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Transportation Director  
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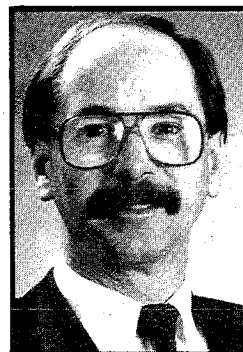
# michiganite

SPRING 1989

VOLUME XXIV, NUMBER 1

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

## MSU Students Attend TRB Board Meetings



### PRESIDENT'S COLUMN

FROM THE DESK OF ...

JOSEPH MARSON

Although this is the first issue of the *Michiganite* for 1989, we are well into the new year. Judging by the turnout we had at the Flint and Lansing meetings, it looks like it's going to be a good one for the Section. We had another successful Vendor's Day in April thanks to Bob Northrup, Joe Meszaros, Gary Endres, and Gerry Van Lew; it's hard to believe this was the twelfth annual display, owing to the efforts of Bill Savage and Bob Northrup over the years.

One of the upcoming events which I want to plug is the dinner/dance/family weekend in Lansing on May 20-21. This function is intended to serve all our members, not just those "married with children." As you are aware, traditionally we have had a few social events in the spring and summer -- couples night, the Mt. Pleasant weekend, and a golf outing. We feel this year that combining these social events of the past will give us an opportunity to pull together more of the membership at one event, which should make it enjoyable to all, more cost-effective for the Section, and less costly to the members.

So take advantage of the excellent facilities the Sheraton Inn has to offer and plan on golfing, swimming, dining, dancing, or whatever your pleasure during this get-away weekend. Please set these dates aside, and watch for the flyer for more information.

### Our Numbers Grow

I am happy to announce that our membership has grown in recent month from 301 at the beginning of the year, 323 as of March 17. I'm not sure if this is an all-time high for the Section, but it is in line with the National trend, where the Institute has announced membership is over 9,000 for the first time in it's history.

See PRESIDENT ... page 3

Thanks to some very generous people, a fine group of 22 Michigan State University civil engineering senior and graduate students were able to attend the Transportation Research Board meetings in Washington, D.C. from January 22 through January 26, 1989. The following nice people contributed a total of \$1,100 for this effort:

- |               |                         |
|---------------|-------------------------|
| Louis Alpaugh | IDC Corporation         |
| Jerry Carrier | Carrier & Gable         |
| Stan Cool     | Reid, Cool & Michalski  |
| Herb Henry    | Unistrut Corporation    |
| Ed Swanson    | Ed Swanson & Associates |
| All of you    | Michigan Section of ITE |

The students making the trip were Carol Loferski, Pete Pfeiffer, Susan St. Cyr, Robert Fett, Gregg Zack, Susan Parker, Zubair Ahmad, Mukesh Jain, Shamshad Ahmad Khan, Michael Arnold, Ken Wells, Bruce Wallace, Russ Henckel, Walid Abdulkader, Sandra Nazar, Richard Prince, Eric Burns, Paul Steinman, Patrick Braboy, and Kurt Schwager. Making the trip with the students were Dr. Tom Maleck and Bill Savage.

The festivities began by meeting at MSU at 8:00 a.m. on Sunday morning. Everyone was on time, and 18 students (4 students flew to D.C. with another professor) and the two former students loaded into a 15-passenger van (rented from MSU), a rented station wagon, and Ellen Maleck's car. It was a tight fit and a long ride, but we got to our Howard Johnsons Motel in time to watch the second half of the

SEE TRB MEETING ... page 4

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1989 Executive Board

President, Joseph Marson, Transportation Engineer  
 City of Dearborn  
 313/943-2145

Vice President, Roger Walther  
 Deputy Manager & Operations Engineer  
 Saginaw County Road Commission  
 517/752-6140

Secretary, Michael Labadie  
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 City of Battle Creek  
 616/966-3343

Director, Samuel Lawson, Jr., Transportation Engineer  
 City of Detroit  
 313/833-7290

Past President, David C. Bacon, P.E.  
 Carrier and Gable, Inc.  
 313/477-8700

TREASURER'S REPORT

Balance as of January 31, 1989: \$4,550.42

Receipts:

|                |                   |
|----------------|-------------------|
| Dues           | \$1,734.00        |
| Michiganite Ad | 200.00            |
| Meeting        | 947.00            |
| Interest       | 20.85             |
| Other          | 4.90              |
|                | <u>\$2,905.85</u> |

Expenses:

|                |                  |
|----------------|------------------|
| Meetings       | 797.62           |
| Check Printing | 13.41            |
| Other          | 25.00            |
|                | <u>\$ 836.03</u> |

Balance as of February 28, 1989: \$6,620.24

Respectfully Submitted,  
 Ken Tsuchiyama, Treasurer

1989 COMMITTEE CHAIRPERSONS

|   |                              |
|---|------------------------------|
| Technical Program:<br>Dave Berridge         | 517/483-4240                 |
| Nominating:<br>Dave Bacon                   | 313/477-8700                 |
| Hospitality:<br>Jerry Carrier<br>Herb Henry | 313/477-8700<br>313/722-1400 |
| Technical Projects:<br>Dave Bacon           | 313/477-8700                 |
| Membership:<br>Adiele Nwankwo               | 313/961-4266                 |
| Legislative:<br>Matt DeLong                 | 517/373-3330                 |
| Public Relations:<br>Mort Fenner            | 517/335-2977                 |
| Program:<br>Roger Walther                   | 517/752-6140                 |
| Awards:<br>Don Wiertella                    | 616/343-3054                 |
| Student Chapters:<br>Bill Savage            | 517/482-0854                 |
| Michiganite:<br>Samuel Lawson               | 313/833-7290                 |
| Michiganite Editor:<br>Joseph Meszaros      | 517/373-2334                 |

MICHIGANITE is published quarterly by the Michigan Section of the Institute of Transportation Engineers. It is distributed to more than 300 ITE members and over 100 cities and counties in Michigan. Address communications regarding the Michiganite to the Editor, Joseph Meszaros, 11310 Flintrock, Grand Ledge, Michigan 48837; telephone: 517/627-6308.



PEOPLE in the news . . . .

TROY'S TRANSIT CHIEF TO QUIT

Transportation Engineer Richard Beaubien left February 6 to take a position in private industry as transportation director for Hubbell Roth & Clark, Inc. in Bloomfield Hills.

