MONTEZUMA'S REVENGE

Lacking the $53,000 necessary to buy 32,000 badly needed light bulbs, city workers have begun removing bulbs behind yellow caution lights in traffic signals. Buenos Aires' notorious reckless drivers now will be faced with a green light at one moment and at the next with a brake-screeching red light. Since many drivers regularly run red lights, many are expected to cruise through the abrupt "stop" flash. Others may try to slam on their brakes, and some fear the loss of the yellow warning could cause more accidents. Concerned drivers wonder what will happen when the bulbs behind the red and green lights burn out: Will the light bulb changers opt to keep the "stop" or the "go" lights burning?

GET IT TOGETHER

RUMBLE STRIPS ON SECONDARY ROADS NO SAFETY BENEFIT

Recently Iowa conducted a study to evaluate the safety benefit of rumble strips used on paved rural secondary roads. In a comparison of 111 intersections with rumble strips installed for 1978, with 111 comparable intersections without rumble strips showed that the control locations actually had lower accident rates. The difference was 21% in the case of total accidents and 14% in the case o of run-stop sign accidents.

It seems from this study, that there is absolutely no benefit to using rumble stirps on rural secondary roads in advance of railroad grade crossings, intersections or other locations.

The report is contained in Transportation Research Record 926 available from TRB, 2101 Constitution Avenue, N.W., Washington, DC 20418.
Reprint from ATSA Signal

MICHIGANITE

Official Publication Michigan Section

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MICHIGANITE

RECEIVED OCT 29 1984

FALL 1984 **VOLUME XXI, NUMBER 3**

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

BEAUBIEN ELECTED DISTRICT III DIRECTOR

Richard F. Beaubien, P.E., was recently elected District III Director to the International Board of ITE. Beaubien is currently Transportation Director in the City of Troy; previously he was with Reid, Cool and Michalski and the Federal Highway Administration.

His involvement with ITE includes Vice Chairman of the District III Board, District III Technical Chairman. He is Past President of the Michigan Section and currently serves as Department One Chairman on the ITE Technical Council. His education includes a B.S. and M.S. in Civil Engineering from the University of Michigan. He is a registered professional engineer in three states including Michigan.

He will replace Bill Fehribach from Indianapolis, Indiana who is currently District III Director. Bill has worked extremely hard for our District at the National level as well as Section level.

PRESIDENT'S COLUMN

FROM THE DESK OF . . .

by Tom Krycinski

The previous two columns I have prepared have been considerably easier than this one will be, I'm sure! I feel like the pastor asking for a building fund from the pulpit! Actually, this is a slight exaggeration. When one considers the fact that the majority of our members have not seen a dues increase since joining our state section of ITE (the last one was some ten years ago), it is most amazing that our section has been able to operate on only $8.00 per member dues fee over this time period. We all know what inflation has done to our grocery bills, our home mortgages, automobile prices and expenses, and the list goes on and on. There are not too many things which you can buy for $8.00 today.

Rich Cunard has done an excellent job of showing why we need this increase on the next page. Consequently, your board feels that we should increase section dues to $12.00. Although we recognize the fact that this is a 50% increase, we feel that it is essential to the section coffers. Twelve dollars is still less than a good magazine subscription and besides the Michiganite beats that! When you receive your ballots for the annual meeting, please remember that a lot of serious consideration went into this request for increase when you vote yes or no. It is recommended that chapters such as ours have 50% reserves in their savings account to keep afloat in time of need. We do not even come close to that. Also, remember that good section activities do require some expense!

I would now like to take a little time to talk about non-financial matters. Monthly accident summary sheets coming across my desk appear to indicate a reversal in a five-year downward trend in traffic fatalities. As transportation engineers, we should all be concerned. Perhaps, just perhaps, there's a link to increased speeds on our state's highways as 55 MPH is more and more ignored. My office will be looking at the situation and at the road systems where the increases are occurring. It's discouraging when one considers tougher drunk driving laws and the increased enforcement we're getting across the state. This fall, a report is due to come out on the national 55 MPH speed limit as prepared for Congress by the National Academy of Sciences. This was a requirement of the 1982 Surface Transportation Assistance Act. National ITE has shown a direct interest in the study and I'll keep you posted on both issues.

Cont. page 2

NEW YORK TAKES LEAD ON SEAT BELT LAW

The question about which state will be the first to pass a safety belt use law has just been answered - New York is now number one.

Beginning January 1, 1985, drivers and all front seat passengers will have to "buckle up" or face fines of up to $50. In addition, children under 10 years of age, regardless of where they are seated, will be required to use a seat belt or be restrained in approved child safety seats. Technically, the measure takes effect on December 1st of this year, but during this one month period only verbal warnings will be given.

Cont. page 2

PRESIDENT'S COLUMN *Cont. from page 1*

If I don't see you at Saskatoon, I'll see you in Frankenmuth, I hope! By the way, for those of you who did not send in reservations, Rich Cunard has purchased a block of 40 Detroit Lions tickets for the Monday night football game which will be played after our annual meeting on December 10th. Remember that it took a lot of arranging by Rich to get the Lions to play a Monday night football game on the same day we were scheduled to have our annual meeting. So, give Rich a call as there are a limited number of tickets left. I'm sure that Billy Sims will give you a run for your money!

July 27, 1984

TO: Michigan Section Board Members
From: Richard Cunard, Treasurer
RE: 1984 Budget Analysis and the Need for Dues Increase

1984 Revenues

Dues	$2100
Michiganite Ads	2000
Bank Interest	140
Other	80
Total Revenues	$4320

1984 Expenses

Postage	$ 750
Supplies	100
Michiganite(5 issues)	4000
Printing	40
ITE National Mtg	500
Tech Council	100
Awards & Plaques	125
National Donation	100
District Donation	75
Other	25
Total Expenditures	$5815
Cash on hand Jan, 1984	$1502.20
1984 Revenues	4320.00
1984 Expenditures	5815.00
Estimated Reserves December, 1984	$7.20

Cost/member to operate the Section (Assuming 300 members and four issues of the Michiganite per year with ad revenues of $2000)

$3015/300 = $10.05

Therefore, I recommend that the Michigan Section Board of Directors consider raising the dues to a minimum of $10.00, but preferably, $12.00 for 1985. This higher figures is suggested in anticipation of continued cost increases, and in order to build the cash reserve back to what it should be.

NEW YORK TAKES LEAD

Although the bill does provide exemptions for certain vehicles and the handicapped, it does not exempt the out-of-state motorist. New York and other drivers would be liable for payment of fines for themselves and anyone under age 16 in the vehicle; otherwise, those 16 years and other would have to pay any fine themselves.

This "first-in-the nation" law is expected to reduce fatalities by at least 400 annually and also prevent up to 14,000 serious injuries. The anticipated economic benefit is projected to be some $530 million each year. This much should be saved alone in terms of reduced medical costs and fewer lost work hours, supporters said.

An interesting side note - just one day before signing the bill into law, New York's Governor Mario Cuomo was involved in a serious rear end collision in Buffalo - and escaped uninjured wearing his seat belt. Police at the scene (the Governor's car was rear-ended) indicated that the Governor would certainly have hit his head on the dash or windshield had he not been using his seat belt.

MICHIGANITE

Official Publication of the
Michigan Section
Institute of Transportation Enigneers

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MICHIGANITE - Dave Bacon

MICHIGAN SECTION ITE, TREASURER'S REPORT

Balance: June 1, 1984	$1,318.37
Receipts:	
Dues and Interest	$ 425.08
Michiganite Ads	1,510.00
Meetings	550.50
	$2,485.58
Expenses:	
Meetings	$ 985.60
Michiganite Printing	1,070.90
Postage	81.84
	$2,138.34
Balance: August 17, 1984	$1.665.61

Treasurer, Rich Cunard, P.E.

