

June 1994

News

Iowa starts pavement system

By Larry Mendenhall
Editor, *Technology News*

An implementation plan to develop a pavement management system for all non-National Highway System highways, roads, and streets in Iowa eligible for federal aid is currently being developed by a task force consisting of city, county, and regional governmental representatives and Iowa DOT staff members. The Iowa Transportation Center is providing staff support for the task force.

During the initial phase of the project, the task force's mission will be to create a plan by which a pavement management system can be implemented. The pavement management system will provide an objective and consistent planning tool to support development of regional and statewide transportation improvement plans. Federal interim rules set September 30, 1994 as the date to submit a work plan for the development of a pavement management system.

The deadline for the actual operation of the system is 1997.

Pavement management systems are not new. Original pavement management concepts were intro-



To meet ISTEA requirements, the Iowa Transportation Center is helping the Iowa DOT implement a pavement management system that would include most of the state's streets and highways.

duced in the 1950s and 1960s. In the early 1970s, pioneers in pavement management began building computerized pavement management systems. These programs now range from the simple to the sophisticated. Sophisticated programs are more comprehensive and the cost may be several thou-

sand dollars. Others, like the PMS available from the Iowa Transportation Center, are less comprehensive but remain valuable tools.

Transportation agencies of all sizes benefit from using pavement management systems. A story in the September, 1992 issue of *Technology News* described how the City of Council Bluffs used a pavement management system as a decision-support tool. In the 1980s, the Arizona Department of Transportation, which has done pioneering work in pavement management, reported an annual savings in the millions of dollars when it used a pavement management system as a tool to assist in making better decisions.

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) recognizes the value of pavement management systems as a deci-

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sion-making tool. The Act requires that a pavement management system be used for all highways, streets, and roads that are eligible for federal funds. ISTEA also requires the use of other management systems. Guidelines for developing these systems are currently pending.

To incorporate all of Iowa's federal-aid highways into a single pavement management system requires that a number of issues be resolved. Because the issues are complex, the planning process has been divided into six categories. The issues in each category will be considered in separate meetings by the task force.

The categories are: Issue 1 – Statement of Purpose; Issue 2 – Data Collection Issues; Issue 3 – Pavement Management Analysis Issues; Issue 4 – Information Delivery and Preparation of Results for Use by Regional Governments; Issues 5 – Information Delivery and Preparation of Results for Local Governments; and Issue 6 – Systems Governance, Operations, and Support.

These categories are somewhat arbitrary because in some cases

several issues in different categories are closely related. An example is when data collection issues are grouped in the second category and data analysis issues are grouped in the third category. Despite being closely related, these issues were put into separate categories simply to help make the project more manageable.

Pavement management systems usually cover decision making at two levels; the network level and the project level. Network level systems are orientated to making planning decisions. For example, common network level questions asked are: how will a budget increase or decrease affect the average condition of pavements or how much funding is required to increase the average condition of pavements? Project level pavement management systems look at individual pavement maintenance, rehabilitation, and reconstruction projects. Project level analysis supports more localized decision making.

Currently the task force thinking is that the system will operate state-wide at the network level while supporting individual project decision making at the local or regional

level. Cities and counties in Iowa currently using a computerized PMS mostly use a project-level system. The task force encourages these cities and counties to continue using their systems. In fact, local agencies should be able to take advantage of the data collected for the state-wide system to use in their own PMS.

The pavement management project has been divided into three phases. The first phase will be conducted this summer and will produce an implementation plan. This is the project's current phase. The second phase is implementation of the system. The third phase is the operation of the system.

The task force will be able to make many decisions in the first phase. For example, as part of this summer's implementation process, decisions can be made regarding which types of data will be collected. However, the specific methodology for collecting and the equipment to be used in data collecting are likely to be determined during the second phase.

The task force hopes to make the process of developing the system

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The preparation of this newsletter was financed through the Technology Transfer (T²) Program. The T² Program is a nationwide effort financed jointly by the Federal Highway Administration and the Iowa Department of Transportation. Its purpose is to translate into understandable terms the latest state-of-the-art technologies in the areas of roads, bridges, and public transportation.

The opinions, findings, or recommendations expressed here are those of the Iowa Transportation Center and do not necessarily reflect the views of the Federal Highway Administration or the Iowa Department of Transportation.