"This looked to me like a better opportunity for professional development," said Beaubien, who has been transportation engineer in Troy for 14 years.

Baubien will head a new transportation department for the civil and municipal engineering firm.

Baubien said his replacement has not been chosen. City Manager Frank Gerstenecker said the personnel department will submit ads to professional journals as it begins the recruitment process.

Gerstenecker said Beaubien made a "significant contribution to traffic management. I think he helped many of our citizens achieve a better understanding of traffic management and our highway systems."

Baubien said he will find it difficult to leave Troy.

"It's been a challenging position," said Beaubien. "I've spent a good deal of my professional career here."

Baubien grew up in Birmingham and is a graduate of Seaholm High School and the University of Michigan. He worked for five years in various cities as a highway engineer for the Federal Highway Administration before returning to Michigan.

ROGER WALTHER MOVES

Effective March 13, 1989, Roger K. Walther has taken the position of deputy manager and operations engineer with the Saginaw County Road Commission. Roger had been with the City of Saginaw for the past 16 years, 12 of

these years as the City's traffic engineer. Prior to employment with the City, Roger spent over a year with the Washtenaw County Road Commission.

Roger has been active in the Michigan Section, currently serving on the Executive Board as Vice President. In the past, he has served as secretary, treasurer, Technical Committee chairman, and Public Relations Committee chairman. He has also been active in national and district ITE activities serving in the past as District 3 technical chairman and with the Urban Traffic Engineer's Council as the District 3 representative on the UTEC Board.

FEDERAL HIGHWAY  
 ADMINISTRATION APPOINTS  
 NEW MICHIGAN ADMINISTRATOR

Henry Rentz has taken over the Michigan division of the FHWA, the agency that administers the nation's federal-aid highway program. He succeeds David Merchant, who retired in December after 16 years in the position.

Rentz was transferred from Missouri, where he was the assistant division administrator for three years. He joined FHWA following graduation from Clemson University (SC) in 1962. Previous assignments include director of the Office of Engineering and Operations in the FHWA regional office in Atlanta, district engineer in Florida, highway programs engineer in the Office of Traffic Operations in Washington, D.C., area engineer in North Carolina, and assistant area engineer in South Carolina. We welcome him to Michigan for his first stint in a northern state.

JOB OPENINGS

TRAFFIC ENGINEER

The Southfield Office of Barton-Aschman Associates, Inc., is seeking applicants for a position as a traffic engineer consultant. A bachelor degree in civil engineering and Michigan professional engineer is preferred. Salary commensurate with qualifications and experience. Barton-Aschman has a competitive fringe benefit package that includes stock ownership, hospitalization coverage, disability insurance, life insurance, paid sick days, etc. Letters of interest and supporting professional qualifications should be sent to: Michael J. Labadie, P.E., Barton-Aschman Associates, Inc. of Michigan, 27600 Northwestern Highway, Suite 100, Southfield, Michigan 48034-4704, or call (313) 350-3040.

TRANSPORTATION ENGINEER

The City of Rochester Hills (population 57,000) is seeking an individual to perform all tasks associated with transportation: traffic, permits, rights-of-way. Qualifications included: bachelor of science degree in civil engineering from an accredited college or university; five years of progressive experience in civil engineering with at least two years in transportation; and licensed as a registered professional engineer in the state of Michigan. Starting salary: \$37,877 to \$42,702 plus COLA and excellent fringe benefits. Send resume to: Human Resources Department, City of Rochester Hills, 1000 Rochester Hills Drive, Rochester Hills, Michigan 48309-3033. The City of Rochester Hills is an Equal Opportunity Employer.

## WELCOME NEW MEMBERS

Scott T. Greiner  
Carrier & Gable, Inc.

Leo. L. Arens  
Michigan Department of Transportation

Mary C. Scharz  
City of Troy

Stephen B. Conradson  
Michigan Department of Transportation

Ching-Chin Wu  
City of Troy

Dale R. Lighthizer  
Michigan Department of Transportation

Dee Ann Swanson  
Ed Swanson & Associates

Robert D. Beckon  
Michigan Department of Transportation

Ravi Kumar Goli  
SEMCOG

Kitty Rothwell  
Michigan Department of Transportation

Katherine Falck  
Michigan Department of Transportation

Pauline Mejia  
Michigan Department of Transportation

Joyce Barnes  
SEMCOG

Mary T. Hudak  
Michigan Department of Transportation

Frank Nevarez  
Michigan Department of Transportation

Piotr T. Lewak  
City of Grand Rapids

Benjamin I. Egiebor  
Michigan Department of Transportation

Leo Davies  
Orchard, Hiltz, & McCliment, Inc.

William R. Zipp  
Orchard, Hiltz, & McCliment, Inc.

Gian C. Aggarwal  
City of Detroit

Andrew Tilma  
Battle Creek Area Transportation Study

Patricia Karr  
Battle Creek Area Transportation Study



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## ITE 1989 MEETING SCHEDULE

| <u>Date</u>                    | <u>Location</u>                   | <u>Host</u>                         | <u>Event</u>                                 |
|--------------------------------|-----------------------------------|-------------------------------------|--|
| April 27<br>(TH)               | Southfield<br>(CIVIC CENTER)      | Northrup/Meszaros<br>Endres/Van Lew | Vendor's Day                                 |
| May 19 - 20<br>(FR - S)        | Lansing<br>(SHERATON)             | Carrier/Henry                       | Annual Dinner/Dance<br>Family Weekend        |
| July 13<br>(TH)                | East Lansing<br>(UNIVERSITY CLUB) | Maleck                              | Lunch/Technical Session                      |
| September 7<br>(TH)            | Grand Rapids                      | Meredith                            | Golf/Dinner                                  |
| September 17 - 21<br>(SU - TH) | San Diego, CA                     |                                     | National Meeting                             |
| October 19 - 21<br>(TH - S)    | Indianapolis, IN                  | Indiana Section                     | District III Annual Meeting                  |
| November 2<br>(TH)             | Marshall                          | Karns                               | Lunch/Technical Session                      |
| December 7<br>(TH)             | Detroit                           | Kobran/DeWitt                       | Section Annual Meeting/<br>Technical Session |

### PRESIDENT . . . continued from page 1

I would like to see the Section keep these new members throughout their professional career in Michigan. Their primary incentive for being a member is to further their knowledge of the profession through our technical meetings and to meet others in the same field. I believe we have been able to address the first issue successfully, thanks to the efforts of Roger Walther and Dave Berridge.