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, Robert V. DeCorte, 4750 Napier Road, Canton, MI 48187.

PEOPLE in the news . . . .

BILL SUTHERLAND RETIRES

Bill Sutherland, who has been with the Wayne County Road Commission since 1951, has recently retired. Bill received a Bachelor of Science Degree in Civil Engineering from the University of Michigan before beginning his long career with the WCRC. He proceeded through the positions of Freeway Design Engineer, Assistant Engineer of Planning and Assistant Director of Transportation before being promoted to Director of Transportation in 1980. We wish Bill and his family well and hope to continue to see him at ITE meetings.

BOB LARSON LEAVES WCRC

Effective July, 1984, Bob Larson retired from the Wayne County Road Commission to assume the Managing Director position with the Monroe County Road Commission.

Larson received his B.S. in Civil Engineering from the University of Michigan in 1952 and a Masters Degree in 1958 from U-M. He began his career with the Oakland County Planning Commission moving to the WCRC in 1957. He worked up through the ranks to become Assistant Managing Director in 1980.

Bob is a Registered Professional Engineer and a member of ASCE and ITE.

RESTRAINING DEVICES SAVE TWO LIVES

Delann Hart and her daughter, 17-month old Stacie, of Three Rivers, were on their way to Kalamazoo on U.S. 131 June 2 when Hart lost control of the car which jumped into the median and rolled over three times.

Hart's Vega was totaled, she said, but her daughter was not hurt because she was in a child restraint seat. Hart said she was not seriously injured either and police said it was quite possible she escaped injury because she too was wearing a safety belt.

Stacie received cuts to her face and head from broken glass but was otherwise unharmed. Today, two weeks after the accident, all the cuts are healed, her mother said.

"She wouldn't even be here right now without her car seat," Hart said.

Sgt. Burl Ghastin, from the Traffic Service Division of the Michigan State Police, said about 36 percent of the residents of Michigan with children under age four use child restraining systems as state law requires.

He said even the 36 percent compliance rate has saved lives, according to state estimations. In the first eight months the law was in effect, 156 children under the age of one year were saved from injury by a child restraint seat of some kind, he said. More than 300 children between the ages of one and three years old escaped injury in the same manner during that period, he said.

By Jan Gardner
Reprint from The Three Rivers Commerical

MDOT RETIREMENTS

Several longtime members of the Michigan Section have retired in recent months from the Department of Transportation. They include one former section president, Bob Rigotti, who retired after 37 years with MDOT, all of it in the Traffic and Safety Division. He supervised engineering in many operational areas, including signs, traffic regulations, and geometrics. For several years he was the traffic and safety engineer in the department's 11-county Saginaw District.

Bob held every elective office in the Michigan Section, of which he has been a member for 35 years. He also served on the Lansing traffic board and on several professional organization task forces studying traffic engineering problems.

Rigotti served in the Navy aboard the USS Oakland during World War II, and has been active in the Naval Reserve Program, from which he retired with the rank of Commander in 1968.

He and his wife, Carolyn, will maintain their home in Lansing and winter in Florida.

In recognition of Bob's contributions and service to the state and the department, a roadside park will be named in his honor. It is located on US-2, eight miles east of Watersmeet in Gogebic County, not far from Rigotti's birthplace in Ramsay.

Max N. Clyde, retired June 2 after 34 years of service.

During his nearly three and a half decades with the Department, Clyde held many positions, including head engineer of the Traffic and Safety and Testing and Research Divisions and also as a design engineer in charge of surveys, utilities, photogrammetry and various other functions.

Earlier, he was supervising engineer of traffic operations, safety and surveillance, and geometrics units in the traffic and safety divison. At the time of his retirement Max was second-in-command of MDOT's bureau of highways. A native of Bellaire, Clyde joined the department as one of 25 young engineers in MDOT's first engineer trainee class in 1949.

In addition to his department experience, Max served in the U.S. Army for 18 months, including a stint as a military policeman. He also served for 10 years on the State Water Resources Commission, and on several committees with the American Association of State Highways and Transportation Officials (AASHTO).

Clyde was also a commissioner on the Meridian Township Planning Commission in suburban Lansing and served on their zoning board of appeals.

He and his wife, Connie, both sailing buffs, plan to spend time on their 25-foot sloop anchored at their home on Old Mission Peninsula near Traverse City. They also plan to ski and travel.

In recognition of Clyde's contributions to the state and the department, the freeway rest area on northbound I-75 Freeway just south of Gaylord is being named in his honor.

John R. Hoyt, retired after 28 years with MDOT.

Hoyt handled a wide variety of assignments during his career, ranging from coordination of geometric improvements to assistant traffic and safety engineer in the department's eight-county Jackson District.

He and his wife Virginia plan to maintain their home in suburban Lansing.

Nejad Enustun also retired after 27 years with the department. Nejad's career included assignments in the Traffic and Safety Division's Geometrics, Research, and Reflective Systems Units. A native of Turkey, Enustun also served 25 years as a planner/engineer for that country. He was involved in the development of the first bridge linking Europe and Asia at the Bosporus Straits.

Other retirements in the department's Traffic and Safety Division include longtime Alpena District Traffic and Safety Engineer Fred Eggan, Romeo Portigo an engineer and John Haley a traffic technician who were assigned to signing and pavement marking projects, Preston Masters, responsible for the department's accident data retrieval system, and Bob Studer the division's Office Manager. Ursel Savage an engineer responsible for administration and supervision of the departments section 402 Community Assistance grant also plans to retire in September.

This Section wishes all of these friends and associates a long, happy, and productive retirement. By: William T. Lebel.

PLANS FINALIZED FOR DECEMBER ANNUAL MEETING AND DETROIT LIONS FOOTBALL GAME

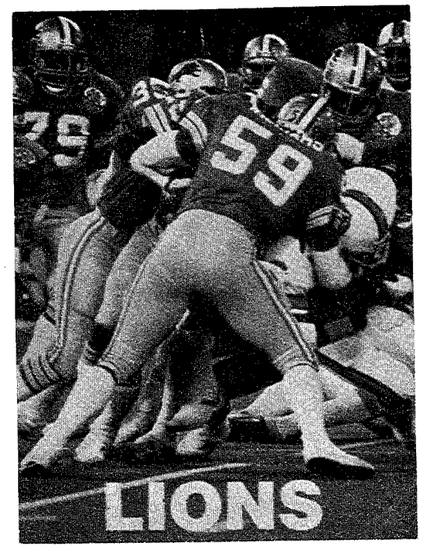
This years Annual Meeting of the Michigan Section-ITE will be held in Oakland County on Monday, December 10, 1984 at Roma's of Bloomfield in Bloomfield Hills.

Hosted by Richard Cunard, the meeting will consist of an afternoon technical program, followed by a buffet dinner, the Annual Meeting and - - The Monday Night Football Game between the Central Division Champion Detroit Lions and the American Conference Champion Los Angeles Raiders.

ITE has purchased a block of 40 tickets to the game (only 20 are still available) which is scheduled for later that evening at the Pontiac Silverdome. We will also be chartering a bus to transport our members to and from the stadium.

So bring your Spouse/Friend, kids or whomever along and have a great time at the game.

The tickets are available directly from Rich for $16.00 each ($12.50 for ticket and $3.50 for bus transportation) by returning the registration form below. Space is limited and will be on a first-come first-serve basis.



RESERVATION FORM
DETROIT LIONS FOOTBALL GAME

Please make _____ reservation(s) for the Detroit Lions Football Game on December 10, 1984. A check for $_____ payable to **Michigan Section-ITE** is enclosed.

