Combat lawsuits by establishing snow removal policies

A written, clearly outlined snow removal policy can protect cities and counties from lawsuits, according to Sioux City's director of public works.

William W. Amundson, P.E., told the 183 representatives from 110 cities, 36 counties, and three states gathered at the October 9 APWA Iowa Snow Conference in Ames that they should take advantage of a new provision in Iowa law freeing political subdivisions from fault liability in accident suits if those subdivisions can prove they were complying with their stated snow removal policies at the time of the accident.

Amundson outlined a number of factors to be considered in writing these policies, including establishing a record system documenting snow removal activities (proof of compliance); providing local media with information about what the policy is; specifying which types of streets will be given priority treatment; establishing a formal complaint procedure; and adapting the policy so that, given Iowa's unpredictable weather, the city or county will be able to comply with it.

"The overall goal is the production of a realistic, meaningful, and practical policy that has the flexibility required to make adjustments" for uncontrollable factors, according to a report Amundson presented to the conference.

A number of snow removal policies developed by Iowa communities and counties were presented to the group, and they embodied some of Amundson's tips. A copy of the survey highlighting samples of practices and procedures used in Iowa towns, cities, and counties can be obtained from the Local Transportation Center, Engineering Extension Service, Haber Road, Iowa State University, Ames, Iowa 50011, or call toll free in Iowa, 800-262-8498.

For example, the Des Moines policy states that property owners are responsible for removing snow on their sidewalks, and advises them that if the city is forced to do the shoveling, the property owner will pay for it. It also sets snow removal priorities into a hierarchy of four classes, and explains exactly what will be done to which type of street under which conditions.

The Palo Alto County Snow Clearance Ordinance warns that, "Snow can be expected to accumulate adjacent to the traveled portion [of a road] to the extent that a motorist's sight distance . . . may be greatly reduced or impaired."

Flexibility in the use of personnel was a consideration in the writing of Urbandale's Snow and Ice Control Policy, "As the need to change crews or add to the crew to begin the removal of actual snow arises, public works supervisors may initiate additional crew calls."

In addition to Amundson's presentation, the conference included exhibits by six snow removal equipment companies, a history of snow removal equipment as seen through the eyes of Iowa State University Civil Engineering Professor Stan Ring, and explanations of the basics of (continued on page 2)
Iowans involved in national research

Faced with staggering highway rebuilding requirements in the next few years, the U.S. will spend $200 billion on bridge rehabilitation and pavement restoration alone. Although much highway research has been accomplished in the past, enormous opportunities exist for technical improvements. Even small improvements in rehabilitation and restoration operations can have dramatic financial impact on budgets.

The desire to seek out and apply the best technology available is the driving force behind the creation of the Strategic Highway Research Program (SHRP). Beginning in 1986, SHRP will provide $150 million for research.

Nine of Iowa's outstanding technical people were chosen for the SHRP advisory team, which will assist with the preimplementation phase of the program. Their selection was based on technical qualifications, appropriate experience, commitment, availability, and organizational support. Their names and the areas in which they will direct research activities are listed below.

Dr. Kenneth Brewer, ISU, developing research design for maintenance
Robert H. Given, Iowa DOT, overview and integration
Gene Hardy, Dallas County engineer, cement and concrete
Charles Huisman, Iowa DOT, asphalt
W. H. Jorgenrud, Bremer County engineer, pavement performance
O. J. Lane, Iowa DOT, bridge protection
Bernard Ortgies, Iowa DOT, maintenance
Paul Schwarting, Sac County engineer, maintenance
Dr. Wallace Ripple, Iowa DOT, snow and ice

Videotapes available for free loan

The May 1985 issue of Technology Transfer listed eight videotapes produced by the Portland Cement Association. The following additional tapes are now available from the Local Transportation Information Center and can be obtained by calling or writing our office:
1-800-262-8498 (in Iowa) Engineering Extension Service
Haber Road
Iowa State University
Ames, Iowa 50011
Be sure to specify tape titles.

PCA 4R Video Transfer #9 (15 min.)
Construction of a full-depth unbonded overlay on a 1 inch minimum stress relief course placed over the old 9 inch reinforced concrete pavement on I-70 from U.S. 40—easterly 4.2 miles in Ohio. Traffic was maintained during construction and an asphalt median barrier supporting reflectorized candles was used.

PCA 4R Video Transfer #10 (18 min.)
“Traffic Control on Concrete 4R Projects”—A discussion of traffic control measures used on Portland Cement concrete 4R projects across the country. The importance of public relations, contractor input, and degree of concern of all persons involved are addressed in the tape. The tape demonstrates control measures successfully used on projects where the average daily traffic varied from a few thousand cars in rural areas to as many as 135,000 cars in urban settings. Construction projects in eight states are reviewed.