You can help by addressing the second issue; i.e., get to know the new people. It doesn't occur to many people to do this because they're busy renewing old acquaintances during the coffee breaks or lunch. I have to admit I'm guilty of this as much as the next person. But we should make this added effort; much of what we gain from our technical sessions is talking to other professionals about similar problems and finding out how they address them. So reach out to the newcomers -- it will benefit both of you.

#### Safety Promotion

Although our organization is devoted primarily toward professional development through education, we have another purpose: to do what we can to improve the safety of our streets and highways. When Tom Krycinski of OSHP provided us with a legislative update at the Lansing meeting, I thought about the fact that most of us don't do some of the simple things that can have the greatest

impact on traffic safety. That is to educate and encourage our legislators to consider and pass bills that will improve the safety of our roadways in ways that transportation engineers cannot. We, as a board, passed a resolution recently to oppose the use of the federal gas tax to reduce the deficit (you will find it discussed elsewhere in the *Michiganite*). You, as an individual, can take similar action and write your congressman in support of seat belt laws, such as HB 4220, which would require the use of seat belts by children ages 4 through 16. Or support a change to make the failure to wear a seat belt a primary offense instead of a secondary offense. A short letter from each member of this Section can go a long way in reaching our goal of improving highway safety. This is a challenge you should take seriously.

Thanks, Dave!

It is a big commitment for an individual to devote time on the Section Board or on a committee. It is also enjoyable and rewarding, both in experience gained and in the opportunity to work with fellow professionals. David Bacon has contributed a considerable amount of time and effort toward improving the Section, and I would like to say thanks to Dave for all he has done for us. Dave has helped tremendously in maintaining Michigan as one of the finest and most active Sections of the Institute. ■

Super Bowl and eat dinner. Most of the students then took off for a little sightseeing in downtown D.C.

Monday morning we were ready at 8:00 a.m. to take the 50-minute walk and subway ride to the TRB meeting. Most of the students had not used a subway system before, and were awed. The group was very excited about the forthcoming sessions, meeting prospective employers, and even possible interviews and maybe job offers. The students had their resumes with them just in case. That night eight of the students were guests of Carrier & Gable for dinner and dancing at Blackies (a highlight of the trip).

Tuesday was taken up by more interesting TRB sessions and job interviews. That night we hired the Howard Johnsons van to take us to Georgetown for dinner and refreshments. It was another lively, fun night.

Wednesday was another day of sessions, interviews, sightseeing, and rest. Tom and Bill bought pizzas for an in-room pizza party that night (it took 11 large pizzas to feed the group), and the students provided the liquid refreshments.

We started back to East Lansing by 8:30 a.m. on Thursday, with tightly packed vehicles (two of the students who arrived by air went back by car). It was a tired, but happy group who arrived in East Lansing about 8:00 p.m.

Thanks to the hard work of MSU's Student Advisor, Norma Kueppers, who gathered all the money and made the good (but cheap) reservations, the cost to each student was held down to \$65. This covered transportation, lodging, and registration. A real bargain!!

This Michigan delegation was unique as the only known student group in attendance at TRB. The students handled themselves professionally, were well-mannered, and a credit to MSU, the state of Michigan, and our ITE chapter. We are proud of them!

—By William F. Savage, WFS



MSU TRB attendees

## SUFFICIENCY REPORT

The Department of Transportation prepares an annual Sufficiency Rating Report of all state trunklines except M-185 on Mackinaw Island. Each trunkline segment, based on unique characteristics of geometry, traffic volume, surface type, surface condition, and political boundaries, is rated on four factors. These factors include safety, capacity, surface, and base. The maximum rating a section can attain is 100, with maximums of 30 points for accident, 30 points for capacity, 25 points for surface, and 15 points for base.

Field reviews are conducted on each segment annually to determine surface conditions, shoulder conditions, or any other changes which may have occurred since the last review. These data are then used along with updated ADT and ACC to create a new file and the subsequent sufficiency rating report.

In the mid 1980s, the Department of Transportation began a "good roads" program intended to improve rideability and extend the pavement life of the trunkline system. In addition, expanded construction resulted in an increase in freeway rehabilitation.

The results of this stepped-up construction program are readily apparent from the surface condition rating contained in the sufficiency rating. Pavement surface ratings of "good" showed a gradual decrease from 4845 miles in 1976 to a low of 2014 miles in 1985. These results are shown in Figure I. As you can see, the number of miles in this category has begun to increase since 1986.

Conversely, the number of miles rated poor gradually increased to a high of 3603 miles in 1985. This trend has now reversed as shown by Figure II.

—By Glen Etelamaki, MDOT

### STATE TRUNKLINE

SURFACE CONDITION - GOOD

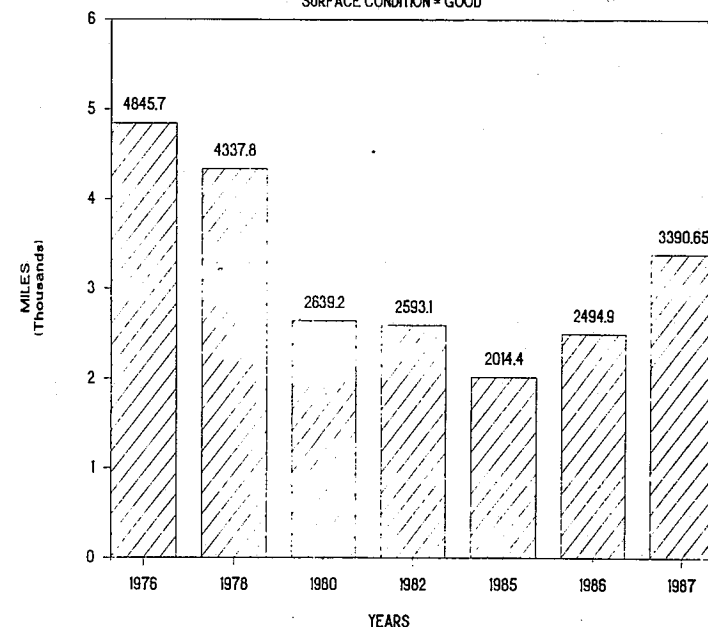


Figure I

leaders, and professionals. The foundation of this project is a \$45 million commitment to refurbish the capitol building to its original condition. The existing office buildings and grounds is to be more "human" oriented, and, in addition, a park is to be developed to the west of the office building. The ability to get people to this area is the development and signing of the capital loop. This access is made up of existing streets that will be the trunkline, and provides a route from I-496 through the downtown area and back to I-496.