Name(s)_____

_____

Forward this form with payment to: Richard A. Cunard, PE
Traffic Improvement Assoc. of Oakland County
2510 S. Telegraph Rd.
Bloomfield Hills, MI 48013

MORAL IMPLICATIONS OF THE 55 MPH SPEED LIMIT

For the past 10 years, most of the discussion surrounding the 55-mph national maximum speed limit (nmsl for short) has focused on its effects on fuel conservation and safety. There has been comparatively little analysis of certain negative effects, societal and behavioral, associated with the law; conflicts stemming from persistent, high levels of public disobedience; from erratic, often arbitrary enforcement; and from confusion and certain amounts of disagreement within the traffic safety community as a whole.

Of recent concern has been the apparent contradiction between public expressions of support for 55 (more than 75 percent favor it according to polls) and an almost equal number of drivers who disobey it. it is at least paradoxical that the very same motorists who claim to support the nmsl also cosse to disregard it much of the time.

> "... one of the principal features of transportation... has been man's decision to travel faster than he can afford to crash."

The same paradox can be found in public attitudes toward speed itself; for the fear of speed - or, more precisely, of acceleration - almost certainly is innate in human beings. An 11-month-old infant, never having experienced a fall, will nonetheless refuse to crawl across an elevated pane of glass to reach its beckoning mother. This fear of falling gives every appearance of being genetically encoded - yet, as adults, we condition ourselves to ride in jet aircraft at 400 mph, as well as in high-speed trains, buses and cars, all at velocities well above the safe limits of maximum deceleration.

In fact, one of the principal features of transportation in the 20th Century has been man's decision to travel faster than he can afford to crash.

Moral Disapproval

This explains the paradox! It is simply the conflict between the public's fear of speed - a fear quite often expressed as moral disapproval - and its willingness to travel faster than is safe to crash under certain conditions. Understood this way, "speed" is a metaphor for behavior threatening to society, or its individual members (speed "kills," ergo speed is evil) without regard to any velocity in particular.

While this "moralizing" of speed may be illogical, it is not entirely impractical. It has acted as a natural brake on the evolution of faster means of transport through the years, and allowed an incremental rise in average highway speeds - about 1/2 mph per year since 1947 - at the same time that the number of accidents and fatalities per mile were declining. Only when the metaphor is taken literally - when speed is quantified in moral terms, and used to calibrate behavior - does this orderly process cease. Only then is the public's ability to adapt to technological advancement inhibited and destroyed.

> "... certainly no one should imagine that 55 mph is a safe speed to crash."

The question is not one of stopping or slowing "progress" in the interests of greater safety: typical speeds already exceed the dependable limits of survivability (about 45 mph in a barrier impact), and certainly no one should imagine that 55 mph is a safe speed to crash. The critical question, then, is the probability of a crash occurring, and the most important aspect of speed its role in causing crashes.

What Causes Traffic Crashes?

Does speed cause accidents? The common wisdom holds that it does, and opinion supported by police reports of accidents and such observers as the National Safety Council, but both views are dangerous oversimplifications. Undoubtedly speed can contribute to accidents, particularly when the limits of control are exceeded, or wehn sudden changes occur in the driving environment; but the most thoroughly controlled studies yet performed of crash causes - Campbell,1, Sielski,2 Solomon, 3 et.al. - indicate that speed is the primary cause of comparatively few accidents, ranking well behind excessive use of alcohol and a variety of driving errors, such as improper turns and lane changes, following too closely, etc.

It could be argued that all or most such actions would be less harmful if performed at lower speeds - but few would go so far as to propose that the proper function of speed limits is to make it safe to follow too close or drive while drunk. If such were the case, speed limits would have to be set very low, inasmuch as 80 percent of today's fatal crashes occur at 40 mph or less.

Value of 55 Enforcement

Considerations such as these not only explain why the nmsl has failed to gain a greater measure of voluntary support, they suggest practical limits to efforts to enforce speeds which are significantly lower than the 85th percentile (the speed at or below which 85 out of 100

Cont. page 12

1984 MEETING SCHEDULE

Date	Location	Host	Event
September 14	Lowell	Grand Rapids	Golf Outing
September 23-27	San Francisco	National	Annual ITE Meeting
October 11-12	Dayton, Ohio	Bob Wert	District III Meeting
November 1	Frankenmuth	Roger Walther	Lunch Meeting
December 10	Pontiac	Rich Cunard	Annual Meeting

WE'RE SORRY

We failed to list Victory Childers and Don Schneider as authors of the article on "Crash Cushions" in the last Michiganite. We apologize for the over-sight and thank them for their excellent contribution of text and photographs.

FROM THE DESK OF . . . THE EDITOR

The ITE has a series of fifty-one policies regarding everything from Canons of Ethics through Federal-Aid Highway Program Categories to a National Energy Policy. Policy 0-12, Maximum Speed Limits addresses the national maximum speed limit. It is stated in the ITE Membership Directory as follows:

> "0-12. **Maximum Speed Limits.** It is the policy of the Institute of Transportation Engineers to encourage studies to determine appropriate maximum speed limits. Continuing investigations, including those concerning traffic engineering practices and economic, environmental and social impacts, are required. Research is needed to determine if the maximum speed limit can be raised on selected Interstate or other high standard freeway without compromising safety."

If we analyze this policy by removing the cosmetic terminology and paraphrasing, we arrive at something like:

> It is ITE's policy to encourage studies to determine speed limits. Continuing investigations are required. Research is needed to raise speed limits without compromising safety.

Perhaps it is time we take a hard look at the "studies", "investigations" and "research" available and take a firm stand on the 55 national maximum speed limit. It is now over 10 years old. It was conceived and born in a political bedroom by parents who were more interested in saving energy and money than in raising a wholesome family of laws. At it's birth, its parents felt that there would only be a few States willing to love and care for it. So states were financially blackmailed into accepting - at least by posting signs stating so: "55 MPH SPEED LIMIT".

When it became obvious the States were not paying due homage to the little brat, the Feds decreed to both withhold money for lack of interest and to pay money for increased show of love through 55 mph enforcement. Now, when States cannot document sufficient interest in the child the Feds step in to revise the statistics so that they will say what they want them to say: compliance.

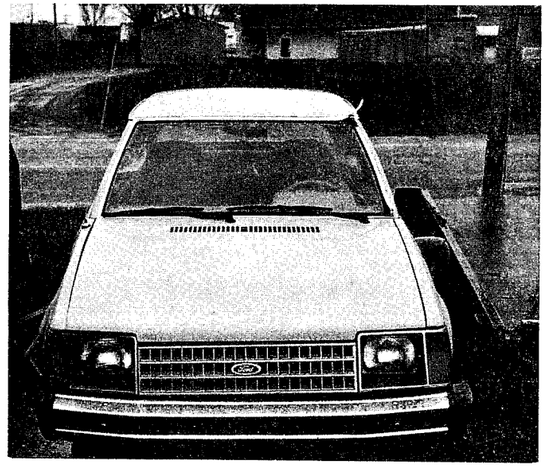
It is truly a blessed event when a new child is born to a loving family for all the good reasons. We also know that there will be a judgement day. A day when all facts are studied investigated and researched to determine the real worth of the child. It is now time for ITE and its members to look at the facts and determine the worth of a law that was born out of wedlock, robbed innocent people of countless time and money and forced police and motorists to play electronic hide-n-seek.

Let ITE be the official parent of good common sense. Let's declare the law an official bastard and return to setting realistic speed limits through the 85th percentile and other official means.

R W McCarter

WHICH DRIVER SURVIVED?

