position.



"Beats me how they find their way back year after year."

## AN EVALUATION OF 8-PHASE SIGNAL CONTROL

A before-and-after study was undertaken by the Michigan Department of Transportation to assess accident experience and changes in travel time, stopped delay, fuel consumption, and vehicle emissions after changing from two-phase fixed-time control to 8-phase, fully-actuated control at nine Michigan intersections.

The intersections, selected for 8-phase control were unique in that they were located at or near large regional shopping centers generally in a suburban setting. Variable and high/left-turning volumes were present resulting in significant delays and a pattern of head-on, left-turn accidents for left-turning motorists.

Volume changes at all intersections ranged from a 7 percent decrease to a 24 percent increase. Left-turn volumes at the three intersections selected for NETSIM modelling increased by 50 percent.

The total number of accidents at the nine intersections decreased by 10 percent. Property damage accidents decreased by 6 percent, injury accidents decreased by 20 percent, and injuries by 28 percent. The small number of fatal accidents and fatalities make it impossible to draw legitimate conclusions concerning them.

Six of the nine intersections experienced fewer property damage accidents than had been anticipated. Seven of nine showed fewer combined

injury and fatal accidents and eight of nine showed fewer combined injuries and fatalities. The overall reductions in accidents for the three categories were statistically significant at the 99 percent confidence level.

Left-turn angle, and head-on accident decreased by 91 percent, 67 percent, and 33 percent, respectively. Rear-end accident increased by 66 percent.

Property damage accident rates decreased at five intersections and increased at four intersections. The combined injury and fatal accident rates decreased at eight intersections and increased by one intersection. The difference in property damage accident rates was not statistically significant. The difference in combined injury and fatal accident rates was significant at the 99 percent confidence level.

NETSIM modelling of three intersections at non-peak hour (11 a.m. to noon) volumes showed average increases of 65 percent in travel time, 65 percent in stopped delay, 51 percent in fuel consumption, 37 percent in hydrocarbon emissions, 55 percent in carbon monoxide emissions, and 7 percent in emissions of oxides of nitrogen.

Copies of the complete study can be obtained by contacting the author at the Traffic & Safety Division, Michigan Department of Transportation, P.O. Box 30050, Lansing, Michigan 48909.

By Peter M. Briglia, Jr., MDOT

### RANDOLPH GOES TO LANSING

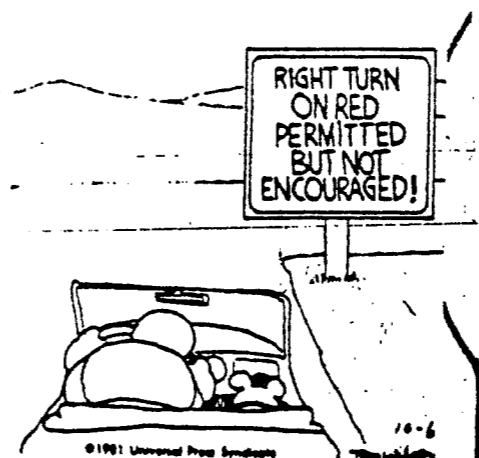
Dennis Randolph formerly with the Macomb County Road Commission and the traffic consulting firm of Goodell-Grievas has relocated to Lansing. In August of this year, Randolph assumed the position of Lansing City Engineer. He will be responsible for engineer design and construction inspection.

### TRAFFIC ENGINEERS SOLVE EVERYTHING?

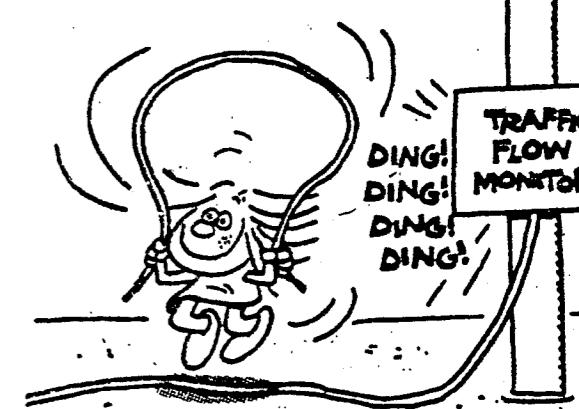
There seems to be no end to the Sacramento City Council's faith in the Traffic Engineer's ability to solve all problems. A particular area in the city has been used by street-corner prostitutes for years. Most of the activity has centered around four one-way streets, two in each direction that allow motorists traveling in a counterclockwise direction to negotiate with the girls through the driver's window. The council decided to convert the streets back to two-way operation to force the motorists to negotiate through the passenger window. They felt this would help solve the problem. The streets have now been converted at a cost of \$18,000 and the prostitutes are still there.