Iowa Transportation Center

IOWA STATE UNIVERSITY

Engineers assess salespeople

By F. James DeLozier
Taylor County Engineer

Many engineers rely heavily on sales representatives to provide them with the latest information about computers, heavy equipment, vehicles, materials and supplies, and the specifications to prepare invitations for competitive bids.

Often, the engineer plans for a future project and anticipates the need for help from a particular sales representative and contacts him or her to determine availability, cost, and specifications. The in-between visits from these same sales representatives, however, are met with different degrees of enthusiasm by county engineers, according to a survey conducted by the Iowa Transportation Center.

The Iowa Transportation Center recently circulated a questionnaire dealing with the exposure of county engineers to sales representatives. The results of that questionnaire are not surprising, but do give a good idea of how 79 percent of Iowa county engineers feel about their time spent with sales representatives and in what areas sales representatives provide the most

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Survey results

1. What is the most important attribute of a sales representative?
 - 38% Available when needed
 - 23% Provides up-to-date information on equipment processes, and products
 - 21% Helps resolve problems with product or performance
 - 18% Provides information for estimating in a timely manner
 - 37% Appointment through secretary
 - 9% Mail
2. How much time do you spend with sales representatives per week?
 - 60% One to three hours
 - 32% One hour or less
 - 8% Less than three hours
3. Do sales representatives contact the Board of Supervisors before speaking to you?
 - 86% No
 - 14% Yes
4. Are major purchasing decisions made without your input?
 - 89% No
 - 11% Yes
5. Do you have to ask sales representatives to leave your office?
 - 53% Yes
 - 47% No
6. Do sales representatives generally drop by or make an appointment?
 - 91% Drop by
 - 9% Make appointment
7. Do you have a preference of how to be contacted?
 - 58% Yes
 - 42% No
 - Type of contact preferred:
 - 54% Telephone
8. What type of sales representative is most demanding of your time?
 - 58% Equipment dealer
 - 34% Material supplier
 - 5% Office equipment dealer
 - 3% Professional engineer
 - 0% Contractor
9. What type of sales representative is least demanding of your time?
 - 53% Professional engineer
 - 23% Contractor
 - 16% Office equipment dealer
 - 4% Material supplier
 - 4% Equipment dealer
10. Do contact by sales representatives increase in frequency when projects are held?
 - 71% Yes
 - 29% No
11. Do you refer most bidding problems resulting from materials and products to the Iowa DOT or handle them by your own staff?
 - 89% By staff
 - 11% To Iowa DOT
12. Has the Gift Law reduced your contacts from sales representatives?
 - 22% Yes
 - 78% No
13. Has the Gift Law made interaction with sales representatives more awkward?
 - 37% Yes
 - 63% No

Regions get ISTEA help sessions

By Larry Mendenhall
Editor, *Technology News*

An emphasis on public participation and long-range planning are an integral part of the Intermodal Surface Transportation Efficiency Act of 1991 and will require training for both the public and transportation experts.

Timothy Borich, assistant director of the North Central Regional Center for Rural Development and an assistant professor in Community and Regional Planning at Iowa State University, is conducting training sessions for regional planning agencies beginning in May and ending in July. The training sessions will touch on the basic planning process as defined by ISTEA. More attention, however, will be given to long-range planning.

"We're going to try to stay away from data crunching and do more conceptualization of what the future might bring and how the transportation system has to be planned in the present to deal with the future," Borich said.

Long-range plans developed by regional agencies will help both the agencies and the Iowa DOT determine what projects should be included in five-year transportation improvement plans (TIP).

"Instead of working at a project level, long-range planning involves a broader concept," Borich said. "These regional agencies need to think where the impact areas are likely to be in the future. Transportation improvement plans should be in line with the 20-year plan."

Borich mentioned several factors that regional agencies may want to consider in their long-range planning. Those factors may include: population shifts, growing numbers of elderly citizens, economic growth or decline, school enrollment, and changes in a region's economic base.

Borich said his meetings would "really be brainstorming sessions with the technical and policy committees" that make up regional planning agencies. The important thing to remember is that long-range

planning is a continuous process, according to Borich.