The driver of this jeep was traveling about 55 m.p.h. when he lost control due to a mechanical problem. The jeep crossed the center line and was struck headon by an oncoming vehicle. The driver of the jeep was wearing a safety belt. He suffered only bruises. Note: In the picture that the driver's seat is lying on the ground. The seat mounts broke on impact. When the driver unbuckled his safety belt, he and the seat bell to the ground!



The driver of this vehicle approached a sharp curve at an estimated speed of 45 m.p.h. The vehicle went out of control throwing the driver (not wearing a safety belt) toward the passenger side. He was half thrown out of the passenger side window which was rolled down. The vehicle rolled over on it's side with the driver's head outside. The vehicle rolled over on the driver. Note: In the picture that the windshield has damage on the far passenger side. The indentation was cuased by the deceased driver's head.

BRAHM'S REPORT TO BOARD

National ITE's Executive Director, Tom Brahms, reported to the International Board of Direction the number of members of ITE. As of January 23, 1984 the Institute had 6,480 individual members and 47 Associated Organization Division members. This compares to 6,394 individual members and 45 Associated Organization Division member companies on January 3, 1983. The following compares this data in more detail:

Membership Grade	Jan.,1983	Jan.,1984	Change
Student	412	361	-51
Associate	2701	2269	-432
Associate 10	471	834	363
Member	1130	1214	84
Member 10	693	738	45
Member Life	75	83	8
Fellow	673	732	59
Fellow Life	196	203	7
Affiliate	19	20	1
Inactive	9	12	3
Honorary	15	14	-1
	6394	6480	86

CROUSE-HINDS SOLD

Traffic Control Technologies, Inc. recently purchased Crouse-Hinds Traffic Control Products Division. The name and address on the new company is:

Traffic Control Technologies, Inc.
7327 Henry Clay Blvd.
P.O. Box 0399
Liverpool, New York 13088-0399

Telephone Number (315) 477-8206

Traffic Control Technologies, inc. will continue to operate in the same facility and with the same personnel that have previously served you.

Any correspondence, request for bids, purchase orders, or other inquiries previously forwarded to Crouse-Hinds Traffic Control Products should now be sent to the address indicated above.

We appreciate your cooperation in this matter and look forward to continuing our relationship and working with you on your needs for traffic control equipment.
By Dave Haver, Marketing Manager

THE FIFTH ANNUAL PEDESTRIAN CONFERENCE EXPANDS INTERNATIONAL PERSPECTIVE

The City on its Feet, the Fifth Annual Pedestrian Conference hosted by the City of Boulder, Colorado, has become increasingly international in its perspective over the years, and this year is no exception. Foreign speakers are being brought to the Conference on September 20-21 to offer their unique perspectives and illustrate successful European and Asian pedestrian spaces.

The speakers provide opportunities for interaction with foreign experts as well as bring novel ideas and standards for comparison to the Conference. Featured presentations will be made by the following international speakers: Mayor D. Hahlweg, Germany; Tadayoshi Fujiki, Japan; Anthony Ramsay, Scotland; Reinhold Mahler, Germany; Jan Gehl, Denmark; and Gerhard Meighorner, Germany. Their topics will include studies done in their respective countries as well as in Poland, France, and the United States.

Other highlights of the September Conference include presentations on the World's Fair and Olympic complexes, keynote addresses by Tom Downs, Deputy Mayor of Washington D.C., and Herbert Levison, Professor of Civil Engineering, and illustrative walking tours.

For registration and information, please contact the Conference Coordinator, Transportation Division, P.O. Box 791, Boulder, Colorado, 80306, (303) 441-3266.

The Fifth Annual Pedestrian Conference

"THE CITY ON ITS FEET"

September 20-21, 1984
Boulder, Colorado

Sponsored by the City of Boulder Transportation Division

The Pedestrian Conference provides an opportunity for people from all disciplines to come together to search for viable ways of creating a supportive and enhanced environment for pedestrians.

National and international speakers will offer perspectives on:

- **The Economic Feasibility of Pedestrian Oriented Downtowns**
- **Recreational Pedestrian Planning**
- **Mixed Use Planning**
- **Pedestrian Safety, Education, and Enforcement**
- **Reallocation of Space from the Auto to the Pedestrian**
- **Enticing the Pedestrian with a Well-Designed Environment**
- **Specific Case Studies**

For further information, please call the Conference Coordinator at (303) 441-3266.

Please Complete and Return with Check to:

The Fifth Annual Pedestrian Conference, Transportation Division, P.O. Box 791, Boulder, CO 80306

Please Print

Name _____

Address _____

_____

Profession _____

Affiliation _____

Check Appropriate Box

☐ $125 Early Registration (by August 30)

☐ $150 Registration after August 30

☐ $15 Proceedings only

--Michigan is one of only eight states with more than one million trucks registered. Total truck registration in Michigan is 1,178,000.

SIGNAL OPTIMIZATION STUDY

FHWA recently announced the availability of a new technology sharing report titled "Traffic Signal Optimization Programs - A Comparison Study." This report is the result of a study designed to assist the practicing traffic engineer in selecting a computer program for optimization of traffic signal timing.

Studies were conducted in three cities, one with an arterial, one with a quasi-network, and one with a CBD network. The three computer programs compared were MAXBAND, TRANSYT 7-F, and SIGOP III. The comparisons provided valuable information that will enable the traffic engineer to make a more intelligent decision on which program may be more applicable to his traffic signal system. The report should be of interest to all traffic engineering personnel who have traffic signal timing responsibilities.

Today, change appears to be the most consistent factor in the field of computer programs to optimize traffic signal timing. This is particularly true of the three computer programs used in the study. At the time of this study, TRANSYT 7-F, Release 2 was the version being supported by FHWA. Since then, TRANSYT 7-F has been updated to Release 3. Some of the limitations identified in this report have been corrected in Release 3. Similarly, the SIGOP III and MAXBAND programs have been recently updated to correct some of the limitations identified in the report.

Copies of the report are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161.

By M. A. Hoevel

INNOVATIVE MEDIAN DIVIDERS SAVE LIVES

Highway safety engineering is a relatively recent innovation. It was not until automobiles began to proliferate and drivers started pushing them to speeds over 35 mph that highway planners implemented widespread major improvements in safety design, such as straighter, flatter roads, banked curves and greater emphasis on highway dividers - median parkways and barriers.

Results have been spectacular. Consider, for example, that in 1937 almost 34,000 people were killed in motor vehicle accidents nationwide, a death rate of 11.46 per 100 million miles of vehicle travel. At that time, there were only 12,000 miles of nonurban divided highways in the United States. By 1983, when highway dividers were commonplace, the death rate had fallen off sharply to 2.63 per 100 million miles.

It took more than just highway dividers to bring down the death rate, of course. But dividers-especially median barriers-played a big part by reducing the number of head-on collisions, a particularly deadly type of accident.

The life-saving value of median barriers has increased over time for several reasons. One is the development of new, more effective design configurations that deflect and/or absorb impact energy to minimize the danger of a flip, roll or sudden stop when runaway vehicles impact barriers.