The next two speakers were International Vice President Dick Beaubien and Tom Krycinski of the Michigan OHSP. Dick reviewed his experiences in running for his present office. He noted that ITE needs a more focused program, and discussed the future needs of the profession. Tom discussed the future direction of the OHSP and the emphasis on highway safety and training.



Polly Kent



Elaine Burgess



Tom Krycinski

Dave Morena, safety and traffic operations engineer, FHWA, was the next speaker. Dave is a graduate of Ohio State and spoke on "Break-Away Sign Supports in Michigan: A Success Story." He reviewed the existing break-away sign supports such as the steel column with slip base (W8-13), the two sizes of wood posts, and the three-pound steel post. A review of existing accidents indicates that these sign supports are operating as designed and do not produce injuries.

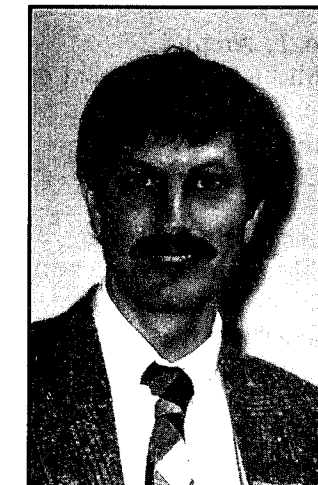
The following table is a comparison of injury accidents resulting from hits on roadside objects.

| Reported Accidents       | Percent Injury |
|--------------------------|----------------|
| Concrete Barrier (Rural) | 25% - 38%      |
| Concrete Barrier (Metro) | 44%            |
| Trees                    | 37%            |
| Multi-Vehicle            | 29%            |
| Guardrail                | 28%            |
| Ditch/Slope              | 27%            |
| Break-Away Sign Posts    | 11%            |

Even with a new design vehicle of 1800 pounds which is down from the present 2250-pound vehicle, all of the engineered sign supports will function properly.



Mike Labadie



Dave Morena

The last speaker was Mike Labadie, a senior associate employed by Barton-Aschman, Inc. of Michigan. Mike's topic was entitled, "The Plaintiff's Expert: Observations from the Other Side." Since 1985, Mike has been retained approximately 150 times as an expert witness; about 50 percent of these projects have been as a plaintiff's expert. He pointed out that many of these cases are lost or go to court in the first place because the agency experts are not well-versed or prepared to defend themselves. The areas that are most predominant with respect to civil liability issues are:

- Roadway Design
  - Geometrics
  - Guardrail
  - Fixed Objects
- Maintenance
  - Shoulder/Roadside
  - Snow/Ice Removal
  - Traffic Control Devices
- Policy (Lack of)
  - Design
  - Maintenance
  - Application of TCD
- Implementation
  - Time
  - Procedures

Mike indicated that you can be sure that the plaintiff's attorneys and their experts are very well versed. The best defense is to have your attorneys and experts well-schooled in all aspects of the case.

Our thanks for a job well done -- again -- to our host Glen Etelamaki. Thanks also to our speakers for the time and effort put forward, and our thanks to you, the membership, for attending this technical session.

—By Don Wiertella, MDOT

## MARCH TECHNICAL SESSION

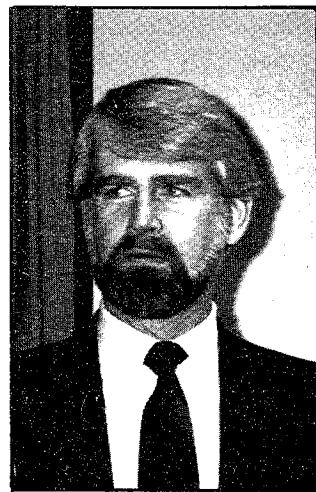
On St. Patrick's Day, Friday, March 17, 1989, the Michigan Section held its annual Technical Session at Lansing's Midway Motor Lodge. This year, as in years past, the meeting had the winning combination of excellent location and technical session.

The first speaker was Dale Lighthizer who is employed by the Geometrics Coordination Unit, Traffic and Safety Division, MDOT, and is a Ph.D. candidate at Michigan State University. His topic was "New Methods for Estimating Exposure." Dale reviewed existing methods of estimating exposure such as accident rates and vehicle miles traveled, as well as registration and density. He questioned if these are the best methods. The new method is based on the innocent victim concept and deals with an "at fault" driver behaving the same in a two-vehicle crash as in a single-vehicle crash. Part of the research is based on a random sample distribution of drivers on the road and an involvement ratio associated with risks.

Fred Sanborn, manager of the Policy Planning and Coordination Section, Bureau of Transportation Planning, MDOT, was the next speaker. Fred is an MSU graduate and has 22 years of experience with MDOT. Fred's topic was, "The Michigan Transportation Economic Development Fund." This \$53 million fund exists to provide road improvements in urban as well as rural areas and thus increase the economic base of Michigan. Of the total money, approximately \$36.8 million is from the Michigan Transportation Fund and \$16.2 million is from the General Fund which is made up of drivers license fees and registration fees. Applicants for projects using these funds include MDOT, cities and villages, and counties. The Funds support the following six areas each targeted to improve the economic well-being of certain industries or



Dale Lighthizer



Fred Sanborn

locations across the state: 1) The Economic Development Road Project which targets industries from agriculture to tourism to office centers. These projects must meet a transportation need, have an immediate positive impact,

and exclude speculative projects. 2) State trunkline service. The criteria is to provide state trunkline service where a local or county road is performing as a state trunkline. 3) Urban funds, and serves to reduce congestion and increase capacity in urban areas. The five eligible counties are the tri-county metro area plus Kent and Genesee Counties. 4) The secondary all-season road systems. 5) Provides funds for forest roads that will promote the collection and distribution of forest raw materials. 6) Provides funds to areas of less than 400,000 to promote road surface continuity through counties and small cities and villages.

Sandra Nazar, a graduate student in transportation at Michigan State University, spoke next on the students' trip to TRB this past January. Their trip was financed, in part, by the Michigan Section. Sandra attended several of the technical sessions and was impressed by the diversity of professions in transportation.