Transportation Info-Line
Call toll-free
1-800-262-8498
(in Iowa)
In Ames call 294-8815
Ice blade carrier

The Ice Blade Carrier is a rectangular frame 5 feet long and 2 feet wide mounted on four casters, equipped with a winch and a lifting arm. Intended for use in mounting blades on motor graders or trucks, this device is easier and safer than previous methods. It eliminates the need for a worker to assume awkward positions to do excessive heavy lifting.

Here's how the carrier works: the chosen blade is placed on the carrier, which is then rolled into position under the machine. Using the winch and lifting arm, the blade is raised to the proper angle, and the mold board is lowered to the blade. A blade bolt is then installed at each end, and the carrier can be rolled out of the way. The remainder of the blade bolts are then inserted and tightened.

An important benefit of this apparatus is that one worker alone can perform the operation that normally requires two or three people.

Estimated cost of the blade carrier, including labor and materials, is $100 to $125.

It was developed by Robert E. Davis of the Iowa D.O.T.
Be alert for changes in sign standards

In October 1981, a driver failed to obey a stop sign at a T intersection of a paved county highway and a primary road in western Iowa. The accident report stated, "The car went off the grade, through the air and stopped in a field, with the driver partially pinned beneath the vehicle." The driver was seriously injured. He sued the county, alleging that it was negligent in failing to properly warn of hazardous conditions at the intersection.

The plaintiff hired a traffic engineer who found the symbol-type stop sign used in advance of the intersection to be in violation of current guidelines: the red octagon within the stop ahead sign spanned only 15 inches, compared to the current standard of 19 inches (see figure 1). The arrow was also smaller than the standard size used today. He considered this to be a "severe violation of the manual."

Use of the symbol-type stop sign was first permitted by the Federal Highway Administration (FHWA) in March 1977. The standard was incorporated in the next edition of the Manual on Uniform Traffic Control Devices (MUTCD), published in 1978. The standard dimensions established for this sign included the 15 inch octagon and the arrow size used on the sign in western Iowa. The sign used in western Iowa had been fabricated in 1978, in strict compliance with the standards then in effect.

However, in November 1980, the stop ahead standard was revised to incorporate the larger octagon and arrow. Users were allowed a five-year compliance period; since five years had not elapsed, the stop ahead sign used in western Iowa was in compliance.

This case highlights the need for local government signing officials to keep abreast of the frequent changes in sign standards. Detailed sign dimensions are published by the FHWA in Standard Highway Signs, and changes are published in the Federal Register. Few local officials have regular access to these publications, but they do receive these updates from the MUTCD and from Iowa DOT mailings. They should be studied carefully.

Every change in the MUTCD is accompanied by a Listing of Official MUTCD Rulings on Interpretations, Changes and Experimentations, which includes compliance dates for some changes. (An example is a compliance date of 2/9/88 to ensure that all type 3 hazard markers are black and yellow.) People responsible for signing need to exert a genuine effort to ensure their signs are in compliance with current standards.

Training slides/tapes available

Two slide/tape training references, "Maintaining Granular Surfaced Roads" and "Snow Removal," are now available for previewing and purchase. These nationally recognized training packages are being used by local transportation units to train their operators and foremen.

If you would like to preview the slide/tape package, the Technology Transfer Center has a loaner set for public agencies. To reserve this educational tool, contact John Moody at 1-800-262-6498 (in Iowa) or 1-294-8815. This service is intended to provide you with the opportunity to screen the material to determine if you would like to purchase it.

If you wish to purchase the sets call Vernon Marks, Iowa DOT, at 515-294-1447. The cost is $40 for each slide/tape package.

And justice for all

Appointment, promotion, admission, and programs of University Extension at Iowa State University are administered equally to all without regard to race, color, creed, sex, national origin, disability, or age. Call the Affirmative Action Office at 515/294-7612 to report discrimination.
conference
1 2 3 calendar

15th Annual ASCE
Transportation Conference
Scheman Building, ISU
November 22, 1985
This annual conference will address
current transportation topics including
the formation of an Iowa DOT
Safety Bureau, cultural resources in
highway projects, pavement re-
habilitation, weight in motion, and
methods for protecting concrete
bridges.

39th Annual Iowa County
Engineers Conference
Scheman Building, ISU
December 3-5, 1985
Courses conducted during this con-
ference are planned for county
engineers and technicians. Associa-
tion and agency updates will be
presented and more than 30 exhibits
from manufacturers and suppliers
will be featured.

Asphalt Paving Association
of Iowa Annual Convention
Des Moines, Iowa
December 5-6, 1985

Iowa Ready Mixed Concrete Associa-
tion's Promotion Workshop
Scheman Building, ISU
December 11, 1985
This annual meeting provides the
concrete ready-mix industry an op-
portunity to meet and update
themselves on changes in the indus-
try. Discussion topics include
innovative marketing, new ready-mix
techniques, and products available.