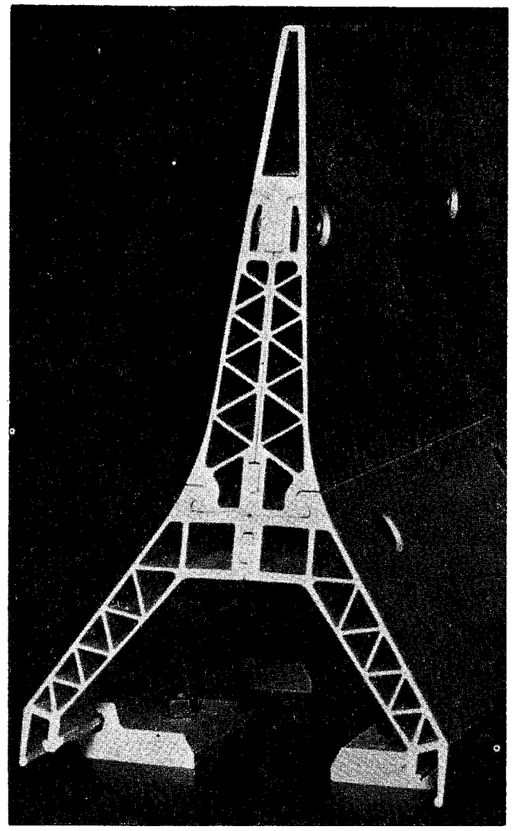
A cylindrical tube filled with sand running "snake-like" for miles is how a spokesman for International Barrier Corp. (IBC) described his company's galvanized sheet steel highway barrier. The product, he explained, "uses 140 tons of galvanized steel per mile, with a 2 oz. zinc coating (per sq ft). If looks like a tube that's been flattened top and bottom and corrugated on the sides. "The sides are made of two sheets of steel, one top and one bottom, overlapping at the central corrugation," he continued. "The whole thing is filled with sand and capped with another sheet of steel. When filled, it weighs 1,100 lbs per running ft." No anchoring is needed; the weight of the sand holds the barrier in place under normal conditions.

For severe impacts, the side deforms in the area of contact and the sand is compacted and shifted. Finally, in the most severe impacts, the barrier slides sideways across the ground. A tremendous amount of energy is absorbed in the process. Thus, the barrier provides top performance through a broad range of vehicle sizes, including the increasingly popular small car.

An entirely different type of metal median barrier is manufactured by Magnode Corp. It is constructed of aluminum alloy 6061-T6 extrusions, or "shapes," that interlock to form a lightweight, heavy-duty barrier ideal for use on existing bridge structures too narrow or weak for traditional concrete barriers. The key is aluminum's high strength-to-weight ratio and the barrier's additional design strength. These parameters combine to make a barrier that Magnode claims is 80% lighter than conventional concrete barriers and 50 to 60% lighter than galvanized steel barriers with comparable strength. A 20 ft long section, when fully assembled, tips the scales at only 1,400 lbs.

The Magnode barrier's "Eiffel Tower" profile (see picture) was reportedly designed to "absorb and dissipate energy created upon impact by forcing the vehicle to be lifted up (and along) the curve of the barrier, glancing it back onto the proper side of the highway," according to a spokesman for the company.

Quazite, a product of Quazite Corp., is characterized by the company as a "new class of engineering materials." Its many industrial uses include the construction of median barriers. A Compnay spokesman provided a peek at the product's composition: "Selectively-graded minerals are combined with polymers and monomers in a patented mixing, molding and curing process. Powerful crosslinked mechanical and chemical bonds formed during the process give Quazite a range of performance characteristics unequaled in a single rigid-class material. "On a



weight basis, Quazite is four times as strong as concrete, two times as strong as natural granite and equal to iron in strength," he continued. Gary Hoffman, director of Pennsylvania's newly-formed Bureau of Bridge and Roadway Technology, added: "We are looking carefully at the Quazite barrier for its potential in an installation where we could place the barrier shells right over existing rail median barriers. This may prove to be a more economical alternative. We won't have to remove the hardware and can just place the shell on top of it and use that for the anchoring system."

The foregoing median barriers by IBC, Magnode and Quazite Corp. are often represented by their companies as being better products than "standard" or "conventional" concrete barriers. But that is a relative judgement. It is true that concrete barriers are at a disadvantage in certain applications. Being rigid and heavy, they do not absorb impact energy efficiently and weigh too much for many older bridges. On the other hand, rigid and heavy adds up to a pretty strong barrier, especially when reinforced with steel rods. Concrete barriers are also economical; it's easy to produce them cost-efficiently and quickly using high-production slipform barrier paving machines, which are able to case a continuous length of concrete barrier in various safety design configurations that deflect impact energy.

Reprinted with permission from Better Roads

55 MPH . . .

Public Compliance Essential

Posted speed limits set by qualified traffic engineers at the 85th percentile achieve voluntary compliance by definition. They increase the number of cars travelling within the 10-mph "pace of traffic", and reduce erratic behavior by drivers uncertain what the proper speed is or should be.

Speed limits set by the 85th percentile free police officers from being the agents of a subjectively determined and essentially political notion of what constitutes desirable behavior, allowing them to apply their full efforts toward controlling the small percentage of offenders who account for a disproportionately large share of all fatal crashes.

Most of all, the 85th percentile makes the motoring public an essential part of the decision-making process - a right they should enjoy if only because they, and not their leaders, must bear the consequences of such decisions.

No other method of determining speed limits can succeed as well. For almost half a century, prior to the passage of the nmsl, the mileage death rate from automobile accidents fell at a near constant rate; in the ten years since 55 has been in effect, the mileage death rate has fallen twice and risen eight times.

To renew the legislative mandate for the national maximum speed limit on the basis that it ought to work. . . or that it would be desirable if it did work. . . or that maybe someday it will work, is not unlike the theory that if a person slides downhill long enough he eventually will come to a place where he can begin to slide uphill.

Not only is the theory unsupported by the evidence, it is, when applied to highway safety, immoral.
Reprint from JOURNAL of Traffic Safety Education

COMPULSORY SEAT BELT USAGE AND DRIVER RISK TAKING BEHAVIOR

The danger compensation principle contends that the use of certain vehicle safety features such as seat belts may induce drivers to take greater risks. To test for this hypothesized effect, observational data on seat belt usage and driver risk taking were collected on 4,812 drivers in Ontario, Canada, where seat belt usage is required by law. These data were compared with the results of a similar study conducted in Michigan, which has no usage law. The measure of driver risk taking in both studies was the time duration of following headway maintained by seat belt users and nonusers in high flow freeway traffic. Seat belts were worn by 51% of the Ontario drivers and by 14% of the drivers in Michigan. The Ontario usage rate before the law took effect was similar to the rate observed in the Michigan study. The results of both studies taken together are incompatible with the danger compensation principle. In the two jurisdictions a smaller percentage of users than nonusers drove at close, risky headways of less than one second, and these differences were of the same general magnitude. In the Michigan study it was concluded that voluntary usage is associated with the avoidance of risk. Likewise, in the Ontario study mandatory usage, rather than producing tendency for increased risk taking as suggested by the danger compensation principle, was also associated with the avoidance of risk. Since the results provide no evidence for a danger compensation effect in car-following behavior, it was concluded that this study presents no evidence that the safety benefits of seat belts would be diminished or neutralized by greater driver risk taking.
Reprint from Journal of Traffic Safety Education

55 NMSL . . . *Cont. from page 3*

vehicles travel in the absence of posted limits). Presuming some number of lives could be saved by posting limits lower than this - and devoting the necessary manpower to enforce them - the question remains how many more lives might be saved if the same amount of resources were used in other ways? For while it may be true that no price tag can be placed on a human life, it is also true that to spend one dollar saving a life is wrong if, by spending the same dollar differently, two lives could have been saved.

This, too, is a moral issue, one affecting legislators and policy makers, who have an obligation to allocate available safety funds in the most productive ways possible.

> "... controlled studies... indicate that speed is the primary cause of comparatively few accidents..."