Kim Warren Eddie, assistant Ingham County prosecutor, was the next speaker on the program. Mr. Eddie's topic was entitled, "It's Not Just Another Traffic Accident" which related the changing attitudes toward traffic deaths. The indications are that society is changing its views toward accidents and deaths caused by drivers under the influence of alcohol or drugs. Prosecutors are pushing for harsher penalties for people who drive impaired and injure or kill someone. He also stressed the important role that transportation engineers play in helping prosecutors pursue these cases.



Sandra Nazar



Kim Warren Eddie

The next topic was entitled, "Capital City Revitalization: The Capital Loop." Presenting this topic were Polly Kent and Elaine Burgess of MDOT's Bureau of Transportation Planning. The revitalization of Lansing in general, and the downtown area in particular, helps promote a unique resource, the capital, for present and future generations of Michigan citizens. This promotion began approximately three years ago with the formation of several subcommittees that involved a broad cross-section of citizens, community

## STATE TRUNKLINE

SURFACE CONDITION - POOR

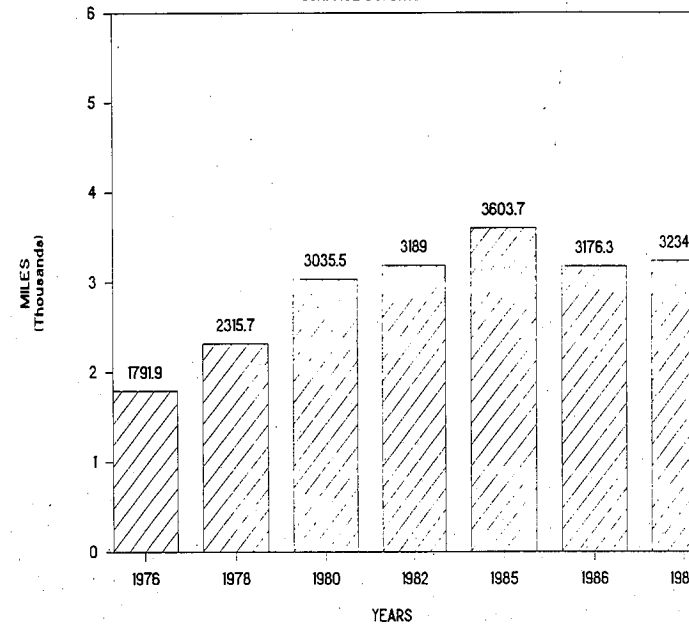


Figure II

### WILLIAM F. SAVAGE P.E. Traffic Engineering Consultant

2224 Tulane Dr.  
Lansing, MI 48912  
(517) 482-0854

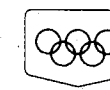
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## MICHIGAN AUTOMOBILE LAWS — 1922

Ignorance of the Michigan laws relating to automobile traffic may occasion some trouble for the motorist, but a larger percentage is caused by carelessness and a disregard of the unwritten laws of the road. The following rules embody the legal restrictions as well as those dictated by common sense.

1. Do not drive at more than a reasonable speed. The Michigan statute allows a speed of 10 miles per hour in business districts, 15 miles per hour in residential section, and not more than 35 miles per hour on country roads. Traffic regulations vary in different communities and you can play it safe by obeying roadside caution signs and the signals of traffic officers in the larger cities.

2. No person under 15 years of age should operate a motor vehicle unless accompanied by the owner or a licensed chauffeur.

3. No person shall drive on a public highway when intoxicated, and Michigan judges usually jail such offenders without alternative.

4. The car approaching from the right has the right-of-way, and drivers are required to keep a sufficient distance between their cars and one ahead to avoid any possibility of accident. It is a courtesy to signal by hand when you are ready to turn out, slow down, or stop.

5. Local regulations vary, but play safe by coming to a full stop within 10 feet of a street car which is taking on or discharging passengers. NEVER pass a street car on the left-hand side.

6. Lights must be dimmed when passing traffic on country highways and some communities absolutely forbid the use of undimmed lights on the streets.

7. Drivers of cars with a Michigan license must have a Drivers' Certificate fee 50 cents. Chauffeur's license, \$2 annually. A certificate of title (fee \$1) is necessary to make a legal transfer of ownership in Michigan.

8. NON-RESIDENT autoists need no license for a stay in Michigan not exceeding three consecutive months, PROVIDED home state numbers are prominently displayed front and rear, and home state laws are complied with.

9. FINALLY, GUARD THE LIVES OF CHILDREN AND THE HELPLESS BY ALWAYS PLAYING SAFE.

Tourist Guide of the West Michigan Pike - 1922





## TRAFFIC ENGINEERING COORDINATING COMMITTEE

### TRAFFIC RECORDS MODEL

For the last several years, the OHSP has been working with the Michigan State Police in cooperation with Michigan State University, Department of Civil and Environmental Engineering, to upgrade and improve traffic accident records processing.

The principal objectives in the beginning were to test: 1) the feasibility of the PC-based work station for processing of traffic accident data and 2) decentralized inputting of traffic accident data. The work station concept would allow for all processing functions to be done by one individual (locating, coding, inputting). This concept of the PC-based work station has proven to be successful as a viable method of processing traffic accident reports. The testing of decentralizing inputting of accident data is being done with the cooperation of the City of Battle Creek Police and Engineering Departments. So far, this has also proven to be another successful way to input accident data. Presently, we are in the process of evaluating the data inputted at the Battle Creek site with the same data inputted at Lansing against the actual accident report that is completed by the police officer.

At this time, the Michigan State Police have not made a decision to convert to the PC-based workstation concept. Our office, however, is continuing to work with the locals in this effort while the department considers the ramifications of this concept. Over the next several years, in cooperation with Michigan State University, Department of Civil and Environmental Engineering, we will be developing and evaluating improvements to the PC-based work station. This product will be referred to as the *TR Model* (Traffic Records Model).

The concept behind the TR Model is to assist local agencies in developing and using a highway safety database. The end product will be a software package which will allow the local agencies to rank their potential problem sites based upon the number of accidents, accident rates, and recognition of a correctable accident pattern. The OHSP expects the benefits to this TR Model would include: 1) more timely data for local communities; 2) more attention being paid to safety problems on local roadway systems, which constitute 90% of the entire roadway system; and 3) additional guidance for a pending study of the state's accident records system. In particular, it will examine the feasibility of an integrated statewide system with a combination of centralized and decentralized inputting of accident data. ■

—By Bonnie J. Powell, OHSP

In a previous newsletter, I discussed the formation of a Traffic Engineering Coordinating Committee and stated that I would follow-up on the first meeting. Well, here it is.