"We're learning as we go. The nice thing is that we can take that approach because both the regional and state plans are living documents. We can make changes and we can involve the public in the later stages to review existing plans and create new ones. These are the positive aspects of ISTEA," Borich said.

Regional planning agencies are composed of a technical committee and a policy committee. A technical committee is composed of local city and county engineers, public works directors, and representatives of other modes. The technical committee may also represent non-transportation interests that could include economic development, agriculture, tourism, handicapped, recreation, and environmental groups. Local elected city and county officials, public transit officials, and representatives of other modes make up the

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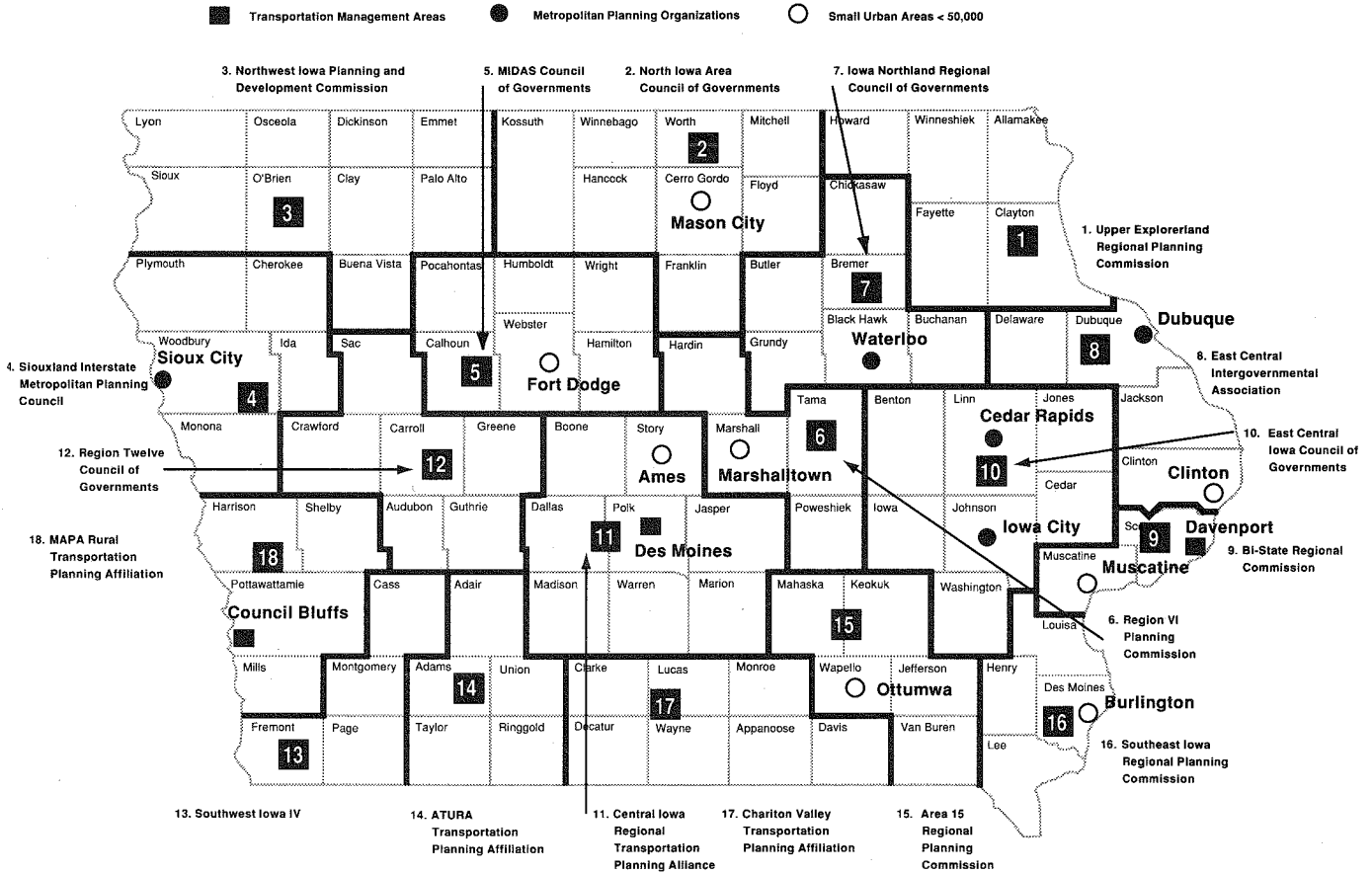
Pavement management system continued from page 2

as open as possible. Task force representatives from city, county, and regional governments will attempt to distribute information on the committee's progress to others. The city representative is Randall Krauel, director of public works, City of Carroll. The county representative is Robert Gumbert, Tama county engineer, and the regional

government representative is Denise Bulaf of the Bi-State Regional Commission. In addition two forums are planned, using the Iowa Communications Network, to provide information to broader groups of city, county, and regional governmental staff members.