Several other moral questions have yet to be addressed in this context, and some have not even been asked. Such as:

* Can any government afford to extablish and maintain a law, however admirable in intent, that does not compel a high level of voluntary compliance?
* Is it morally defensible to promote obedience to such a law by basing claims for its effectiveness on data that are known to be incomplete, and in some cases unrepresentative?
* How moral is it for an agency of the government to concoct a fictitious factor for "speedometer error"- as the DOT has done - and use it to misrepresent compliance levels and actual speed behavior by as much as 4 to 5 mph?

Cost-Benefit Factors

The answers to such questions are as essential in determining the relative costs and benefits of 55 as are such physical factors as added road wear, vehicle maintenance, fuel saved v.s. time lost, etc. The long-term costs to social order and cohesiveness cannot be discounted simply because they are difficult to predict or quantify.

> "... to spend one dollar saving a life is wrong if, by spending the same dollar differently, two lives could have been saved."

What is the cost, for example, of creating a constant, pervasive "adversary relationship" between citizens and the police?. . . .Of setting a daily example to the youth of this country that unreasonable laws need not be obeyed, and that the right to decide which laws are reasonable, and which are not, rests with the individual?. . .Of creating financial inducements, as the present federal law does, for states to misreport or misrepresent crucial traffic data?

This nation's experience with alcohol Prohibition, though not comparable in all respects, is yet similar enough in the areas mentioned to suggest that the price can be high indeed.

The most costly mistake of all would be to allow traffic safety to devolve into a test of wills between authorities and the public; to permit arbitrary laws and unequal enforcement to create further estrangement, instead of enlisting American motorists as a part, the most important one, of the joint effort to eliminate highway accidents. The means for accomplishing this goal are immediately available, and well-documented as to their effectiveness.

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LOW-COST SHOULDER RUMBLE STRIPS REDUCE ACCIDENT RATE 52%

Caltrans develops technique for efficient production of continuous shoulder rumble strips to help prevent "ran-off-road" accidents

Technologically complex inventions such as VCRs, computers and the space shuttle earn our respect. So do relatively simple things that really work, such as aspirin, Velcro--and a new variation on rumble strips developed by the California Department of Transportation (Caltrans).

The rumble strip concept itself is nothing new, of course. Pavement designers have used them for years to alert inattentive or drowsy drivers that they are approaching a toll gate, intersection or other mandatory stop zone. What distinguishes the Caltrans variation is (1) extensive use of rumble strips along highway shoulders to reduce by over 50% the rate of "ran-off-road" type accidents and (2) the Department's development of a cost-effective way to build the strips into continuous miles of pavement.

In a background report by Caltrans engineers J. H. Chaudoin and Gary Nelson, the Department described its approach to the problem:

"For years, the California Highway Patrol and traffic engineers have searched for a way to communicate with the careless motorist. These people are often driving poorly maintained vehicles or indulging in alcohol, drugs or speed, resulting in boredom, fatigue or combinations thereof. They fall asleep at the wheel or are inattentive, run off the freeway shoulder, overcorrect and roll the vehicle."

Saving drivers from themselves

Barring a wonderful change in human nature, there is only one practical way to save these drivers from themselves: They must be jolted to awareness every time their vehicles start drifting off the pavement.

For obvious reasons, Caltrans noted, this cannot be accomplished with visual warning devices such as signs or pavement striping. "The solution, therefore, must be the use of auditory and/or vibratory devices," including raised bars, pavement grooves and other systems of alert that fall under the general heading of "rumble strips."

Caltrans had earlier tested such systems for use on the shoulders of long stretches of highway and found the results disappointing. Later, results of a separate study by Human Factors Research, Inc., Goleta, CA, suggested that the test locations used in Caltrans' research were not long enough, at 5 to 10.9 miles, to gauge the true effects of shoulder rumble strips.

Human Factors' research had determined that when drivers drift onto the shoulders of highways and impact a warning device, they are likely to stay on the pavement for 48 minutes of driving time before they drift onto the shoulder again. If no impact is encountered, they are likely to drift off the highway again only 12 minutes later.

Caltrans decided to try a more ambitious testing project to evaluate the usefulness of shoulder rumble strips. The strips were added to the shoulder of a 23.5-mile section of Route 15 that was being resurfaced between Cima Road and the Nevada state line, followed later by 93 additional miles of Route 15 and a portion of Interstate 40 east of Needles.

These locations, according to Caltrans, were ideal for the project because motorists driving their vehicles through the Mojave Desert on their way between Los Angeles, Las Vegas and the Colorado recreation areas are often "lethargic, in a sense hypnotized and insensitive to super speeds, highway grades and weather extremes. There is a strong tendency to minimize driving time [by driving faster] to maximize recreation time."

The stretches of highway affected were all scheduled for resurfacing. Caltrans planned to form the strips as grooves in the new asphalt surface, using some kind of machine to make impressions at regular intervals in the shoulder, perpendicular to the roadside. Tractor cleats and asphalt steel wheel rollers both were considered and rejected.

Finally, Caltrans reported: "The decision was made to begin experimentation with a vibratory dirt roller (steel vibratory drum with rubber drive wheels)," because the metal sections used to make the rumble strip depressions could be welded to the drum and removed without causing permanent damage, thus permitting experimentation with various shapes, sizes and spacing of the metal sections.

A RayGo Rascal 300 vibratory dirt roller was selected as the guinea pig. Modifications included replacing its knobby tread tires with slicks to prevent making knobby impressions in addition to the rumble strip depressions in the newly-laid pavement. Two 55-gallon water drums and wetting pads were installed to keep asphalt from sticking to the machine, and a small water pump was connected to regulate water flow to the drum. Total cost of the modifications and trial runs came to $8,000.

Work then began with the modified roller. Various shapes, sizes and spacings were tried for the welded-on metal sections, and "timing"--i.e., efficacy under different seasonal weather conditions--was also treated as a variable. Results:

. A semicircular round pipe section 2 1/2 in. in dia. was found to be the optimal shape, forming 0.12-in. deep depressions. "With less thickness of the asphalt concrete, the resultant depression was diminished," Caltrans noted. "The depth and width were also dependent on the temperature of the asphalt concrete. The hotter the asphalt concrete, the deeper the depressions." V-shape and rectangular metal sections were tried and rejected for various reasons.

. Optimal length for the metal sections used to form the depressions turned out to be 3 ft., including a 6 in. bevel, 2 ft. full depression in the center and another 6 in. bevel, according to Caltrans. "This increased the width of the strip exposed to the motorist and provided drainage regardless in which direction the shoulder was superelevated."

. The depressions were finally spaced apart at intervals of 8 in., which reportedly "provided a good sound effect with a lower pitched sound than 4-in. spacing" and was easier to roll into the asphalt with the necessary depth and consistency. Intervals of 4 and 16 in., as well as a pattern of irregularly-spaced depressions, were also tested and rejected.

. The strip of depressions was laid perpendicular to the roadside and held to an average distance of 6 to 12 in. from the edge of the traveled way.

. Concerning the subject of timing, Caltrans emphasized that "time of groove placement is a critical factor in obtaining good depressions and can be highly unpredictable. It is, of course, dependent on both air and mix temperatures. Geographic locations (elevation), haul and 60 to 80° daily temperature extremes all complicate attaining good results.

Cold weather complications

"In the summer, the rumble strip has no difficulty in waiting for the breakdown rolling to be completed," Caltrans elaborated. "However, in late fall and early spring when desert temperatures are low and especially when there are cold winds, breakdown rolling and the rumble strip rolling must be very closely coordinated so that they are completed before the mix becomes too cold. Depressions must be placed after breakdown rolling, with finish rolling done after rumble strip rolling but not on the depressions.

"This method works well when the contractor's operations are smooth and rollers remain close to the paver," Caltrans reported. "However, any delays with rollers can allow the pavement to cool and the depressions are then likely to be shallow."