The committee held its first meeting on February 7, 1989. Representatives were present from SEMCOG, ITE, IMSA, the Traffic Improvement Association of Oakland County, the County Road Association, the Municipal League, the Sheriffs' Association, Michigan State University, Wayne State University, the Michigan Department of Transportation (Local Services and Traffic and Safety Divisions), AAA of Michigan, the Michigan State Police, and the OHSP. Representatives are also being invited from Michigan Technological University, the Road Builders Association, the Michigan Chiefs of Police, and Creative Risk Management.

A lot of business was handled at the meeting. First, representatives agreed to the need for the committee to exist with both engineering and enforcement represented.

Members established the following purposes for the committee:

1. Effecting coordination of engineering-related highway safety activities.
2. Promoting coordination between law enforcement officers and engineers.
3. Reviewing of the action plan from the Governor's Highway Safety Conference and possible resultant action.
4. Keeping current on highway safety legislation affecting our mutual disciplines.
5. Keeping current and effecting coordination of engineering training.

Two subcommittees were formed. The first was a Lifesavers subcommittee chaired by Lt. Marshall Weeks of the Michigan State Police and the second a Training subcommittee chaired by Dr. William Taylor of MSU. The Lifesavers subcommittee was the result of the members' decision that there should be a half-day set aside for a joint engineers/enforcement workshop at the next Life Savers Conference scheduled for May 15-17, 1990. This workshop will promote communication between engineers and law enforcement officers and will discuss topics of mutual interest. We are all looking forward to it!

SEMCOG, FHWA, and MDOT activities and MSU and WSU training were discussed by the appropriate committee members.

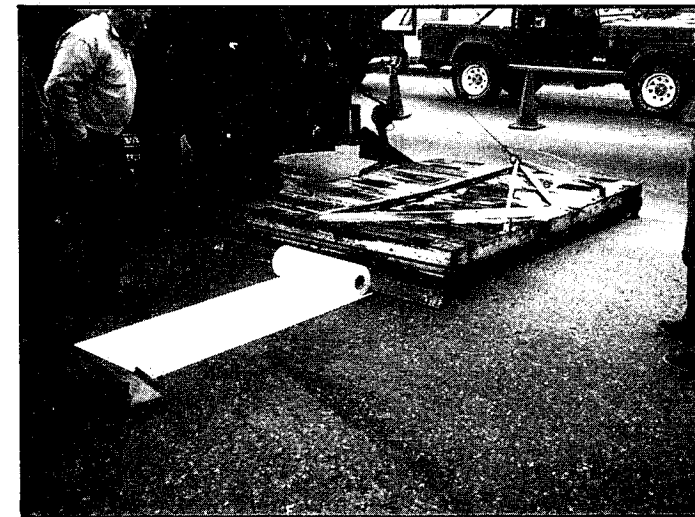
A video entitled, "How to Establish Realistic Speed Zones" was shown. This video was prepared by the State Police Training Division in cooperation with the Michigan Departments of State Police and Transportation and county road commissions. A pamphlet is also being published on this issue by AAA of Michigan. The committee felt that it was an excellent video. A distribution plan is being worked out, so watch for further information on this video. It should be a valuable tool to you.

## COLD WEATHER MARKING

In Michigan the placement of any type of pavement marking in general, and preformed tape in particular, stops in September and does not start again until the following May. Construction projects completed in late fall left roads with poor or no markings due to cold or damp laydown conditions. Operational changes, approved in the winter, must wait until spring brings the proper weather conditions. A new method for pavement marking application may reduce or eliminate this extended period of winter inactivity.

A test was conducted in Kalamazoo on a cold January day to determine the feasibility of placing preformed tape in the winter, thus extending pavement marking application to a year-round basis. This test had two objectives: 1) to determine the feasibility of using an infrared asphalt heater to facilitate the placement of preformed tape pavement marking in cold weather, and 2) to determine the laydown and adhesion characteristics and the survivability of preformed tape placed in cold weather. The specific goal was to produce permanent inlaid stop bars that would resist hits by vehicles and snowplows.

Two test sites in the metropolitan Kalamazoo area were selected for the placement of stop bars: 1) M-43 (Riverview) at Mill Street which has an intersection ADT of 22,000 vehicles and 2) M-43 (Gull Road) at Sprinkle Road which has an intersection ADT of 16,000 vehicles. Because of the high ADT, the number of starts and stops, and the number of left-turning vehicles hitting the stop bars, we felt that these two areas would give a good test of the survivability of preformed tape placed in cold weather. The temperature on the test day varied from 25° F to 32° F. Although no moisture fell on the road, the surface was damp and cold.



Heating the road surface preparatory to tape placement

The equipment used for this test was a Poweray Model TR-48 infrared asphalt heater manufactured by Poweray Infrared Corp. of Claremont, New Hampshire. The Model TR-48 will heat an area of 6 feet by 8 feet. Poweray also



3M coldplastic material being installed

has a Model TR-36 which heats an area 3 feet by 12 feet. Both of these units have been successfully used for the repair and restoration of utility cuts, asphalt repair, epoxy repairs of concrete, and winter patching. Additional equipment used was an 800 pound steel-wheeled roller, a 3M tamper cart, a light truck used to carry the heater, and a pickup to pull the roller.

The heater worked very well to heat existing preformed tape pavement marking that had to be removed. A two-minute heating enabled us to basically pull the existing tape markings off by hand. Heating of the road surface preparatory to tape placement varied from two to five minutes. The optimum heating time was three to four minutes. The steel-wheeled roller worked well to roll the edges and inlay the tape, but the 3M tamper cart with 200-pounds of weight worked as well, and is much easier to transport. It appears to be a natural extension of this equipment to heat, soften, and dry the pavement to provide for the placement of preformed tape in cold and damp weather.

The material used for this test was purchased from 3M. This material performed very well in the lay-down process, and the cold weather did not affect its adhesion to the road surface. As of March 24, approximately two months after its application, the material is holding up very well and shows little wear from snowplows. It appears that our goal of providing permanent, inlaid stop bars in cold weather has been achieved.