Local or regional government personnel in Iowa are encouraged to find out more about the project by contacting their task force representative. The task force's chair, Bernard Brown, director of the Office of Materials at the Iowa DOT, can also provide information about the project.

Regional Planning Affiliations



policy committee.

The technical committee is responsible for evaluating and recommending TIP projects and advising the policy committee on technical matters. The policy committee establishes policy and acts as the regional decision-making body on the long range transportation plan, the transportation improvement plan, the transportation planning work program, and the regional public participation process.

"There also has to be some way for everyone to be heard," Borich said. "A regional committee could do that in any number of ways. ISTE is a major effort to get everyone in-

involved."

ISTEA's emphasis on public participation is a major departure from past transportation legislation.

"Traditionally, transportation is an occupation that has been left to the experts," Borich said. "It's not the norm for the public to have a high degree of involvement in transportation planning. We need a real educational component for the public, and to some extent for local elected and non-elected officials, on how to look at the future, chose alternatives, and on the transportation process itself."

Borich, however, says it is unknown

how much the public will be willing to participate. Previously, many transportation projects and plans were federal mandates. Under ISTE, the federal level will be responsive to needs at the regional and state level. It will take time for people and agencies to make the switch. For that reason, Borich says ISTE requires "as much sociology as it does engineering."

"What the spirit of the legislation calls for is institutional change," he said. "What we have to do collectively – and that includes Iowa DOT, regional planning agencies, technical committees, policy committees, and people – is to come up with a new way of looking at things."

Tips From The Field

Mud flaps help driver visibility

Borrowing an idea from John Deere Co., the City of Clive cuts up old mud flaps to help keep its tractor cabs clean.

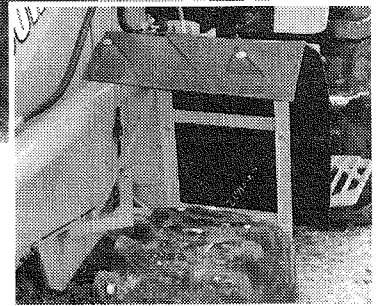
The mud flaps fit over the front wheels. They keep mud and water from flying onto the tractor cab when going down the road. This keeps the tractor cleaner and keeps the driver's visibility unimpaired.

The City of Clive cuts up old mud flaps from trucks and then attaches them to a frame with bolts. The frame is cut from square tubing and attached to the existing step.

For more information contact: Willard Wray, public works director for the City of Clive, at 515/223-6230.



Mud flaps on the front wheel of this tractor prevents mud from obscuring the driver's vision. The inset photo shows how the mud flap is attached to the tractor.



Survey results continued from page 3

benefit. A question about the new Gift Law seems to have demonstrated that county engineers can continue to cooperate and function around the marketing side of products and materials even though this has had an impact on the sales representative's approach.

The recent changes to Iowa's Gift Law introduced a degree of awkwardness for some sales representative that used lunch time as a perfect "free time" that they could spend with their county engineer customer. Some engineers felt comfortable in allowing a sales representative buy their lunch. Others

felt this to be a compromise of their ethical principles; but, regardless of how a county engineer felt before the law was passed, the new Gift Law brought a pretty abrupt halt to the sales representative's lunch-buying practice.

Some of the more interesting comments volunteered included:

- Phone solicitation from unknown sales representatives are biggest problems.
- The several two-county, county engineers have to be especially careful of time spent with sales

representatives.

- The Gift Law seriously affects local government and reduces our opportunity to attend seminars sponsored by vendors and manufacturers that are important to our educational process.
- Suggested equipment sales representatives concentrate on improved methods of or opportunity for counties to purchase or otherwise acquire equipment; better methods for renting, leasing, lease purchasing, etc.