Reprinted from Westernite, March-April, 1981

### ZIGGY



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THURSDAY, MAY 6-28

**ENHANCING HIGHWAY SAFETY THROUGH ENGINEERING  
MANAGEMENT IN AN AGE OF LIMITED RESOURCES**

The Transportation Research Board sponsored a 4-day symposium on the above subject November 2-5 in St. Louis, Missouri. The symposium was jointly sponsored by AASHTO, Hufsam, ITE, AAA, American Trucking Association, and the Motor Vehicle Manufacturers Association. The purpose of the symposium was to bring together leaders in the traffic safety community to discuss the future role of traffic safety in view of the reduced resources that are available for that purpose. As many of you know, the U.S. Department of Transportation has decided to abandon the categorical safety programs and will probably be settling for a general safety category with the level of expenditures to be determined by the various agencies.

The symposium was divided into five workshops; highway traffic operations, maintenance preservation and restoration, upgrading and rehabilitation, reconstruction and new construction, and finally, program administration.

I participated in the workshops on highway traffic operations and program administration. The all-day discussions were very beneficial with participation from all members of the traffic safety community, including two representatives from congressional committees. A final report

will be produced in early February that will highlight the contributions that safety programs can make in road agencies' overall programs. It is sometimes easy to ignore the minor, but very cost-effective, safety activities in favor of maintaining the road surface in a rideable condition. Therefore, this symposium is hoping that the awareness of decision-makers of these agencies will increase regarding safety contributions in their program.

The item which I felt was most significant was the fact that greater efforts must be made to get the Maintenance people and others who work on the roads each day, to be more aware of things which may contribute to highway safety. This will only occur if training is given to individuals working on the roads so they will be on the lookout for ways to correct deficiencies. At the state level, we intend to work on this area to develop a reporting system and a method of correcting deficiencies as they are observed.

This type of meeting has been very useful in highlighting the cause of safety. Copies of the final report from this symposium are expected to be distributed in February of 1982, to all road agencies.

By M. E. Witteveen

**1981 ANNUAL MEETING AND TECHNICAL SESSION**

On November 19, the Michigan Section's Annual Meeting and Technical Session was held at the Pontiac Silverdome. The highlight of the technical session was an hour and a half tour of the Silverdome facilities including a special trip to the roof for a look at the fiberglass cover and blowers which keep it inflated.

After the tour of the Silverdome, transportation improvements for Super Bowl XVI were discussed by Jerry Holmberg and Les Ackey of the Oakland County Road Commission, Paul Riley of the Michigan Department of Transportation and Mel Placilla of the city of Pontiac. They presented a brief overview of the history behind road improvements around the Silverdome. The system of overhead fiber-optic variable message signs on Opdyke and Featherstone Roads were discussed and a model was available for inspection. The cost of these improvements over the last five years totaled about \$5.4 million. The acquisition of Super Bowl XVI provided the impetus to complete the roadway improvements that were so badly needed.

Michael Labadie of the Oakland County Road Commission discussed the development of a priority program for roadside hazard abatement. The main element of the program is a computerized inventory of roadside hazards completed by Oakland County with the assistance of Goodell-Grivas Inc. and TIA of Oakland County. The inventory was completed on all streets except those in subdivisions. The program is designed to increase safety by removing, relocating or sheilding fixed objects and to help reduce expensive litigation against the county.

Following Mike's discussion, Thomas Reel, Executive Director of the Michigan Association for Traffic Safety, gave a legislative report on traffic safety issues. He discussed the child restraint law (P.A. 117) which goes into effect April 1, 1982, a mandatory seat belt law which may be introduced shortly, and the recent defeat of the motorcycle helmet law repeal effort. He also discussed bills which will require motorcycle

safety education and another which will provide for drivers license renewal by mail. (For details see Legislative Report article)

Thomas Krycinski from the Michigan Office of Highway Safety Planning reviewed the future of federal funds in Michigan. Overall federal funding has been cut by 50 percent with no funds allocated for planning and administration. Police traffic services, emergency medical services, traffic records, and alcohol related projects are the four emphasis areas identified by the feds for future funding. There will be some funding for engineering activities, which was cut by 2/3, with MALI and MIDAS the two emphasis areas. Tom also indicated that a small sum of money is available for training, traffic engineering equipment, and to support one new city traffic engineer. (For details see Future of '402' Funds article)