Cont. page 8

RUMBLE STRIPS *Cont. from page 7*

An engineer's evaluation of the project's early stages warned that "if the temperature of the material was too hot, tearing [of the mat] would occur; if too cool, depressions were too shallow. The rule was to place one's hand on the asphalt, and begin rolling depressions when 'fines' stuck to the palm of the hand--about 180°F--and discontinue when the mat began to tear." He also suggested that the roller should be in place before daylight during summer, when the temperature is warmer, to avoid making tracks while positioning the roller.

Once the bugs were worked out, Caltrans found that the process cost 3 to 7¢ per ft. and bid future projects at 5¢ per ft. For its money, the Department has dramatically reduced the risk of drivers drifting off the road. Such accidents declined by a spectacular 52% on highways where the shoulder grooves have been installed. In human terms, the rumble strips prevented two fatalities, 34 injuries and 16 property-damaging accidents.

Reprinted from Better Roads

AUTOMATIC SEAT BELTS LOWER INJURY CLAIMS

Volkswagen Rabbits equipped with automatic seat belts have a 14 percent lower overall insurance claim frequency for occupant injuries than comparable Rabbits equipped with manual belt systems, the Highway Loss Data Institute has reported.

HLDI said that almost all the difference in claims involved cars for which a collision claim was filed in addition to the injury claim. "Such crashes are more likely to be frontal," HLDI said.

Moreover, in cases where large collision damage claims were filed, associated injury claims were consistently lower for the Rabbits equipped with automatic belts than for those equipped with manual systems, HLDI said.

"The results...strongly suggest that the automatic belt system offered on VW Rabbits reduces the frequency of injuries in such cars..." HLDI said.

The study was submitted to the National Highway Traffic Safety Administration (NHTSA) in support of reinstatement of the automatic restraint provision of Federal Motore Vehicle Safety Standard 208.

The report compares the frequency of insurance claims for injuries to occupants of 1981 and 1982 Rabbits, equipped either with automatic or manual seat belts. The claims were from Sept. 1980 through Sept. 1983. The study is based on 51,970 insured vehicles years of exposure for Rabbits equipped with manual belts and 32,084 insured vehicle years of exposure for Rabbits equipped with automatic belts.

The overall injury claim frequency for Rabbits with the manual system was 16.9 per 1,000 insured vehicle years, contrasted with 14.5 claims per 1,000 insured vehicle years for those with automatic systems, HLDI said.

Reprint from STATUS REPORT

INFORMATION NEEDED ON ARROW BOARD PLACEMENT

AMAF Industries, inc., Columbia, Maryland, is under contract with FHWA to conduct a study entitled "Arrow Board Placement at Urban and Freeway Work Zones." The primary objectes of this study are to review current practices and considerations in arrow board placement and to develop an informative slide-tape package for FHWA distribution to highway, traffic and maintenance engineers.

The study team is currently collecting information from individuals and agencies with experience in the placement of arrow boards in work zones. Any pertinent information should be supplied to Claude M. Ligon, P.E., Principal Investigator, AMAF Industries, 90520 Annapolis Road, Columbia, Maryland 21045, phone (301) 995-1919. Cooperation of individuals and agencies in any manner will greatly assist AMAF in completing this useful research project.

Reprint from ATSA Signal

HOW TO BE HAPPER, MORE SUCCESSFUL

Hey, guys, did you know a good-morning kiss from your wife can make you happier, healthier and more successful? It also can give you a lift that will transform the rest of your day.

That may sound almost too good to be true - but the experts say it's so.

Good For Life!

There are other fringe benefits. An insurance study shows the husband who kisses his wife every morning before leaving for work probably will live five years longer than one who doesn't.

A kissing husband will have fewer auto accidents, lose up to 50 percent less time from work because of illness and earn 20 to 30 percent more than the non-kissing husband. It's something to consider!

No statistics are available for benefits to kissing wives.

FIELD EVALUATION OF SNOWPLOWABLE PAVEMENT MARKERS

Transportation Research Board Committee on Traffic Safety in Maintenance and Construction Operations recently reported on tests conducted during the 1981-82 winter to evaluate various types of snowplowable pavement markers. Five different markers were tested: Stimsontie 96, Dura-Brite, recessed markers, Kingray and Prismo roadstud.

The evaluation revealed that the Stimsonite 96, Dura-Brite and recessed markers were acceptable snowplowable markers, because all 3 had adequate reflectivity during both dry and wet nightime conditions and the markers proved to be durable when subjected to snowplow operations. Because of its lower cost ($8 - $9) the recessed marker was recommended as the most cost effective. The report indicated that the cost of the other markers was in the range of $16 - $20 each. The cost of a regular, raised pavement marker is approximately $3 each.

A full report of the evaluation is contained in Transportation Research Record 933 available from TRB.

Reprint from ATSA Signal

NEW SAFETY BELT PROPOSALS INTRODUCED IN SENATE

A safety belt use package with a "new twist" is how a pair of bills (SB 741-742) is being described after introduction recently in the Michigan Senate. Sponsors of the new proposals are Senators Doug Cruce (R-Troy) and William Faust (D-Westland).

The principle change and "new twist" from earlier legislative proposals is found in SB 742 which would require a public vote on the seat belt law at the general election in 1988. Senate Bill 741 is the actual seat belt bill and is nearly identical to the Hollister proposal. Only front seat occupants would be covered under the bill and no points would be assessed for violations; a fine of $10 would apply and certain exemptions would be allowed. The bill is silent on an effective date, but it could become law as early as January 1, 1985, if adopted. If the legislature does not specify a date, it would become effective 90 days after the end of the current session.

On May 17, the two-bill package was unanimously adopted by the Senate Administration and Rules Committee, chaired by Senate Majority Leader John Engler (R-Mt. Pleasant). The vote was 4-0 with one committee member being absent. The bill now moves to the Senate floor where action is expected shortly. Twenty votes are required for passage in the 38-member Senate.

SIGN VANDALISM—NATIONAL PROBLEM

"Sign vandalism has become a costly and often deadly national problem" says Himmat Chadda and Everett Carter in a paper published recently by TRB.

According to FHWA estimates, total annual direct costs of sign vandalism to the states, counties and cities are $51 million. Indirect costs for injuries and court and liability claims are estimated to be about the same. A recent survey found that in just seven states, 14 fatalities were attributed to vandalism or theft of signs. Approximately 10% of traffic signs must be replaced annually because vandals either stole, defaced or mutilated them.

There are three major types of sign vandalism according to Chadda and Carter: (1) Destruction from bullets, bottles, bricks, rocks, etc. (2) Mutilation by spray paints, political posters, etc. and (3) Theft of both the signs and supports.

The stop sign is probably the most often vandalized with street name signs running a close second. Some street name signs that more most often stolen are "Yellow Brick Road" (stolen 20 stimes in one year), "Karen Place" and "Judy Lane" (each vandalized at least six times a year).

The paper evaluates techniques used to combat sign vandalism problems including legal and physical counter measures, educational programs and public information campaigns.

The complete report is contained in Transportation Research Record 926 available from TRB.

Reprint from ATSA Signal.

--There are 88,700 miles of county roads in Michigan, 19,000 miles of state highways--all the Interstate and US-and M-numbered highways.

NATIONAL ITE PUSHES AUTOMATIC RESTRAINTS

Washington, D.C.-- The National ITE has urged the U.S. DOT to require manufacturers to equip new cars with automatic restraints and to provide incentives to the states to adopt and enforce mandatory safety belt use laws. Calling for a quick end to the delays in the development of final rules, ITE President Melvin B. Meyer stated "We cannot continue to study, restudy, extrapolate, expound, and theorize on every imaginable aspect of each option while the main concern - the deaths and injuries on our nation's highways - continues unabated."