ASCE Structural Design Conference
Scheman Building, ISU
December 18, 1985
Updates on university research de-
velopments and successful design
techniques will be presented. This
year's conference includes topics on
admixtures in Portland Cement con-
crete, masonry design, restoration of
a multiphased project, discussion of
light gage steel stud-bearing walls,
and new ASCE design standards.

For more information on these con-
ferences, call the Info-Line at
1-800-262-8498.

The following publications can be
obtained by contacting the Local
Transportation Information Center.

Safer Bridge Rails, Volume 1
"Executive Summary"—Available
from the Technology Transfer pro-
gram or the director of FWHA's
Safety and Traffic Operations Re-
search and Development Division,
6300 Georgetown Pike, McLean,
Va. 22101; #HSR-30. The book doc-
uments research undertaken to
develop guidelines to improve the
safety of bridge rails in order to
comply with AASHTO specifications.
The research included a series of
60 mi/hr impacts from various angles
by vehicles ranging in size from a
subcompact automobile to a bus
into five selected rail systems and a
rigid wall. The resulting guidelines
are an improvement from those out-
lined by the National Cooperative
Highway Research Program Report
230. Three other volumes of the
report are available also.

Audio-Visual Lending Library of the
Federal Highway Administration, #1
Provided here is a list of films, slide
and cassette packages, and video-
tapes available through FHWA
regional offices.

Construction Handbook on PCC
Pavement Rehabilitation, #7
Published by the Construction and
Maintenance Division of the FHWA,
this handbook can assist FHWA Area
Engineers in making construction
inspections and in reviewing specifi-
cations and special provisions
during the PS&E stage of a con-
struction project.

Our Nation's Highways—Selected
Facts and Figures, #13
Intended for general audiences, the
book provides an overview of the
U.S. highway system based on data
gathered in 1981.

Hydrology, #31
This compilation of techniques for
the design and analysis of highway
drainage structures was prepared by
Stottler, Stagg and Associates, Inc.
with technical guidance from FHWA
office of engineering hydraulics.

Mailbox guide revised

The AASHTO Task Force for Road-
side Safety of the Standing
Committee on Highways has pre-
pared an informational guide entitled
A Guide for Erecting Mailboxes on
Highways. The guide includes infor-
mation on:
• Mailbox support and attachment
design
• Mail stop design and location
• Model regulation for mailbox and
newspaper delivery boxes on public
rights-of-way

Copies are available for $5.25 from:
American Association of State High-
ways and Transportation Officials;
444 North Capitol Street, N.W., Suite
225; Washington, D.C. 20001

The revised guide states "... some
mailbox supports are so massive
they are damaging the vehicles and
causing serious injuries to people
who accidentally strike them. The
use of heavy metal posts, concrete
posts, and miscellaneous items of
farm equipment, such as milk cans
filled with concrete, should be
avoided." The new guide goes on to
say, "... the ideal support for a
mailbox assembly if struck will bend
or fall away from the striking vehicle
instead of damaging the vehicle and
injuring its occupants."
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Interested in receiving some of the materials discussed in Technology News?
Place a check mark next to the items that interest you and send this panel to:

Local Transportation Information Center
Engineering Extension Service
Ia.ber Road
Iowa State University
Ames, Iowa 50011
1-800-262-8498 (in Iowa)
515-294-8815

Free Information
___ City and Snow Ordinances
___ For More Information (specify title(s))

Preview Information
___ Granular Surfaced Road Training Slide/Tape
___ Snow Removal Training Slide/Tape
___ Video Tapes, Title and Number

Name ____________________________
Firm ____________________________
Address ____________________________
City ____________________________ State __ Zip ____________
Phone ____________________________

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Videotapes Available for Free Loan
Eight Portland Cement Association videotapes (May '85)
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Knutson named president of the American Concrete Pavement Association

M. J. "Knute" Knutson was recently named president of the American Concrete Pavement Association in Chicago. He will continue to serve as the executive vice president of the Iowa Concrete Paving Association until March 1986.

Knutson, a civil engineering graduate and registered professional engineer in Iowa, has been involved with many civic and professional organizations. He was the recipient of the H. W. Hartmann Outstanding Achievement Award from the American Concrete Pavement Association.

He is the author of several technical papers on slipform paving, continuous reinforced concrete paving, recycling of concrete pavements, fibrous concrete resurfacing, concrete resurfacing designs, Iowa's bonded concrete resurfacing, pavement design, and pavement restoration.

Knutson served as the national chairman of the American Concrete Pavement Association Resurfacing, Recycling, and Reconstruction Committee. He has worked with various engineers in the design of all types of concrete resurfacing and recycling, and has worked with contractors in the construction of these research and demonstration projects. He is a member of the Rigid Pavement Construction Committee (A2F01) for the Transportation Research Board.

engineering extension service
iowa state university, ames, iowa 50011

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Address correction requested.
Include entire mailing label.