For More Information

The videotapes and publications listed in this column are available on a loan basis by contacting Stan Ring, Iowa State University, Iowa Transportation Center, 2521 Elwood Dr., #125, Ames, Iowa 50010-8263 or by calling 515/294-9481 Monday, Wednesday, and Friday mornings.

Publications

Part VI of the MUTCD This new publication covers standards and guides for controlling traffic during street and highway construction, maintenance, utility, and incident management operations. A loan copy is available or a copy may be purchased for \$7. **Request #952**

Vehicle Dimensions: 1994 Models This publications shows the basic dimensions of domestic vehicles. Multiple copies available. **Request #955**

West Des Moines Snow and Ice Control Manual and Operating Instructions This manual provides

guidelines and instructions for a snow and ice control program. **Request #956**

A Design Primer: Geotextiles and Related Materials This manual provides information on application of geotextiles. **Request #960**

Durability of Flyash Concrete: A Literature Review The purpose of this report is to summarize the state of knowledge on portland cement concrete containing flyash. **Request #963**

Guidelines for the Design and Application of Speed Humps This Institute of Transportation Engineers publication covers the recommended practices for speed humps to reduce vehicle speeds in residential areas. **Request #964**

Use of Rumble Strips to Enhance Safety – NCHRP Report #191 This synthesis of practice covers rumble strips. **Request #965**

Estimating Design-Flood Discharges in Iowa – Iowa Highway Research Board HR-322 This re-

port provides a procedure for estimating design-flood discharges using drainage basin and channel geometry. **Request #967**

Videotapes

Finding Better Ways Video This SHRP videotape discusses research results in cost effective pavement repairs. **Request #338V**

Superpave Video This SHRP videotape explains the benefits of performance-based asphalt specifications. **Request #339V**

Sealcoating: A Matter of Skill This Minnesota-produced videotape provides maintenance workers a lesson in chip sealing. **Request #343V**

Traffic Detectors – Video Training Course This FHWA videotape provides information on the theory, design, installation, and maintenance of traffic detectors. A companion publication, #938, should be requested when ordering this videotape. **Request #329 and #330**

Publication order form

To obtain the materials listed from the ITC, return this form to the Iowa Transportation Center, Iowa State University, 2521 Elwood Dr. #125, Ames, IA, 50010-8263.

	Book/Video Title	Index No.	No. of Copies
Name _____	_____	_____	_____
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Phone (____) _____	_____	_____	_____

Please send a complete listing of all publications from your office.

Please send a complete listing of all audio visual materials available.

Survey shows excavating crews assume the worst

Ed Bigelow, Safety Circuit Rider for the Iowa Transportation Center, recently surveyed city and county road administrators in Iowa to see how they are analyzing soil in regards to excavation safety.

In following OSHA standards, city and county road administrators know that a competent person as defined by OSHA must be in charge of safety whenever

SMS upgrade here soon

The latest version of the FHWA Sign Management Software V4.0 is expected to be released in June.

The ITC will mail copies of this disk and an instruction manual to those who placed their order at the sign management conference as soon as it receives its copy.

employees have to work within excavations.

The latest survey results show 71 percent of the cities and 74 percent of the counties have instructed their street and road employees to assume they are excavating the worst type soils (Class "C" soils) when deciding how to protect their employees at excavation projects.

If you have questions on "Excavation Safety" for city street or county road crew employees, contact Ed Bigelow at the Iowa Transportation Center.

And justice for all

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FHWA approves new Part VI for MUTCD

The FHWA recently approved a new version of Chapter 6 (Work Zones) to the Manual of Uniform Traffic Control Devices (MUTCD). This chapter covers signing, markings, and flagging for construction and maintenance work zones.

The changes were approved by the FHWA on January 10, 1994. The new Part VI becomes effective in Iowa when the Iowa Department of Transportation completes hearings and adopts the new standards through the rule-making process. You will be furnished a copy of the revised Part VI at that time.

The Iowa Transportation Center has the new Part VI for sale if anyone wishes to study it prior to its adoption in Iowa. The cost is \$7 and includes shipping. Call the Center at 515/294-8103 for your copy.

P082-0524

Technology News

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