The Institute was responding to a recent set of options regarding the passenger restraint issue published in the Federal Register by the U.S. DOT.

ITE pointed to the significant safety impacts in the 32 countries which currently have mandatory safety belt use laws. The passage of such a law in Sweden in 1975 increased belt use from 40% to 80-90%, reducing the risk of fatal injuries by 25%. Current belt usage in the United States by front seat occupants is less than 15%.

While supporting state mandatory use laws, the Institute opposed suggestions that possible passage of these laws obviates the need for requiring manufacturers to install automatic restraints. Although New York recently became the first state to pass such a law, legislatures in nine states have recently voted down mandatory safety belt use bills. Lengthy debates are expected in other states.

Another option raised by DOT would allow each state to choose either manufacturer equipped occupant crash protection or passage of a mandatory safety belt use law. The Institute pointed out that this could result in a constantly changing patchwork of laws, regulations and equipped/nonequipped vehicles across the country. Complications involved in the selling and reselling of cars, the possibility of a state's rescision of its belt use law, interstate travel, and production and delivery of appropriately equipped/nonequipped cars would confuse everyone.

According to the Institute, requiring manufacturers to equip new cars with automatic restraints while simultaneously encouraging passage of state safety belt use laws would serve to counteract many of the arguments raised against either option. The public would be less likely to try to defeat the automatic restraint system knowing that the law requires the proper use of the system provided. In addition, the public would be more willing to accept the mandatory use laws knowing that the provision of automatic restraints would eliminate the need for positive action to comply with the law.

In opposing suggestions for additional demonstration programs, the Institute explained that this would require a minimum of two years before initial installation, four years of sales, a number of years for data collection and analysis, and additional rounds of proposed rulemaking. Considering the amount of study that has already gone into this rulemaking, another 6-10 years for one more study is not warranted or defensible.

SOLID STATE CONTROLLER SCHOOL

Based on request from traffic engineers, the application for a school on the programming and set up of solid state pretimed controllers has been submitted to the Office of Highway Safety Planning.

It was the thought of many engineers that a school would aid greatly in bringing users of this new type of equipment up-to-date and allow for the full capability of these new approaches to control to be used to the best interest of the citizens of the State of Michigan.

Should the request for funding be approved, notice will be sent to all entities of government plus the ITE and IMSA mailing list.

By John R. Gray

AAA: CELLULAR CAR PHONES CAN BE CONVENIENCE OR CATASTROPHE

They'll make it possible for motorists to report road emergencies, traffic jams and other information that can reduce traffic aggravation and even save lives.

But cellular car telephones pose a serious safety hazard for Washington area motorists if the phones are used only as their advertisements suggest, AAA Potomac traffic safety experts warn.

"AAA is not opposed to cellular phones in automobiles," says traffic safety manager Norman E. Grimm. "However, we feel that manufacturers need to emphasize how to safely operate this newest technology so that the driver and other motorists are not endangered."

Smiling drivers with their left hand on the steering wheel and their right hand holding a phone are depicted turning "drive time into work time" and "cars into offices" in advertisements which have blanketed the metropolitan area in recent months. Cellular phones are expected to attract 9,400 Washington area customers by the end of 1984 and more than 151,000 by 1995.

The phones represent a technological breakthrough and can be a boon to motorists if used with caution. With an estimated 200 situations per mile requiring an urban driver's attention, the driver's first concern must be the road ahead.

The safest way to use a cellular phone is before and after driving, but for motorists who will attempt to use the phone while driving, AAA Potomac ahs developed the following safety suggestions. Several cellular phone manufacturers have asked for help in adapting these tips to their own literature and sales demonstrations.

Reprint from AAA World

AAA Tips for Safe Use of Cellular Car Phones

1. Insist on a demonstration of how to use the phones safely during any test drive.
2. Select a model with hands-free microphone option.
3. Install the microphone on the visor directly above your line of vision.
4. Keep both hands on the steering wheel and the phone handset in its cradle whenever the car is in motion.
5. Place calls only when the car is stopped.
6. If you receive a call, assess the traffic situation before answering, then lift the handset briefly to stop the ring and replace the handset to continue the conversation on the hands-free microphone.
7. If talking on the phone while the car is moving cannot be avoided, drive in the slow lane. Keep the conversation brief.
8. Whenever you use a cellular phone while driving, realize that you may be endangering yourself, your passengers and other motorists.

MICHIGAN TO LEAD DISTRICT III

During the next three years, 1985-1987, District III of the Institute of Transportation Engineers will be led by the Michigan Section. This will give Michigan a more significant role in making District III effective in serving the needs of our members. As your representative on the International Board of Direction, I will welcome your suggestions about how the Institute can be more effective in serving its members.

District III could be made a stronger force for the professional growth of our members if contacts between sections were increased. We should continue to emphasize a high-quality technical program at the District Annual Meeting as a means of encouraging this contact.

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DISTRICT III *Cont. from page 9*

Better contacts between sections will be particularly important as District III prepares to host the International Annual Meeting in Indianapolis during September 1986. Cooperation between sections can be enhanced by giving the District Vice-Chairman more responsibility for coordinating District activities.

Other objectives for District III during the next three years should include:

1. Continuing the practice of having the District Director attend at least one meeting per year in each section.
2. Preparing the next District Director for office by encouraging involvement and familiarity with District activities.
3. Encouraging more District III members to get involved in national committees - particularly Technical Committees.
4. Encouraging submissions from District III for the Section Technical Award and the Student Paper Award.

By Richard F. Beaubien, P.E., District III Director-Elect

SADD LOGO:

STUDENTS AGAINST S A D D DRIVING DRUNK ™

FRIENDS DON'T LET FRIENDS DRIVE DRUNK

SENTRE A NEW SAFETY BARRIER END TREATMENT

A Car impacts Sentre head-on.

B Redirecting cable helps direct the vehicle away from the guardrail end.

C Vehicle is safely stopped without vaulting, ramping, or spearing caused by other guardrail end treatments.

A new safety barrier end treatment (referred to as SENTRE) is being manufactured by Energy Absorption Systems.

The SENTRE unit consists of interlocking telescoping Thrie-beam fender panels, wide flange posts, slip bases, sand containers, and a redirecting cable. These components form a crashworthy guardrail end treatment which meets test requirements specified in the National Cooperative Higheay Research Program (NCHRP). It passes the following tests:

1. Impact at 25 degrees into the beginning of length of need (i.e., beginning of tensioned guardrail) at 60 mph with a 4,500-lb car.
2. Impact at 0 degrees into center nose of the device (0" offset from center line of vehicle) at 60 mph with a 4,500-lb car.
3. Impact at 15 degrees into side of the device midway between nose and beginning of length of need at 60 mph with an 1,800-lb car.
4. Impact at 0 degrees into nose of the device (with 1.25 ft offset from center line of vehicle) at 60 mph with an 1,800-lb car.

In addition, the SENTRE is capable of passing test No. 2 above with the redirecting cable anchored on a 1-1/2-to-1 side slope running parallel to the unit. When hit head-on, the unit is capable of simultaneously collapsing and moving laterally to redirect an impacting vehicle away from the end of the tensioned downstream section of guardrail. The redirecting cable is anchored at both ends which are capable of withstanding a minimum pullout force of 50,000 lbs.

The base plate of each SENTRE post is rigidly held in place by anchors that are capable of withstanding a 15,000-lb shear and 26,500 ft-lbs moment in the longitudinal axis of the SENTRE and 27,000 lbs of shear and 49,500 ft-lbs of moment in the lateral axis of the SENTRE.