Dave Merchant Division Administrator for the FHWA completed the technical session with a discussion of future trends in federal-aid highway programs. Dave mentioned that the highway trust fund is scheduled to cease operation September 30, 1984, with the tax itself to stop a year earlier. He feels that federal funding of some kind will continue in the future but at a reduced level. Dave indicated that the federal government is going back to teaching and training and finding good ideas in one area and seeding these ideas in other areas. (For details see Trends in Federal Program article)

After an appropriate attitude adjustment and an excellent meal, Bill Lebel conducted the annual meeting. Reports were given by the officers and the election results for the new officers was given. In addition, awards were presented to Howard Cox for his service as Michiganite editor and to Bill Lebel for his hard work as Section President. The evening closed with many members attending the Detroit Pistons basketball game. The arrangements for this meeting which were made by Rich Cunard of TIA were first class. Many thanks go to Rich and those who helped him for making the annual meeting a success.

By Bob Lariviere

**NO JUMPS FOR DRUNKS**

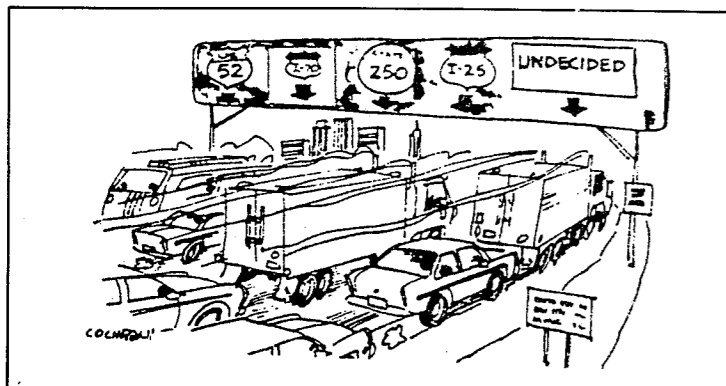
A Colorado Court of Appeals ruled that a person who provides a jump-start for an obviously intoxicated motorist can be held liable if the drunken driver later is involved in an accident injuring others.

According to testimony in a case, a man entered a bar and asked for a drink. The owner of the bar, seeing he was drunk, refused to serve him but provided a jump-start for this car. The man then drove to a second tavern where his car failed again. The owner refused him both a drink and a jump-start. In the parking lot he encountered the owner of a third bar, who agreed to jump-start his car.

Later while driving at high speed in the wrong lane of a highway, the man's car collided with another, killing its driver and injuring a passenger. A blood alcohol test showed that the man was heavily intoxicated.

The injured passenger sued the two men who jump-started the man's car, charging them with negligence. The court said the two defendants could have foreseen the likelihood of a serious accident and thus could be sued to determine if they committed a breach of duty.

Reprint from the State Capitals



**WHERE IS THE APIAN WAY . . .**

As we know, the power of the Roman Empire can be partially attributed to its excellent roadway network. The ability to move cargo and people great distances in a short time was its greatest asset. As the Empire began to deteriorate so did its roads--or was it the other way around!

In 1956 the United States government made a commitment of \$50.5 billion to construct 42,500 miles of interstate roads. That project is all but completed and it is the best transportation system in the world.

Major portions of that system are now 25 years old. Even though built with the best technology available, there is a great need to maintain and update the system now that even greater strides have been taken in technical areas. Our roadsides must be cleaned of deadly obstacles, guard-rail ends must be buried, breakaway posts and bridge pier cushioning systems installed and roadways resurfaced.

Recently construction costs have increased due to inflation and revenues have decreased due to the energy-conscious American motorists buying less gasoline, thus paying less taxes.

One long-term solution is to revise the present gasoline tax to a percentage basis. This would allow highway revenues to fluctuate with highway costs through the inflation median.

Whatever steps are taken they must be implemented immediately, or the solution of repairing our deteriorating highway system may be unthinkable.

by Robert DeCorte

**MICHIGAN  
TRAFFIC FATALITIES  
AS OF NOV. 31, 1981**

|                |          |
|----------------|----------|
| 1980 . . . . . | 1598     |
| 1981 . . . . . | 1389     |
|                | DOWN 209 |