The asphalt heater and support equipment and labor was provided by Jim Petee, general manager of Pavement Restoration of Michigan, a Kalamazoo-based company. Technical advice was provided by Merv Teague of 3M. Traffic control was provided by Jim Arnsman of the MDOT sign shop and the general project supervision was provided by Joe Finch and Don Wiertella, MDOT Traffic & Safety, Kalamazoo. ■

—By Don Wiertella, MDOT

## INTERNATIONAL VICE-PRESIDENT

**Richard F. Beaubien**



### TRAFFIC ENGINEERING ACADEMY

At the Institute of Transportation Engineers mid-year meeting in Dallas, Texas, held March 12-15, 1989, the Institute focused on strategies to get "beyond the grid-lock." A new ITE publication, "A Toolbox for Alleviating Traffic Congestion," was distributed to all participants at the "Beyond Grid-Lock" conference and the ITE Technical Council, as well as several task forces, took advantage of the opportunity to tie their meetings into the mid-year meeting.

One of the task forces meeting was on the Traffic Engineering Academy. The demand for transportation professionals today exceeds the supply. Numerous public and private sector employers are having trouble filling positions requiring experience in geometric design and in traffic signal designing and timing. With the increase in public agencies requiring that site traffic impact studies be done for new development, this sector of the profession is also experiencing significant growth. The demand is further exacerbated by the large percentage of transportation professionals who are eligible for retirement. The result is that many employers are hiring graduates of baccalaureate degree programs that may have had only limited course work in transportation engineering.

To assist employers in meeting the current demand for training of entry level professionals, the Institute is planning to initiate a Traffic Engineering Academy. The Academy is not intended to serve as a replacement for advanced degrees in transportation engineering, or to replace multi-week professional development programs. The Institute will be seeking proposals from academic institutions to serve as the coordinator and manager of the Traffic Engineering Academy. Based on the proposals, an academic institution will be selected to conduct the 1989 Traffic Engineering Academy, which will probably be held in December. For the first year of the Traffic Engineering Academy, there will be courses offered in traffic signal design and timing, intersection geometric design, and transportation site impact studies.

The ITE Technical Council met during the two days preceding the "Beyond Grid-Lock" conference. Past Michigan Section President Richard Cunard is now the Transportation Research Board's representative to the ITE Technical Council. He will be attending all meetings of the Technical Council to provide coordination with the research activities of the Transportation Research Board in the traffic

operations field. At the March meeting, the Technical Council took some time for a "brainstorming" session. Issues discussed by the Technical Council included: 1) The ITE's role in future technology for transportation engineering, 2) How can we upgrade technical activities at the local level?, 3) Suggested means to increase public agency participation in technical activities, and 4) how can ITE improve student programs and services and motivate student members to become active in Technical Council activities?

The "Toolbox for Alleviating Traffic Congestion" which was distributed at the "Beyond Grid-Lock" conference is oriented to elected officials and includes a brief summary of the cost and benefits of each traffic mitigation measure. An extensive list of references is included at the end of each chapter so that elected officials who wish to do more research on a particular measure for alleviating traffic congestion will know where to look. At one of the conference luncheons, former Broome County Administrator (Binghamton, New York) Carl Young urged transportation engineers to speak up on the need for increased funding for transportation improvements. Thomas Deen, executive director of the Transportation Research Board, reminded conference participants of the importance of transportation planning in the future. The 1990 mid-year conference is scheduled for March in Anaheim, California. The 1991 conference will be in New Orleans, Louisiana, and the 1992 conference will be in Scottsdale, Arizona. ■

### MICHIGAN HIGHWAY TRAVEL WAS OUT OF THIS WORLD IN 1988

Motorists drove 78.7 billion miles on the state's network of highways, roads, and streets, the equivalent to 423 round trips from the earth to the sun. That's up nearly four percent from the previous record of 75.7 billion set in 1987. The increase is attributed to Michigan's continuing strong economy, fueling a continuing rise in commercial traffic and steady growth in tourism and recreation travel. ■

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The next committee meeting is scheduled for May 11, 1989. The committee will be meeting on a quarterly basis.

The following are committee members. Several are ITE members. Contact any of them if you have any input or would like further information on the committee.

Dr. Bernard Alkire, Michigan Technological University; David Bacon, Carrier and Gable, Inc., Rep. IMSA; Inspector Allen Byam, MSP Traffic Services Division; Robert Carroll, Kalamazoo County Road Commission, Rep. County Road Association; Dr. Tapan Datta, Wayne State University; Robert DeCorte, Traffic Improvement Association of Oakland County; Sheriff Don Godell, Montcalm County Sheriff's Department, Rep. Michigan Sheriffs Association; Alan Isola, MDOT Local Services Division; William Lebel, MDOT Traffic and Safety Division; Joseph Marson, City of Dearborn, Rep. ITE; Lawrence Martin, Michigan Road Builders Association; Jere Meredith, City of Grand Rapids, Rep. Michigan Municipal League; Chief Dale Moore, Clio-Vienna Police Department, Rep. Chiefs of Police; David Morena, Federal Highway Administration; Lyle Nustad, AAA of Michigan; Adiele Nwankwo, Southeast Michigan Council of Governments; Dr. Thomas O. Reel, Traffic Safety Association of Michigan; Dr. William Taylor, Michigan State University; and Tom Krycinski, Judy Berman, Bonnie Powell, and Gary Holden, Office of Highway Safety Planning, MSP. ■

—By Thomas Krycinski, OHSP

### GARY HOLBEN GETS PROMOTED

The OHSP is pleased to announce that Gary Holben was promoted to a Departmental Specialist VIII effective January 8, 1989. As a part of his new responsibilities, Gary will be working in the engineering area of our office's highway safety program. Thus, you can look forward to seeing Gary at ITE state meetings again. Gary will be working on long-range planning for the office, too.

Congratulations, Gary! ■

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### TRUCK SAFETY LEGISLATION

Have you ever had a broken windshield caused by a piece of gravel thrown from a truck trailer bed into your car windshield, or been frightened to death by a 160,000 pound truck traveling at high speeds five feet behind your car, or even been trapped behind two rigs traveling the highway side by side? All of us, at one time or another, have had some unpleasant experience with commercial trucks on the highway.

During the last legislative session, the Governor, your senator, and your representative decided to do something about truck safety. Truck safety legislation was introduced and passed both the House and Senate with overwhelming support. Also supportive of this legislation was AAA of Michigan, Michigan Trucking Association, Michigan Teamsters Association, Private Motor Carriers, Michigan Farm Bureau, and numerous state agencies, including the Office of Highway Safety Planning.

The Truck Safety Package includes significant measures to increase safe traveling for both cars and trucks on Michigan's highways. Some of the more important portions in the package are: it establishes a Truck Safety Commission, who will determine how truck safety funds are spent for increased truck driver education, law enforcement, and research (this fund was described in the last issue of the *Michiganite*); it mandates covered loads on commercial trucks; and it restricts commercial drivers to the right-hand lanes of highways with two or more lanes in each direction.

Since the deregulation of the commercial trucking industry in 1980, crashes involving commercial trucks have continued to rise. It is to Michigan's credit that they have realized the seriousness of this issue, and with the cooperation of all trucking interests, have acted to strengthen traffic safety on Michigan highways. The Office of Highway Safety Planning looks forward to the increased benefits to Michigan's motoring public.

—By Marcia Barry, Consultant to the OHSP

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# INTERNATIONAL BOARD MEETING JANUARY 1989

The International Board of Directors of the Institute of Transportation Engineers met in Washington, DC, on January 25, 1989. President James Pline presided at the meeting. The following new international officers and directors were installed at the meeting: James Pline as president, Richard Beaubien as vice president, Frank Dolan as director from District 1, Dick Best as director from District 2, and Gary Metcalf as director from District 7.

The executive director, Tom Brahms, indicated that the membership had exceeded 9,000 for the first time in the history of the Institute of Transportation Engineers. In fact, the actual total membership is 9,181. This is made up of 7,503 voting members, 1,525 student members, 152 institute affiliates, and 1 institute affiliate retired. The lowest number of members were dropped for non-payment of dues in 1988 than at any other time in recent history. The goal for total membership in 1988 was 9200. This goal was just narrowly missed.

It was noted that District 6 now has 25.19% of the Institute's voting members. In accordance with Article 4, Section 1 of the Constitution, District 6 is now entitled to elect a third international director to serve a two-year term starting on January 1, 1990.

The income from publications for 1988 was the highest in the Institute's history. There was a 24.5% increase in total income from publication sales in 1988 over 1987. The top three sales included the Manual on Trip Generation, Transportation Land Development, and the Parking Generation Manual. It is anticipated that 1989 will have a similar figure especially because of two new manuals on residential street design and traffic control and traffic signal installation and maintenance.

The transportation training series materials supply has been nearly exhausted, and the headquarters staff is proceeding with the updating of the Traffic Signal and Traffic Control Thru Construction and Maintenance Zone courses. The market for these courses continues, and it has been recommended that ITE invest in producing updated video tape versions of the courses, audio-visuals, and revising the course references and exams. This series has not only provided net income, but has also been a visible service for our public sector members.

The headquarters office has recently been renovated and expanded to the entire fourth floor of the building on School Street S.W. in Washington. The added space is very helpful in providing room for future added staff.

The staff has been involved in updating the Careers in Transportation Engineering video tape and in setting up two conferences for traffic congestion, one in Rustin, Virginia, and one in Boston, Massachusetts, as well as the conference in Florida and the annual meeting in Vancouver.

In addition, the staff encouraged member participation in the 2020 Hearing series, as well as serving as panelists in several of the hearings. The appointment of an advisory

committee for the manual called Program to Alleviate Traffic Congestion - A Primer also took considerable time to select section authors and to review and monitor the progress of the draft.

The headquarters staff continually receives telephone and written requests for technical information. As a matter of fact, in a recent seven-week period during the summer of 1988 over 200 inquiries were logged and responded to. Approximately one-third of these inquiries were related to questions concerning trip generation. Some misuse of this data has occurred, and headquarters staff have followed-up and pursued legal action.

The Traffic Congestion '88 Conference which was held in Tampa, Florida, in March was attended by over 300 delegates from the United States, three Canadian providences, and two foreign countries. Ninety speakers were included on the program. Similar conferences were held in regard to strategies to alleviate traffic congestion in Rustin, Virginia, in April and also in Boston, Massachusetts, in the end of October. Two hundred forty-six attended the conference in Virginia while 238 attended the conference in Massachusetts.

The U.S. Legislative Committee of the Institute was hard at work promoting the agenda on issues of traffic congestion and highway safety. Materials have been provided by headquarters to the sections and districts to review. A program for national mobility and safety has been developed based on the standards set out in the ITE policies. It is hoped that this set of policies can be reviewed and input received from the membership and specific positions taken by the ITE Board and transmitted to Congress for their deliberations on federal funding for transportation projects.

Financially, 1988 was a successful year. The 1988 income will exceed \$2 million. This represents the largest income in the Institute's history.

Executive Director Tom Brahms commented that we should be proud of the progress that ITE has made, but we should not rest on our laurels, but continue to identify needs and have the courage to make decisions which make it possible to deliver programs which address these needs.

The ITE headquarters maintains a microcomputer-based bulletin board indicating positions available. During 1988, almost 400 users logged into the board to request information. In addition, the summer employment placement service and student employment program were well received and will continue.

The headquarters has developed a computerized data base of ITE publications and articles published from 1980 to the present. The data base which will be updated monthly contains information on 1600 publications and articles. The data base has potential uses including: (1) literature searches, (2) author searches, and (3) searches for information relative to various publications. The distribution of the data base is planned to be on diskette in the near future.

Several publications are planned for production this year including a manual called Programs to Alleviate Traffic Congestion - A Primer. This is due by the annual meeting. A contract has been entered into for writing a proposed text on geometric design. A publication to replace a former document called Introduction to Transportation Engineering is also planned. The contract for this publication has been terminated due to lack of effort by the writer of the manual. A new Transportation Planning Handbook and a new Traffic Engineering Handbook are underway. A 1990 target date has been set for publication of these items.

The board heard presentation by four cities concerning the 1994 annual meeting. The possible sites were: Seattle, Washington; Las Vegas, Nevada; Phoenix, Arizona; and Denver, Colorado. The Site Selection Committee recommended to the board that the Denver, Colorado, site be selected for the 1994 meeting. This recommendation was unanimously adopted by the board.

The board adopted revisions to the Associated Organization Division bylaws which provides for the chairman of that organization, who is a board member, to have a 3-year term instead of a 2-year term. This would be in concert with the present length of term of the other board members. ■

—By Delmar L. Kloeker, P.E. — District 3 Director

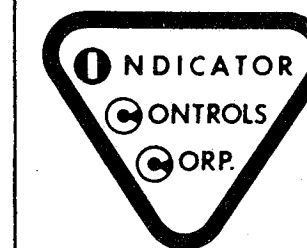
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