The A.S.H.E. SCANNER

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Society Member Heads Highway For PennDOT

David C. Sims, P.E., Senior Member of the Harrisburg Section has been appointed Deputy Secretary for Highway Administration, Pennsylvania Department of Transportation. A former chief engineer of the Department, Sims will serve under Transportation Secretary Jacob Kassab as operating head of the Commonwealth's 44,200 mile highway network.

DAVID C. SIMS

Sims, a registered professional engineer has been Kassab's principal aide in PennDOT's road building activities as deputy chief engineer for Central Pennsylvania. In his new post, he becomes responsible for policy recommendations, coordination of activities and operational functioning of all engineering phases including design, construction, maintenance, materials, testing and research, right of way, traffic, landscape development and environmental controls.

Commenting on Sim's qualifications, the Governor said: "This dedicated engineer has an outstanding professional reputation. His engineering skills and administrative accomplishments have significantly aided in the advancement of the Department's $3.2 billion road improvement program. I am confident he will prove of invaluable assistance to Secretary Kassab in providing Pennsylvanians with the finest and safest highway system in the nation."

A native of Erie, Sims served in the Army from 1943 to 1946 and received a B.S. in Engineering from Pennsylvania State University.

He joined the former State Highways Department in 1949 as a senior draftsman and rose steadily through the ranks in engineering posts, including assistant urban coordinator, special assistant to the chief engineer, deputy chief engineer and chief engineer. From 1953 through 1961 he was associated with a Consulting Engineering firm in Boston, Massachusetts.

He is married to the former Lois M. McCormick of Franklin; the couple has three children—Mark, Wendy and Carol—and resides at 413 Allendale Way, Camp Hill.

Society Profile

Continuing a feature called member of the month in previous issues, it is intended to select at random a member of the Society and give pertinent information on his background. In this way it is hoped that the readers of the SCANNER will achieve a keener understanding of the varied expertise of the membership which makes ASHE a unigue organization.

Selected for this profile is Matthew F. Mazza, P.E., a charter member, a director, and program chairman of the Delaware Valley Section.

M. F. MAZZA

Matt, presently District Location Engineer for PennDOT District 6, joined PDH in 1959 after graduating from Villanova University. His assignments have been quite diversified, starting as a construction engineer on a small bridge replacement project in rural Chester County he advanced to project engineer for the construction of the Woodhaven Road Expressway in Philadel-

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President's Message

John H. Leapson, P.E.
Philadelphia, Pa.

During the present problem period for the highway industry, the question frequently arises - WHO NEEDS ASHE? The frustrations of a highway designer under today's problems are beyond description. Projects which had been proceeding logically through the orderly steps of design development are suddenly stopped for reasons such as environmental restudy, legislative inaction or financial restudy. If he is fortunate to continue as an "employed" designer, he probably gets reassigned to a project with an unreasonably short design period and a completely impossible set of rules to follow. If he has an obviously practical common sense solution to a problem, it is certain to be in conflict with some agencies' requirements. When the vocal antihighway groups review his design, they are not at all shy to point out publicly what a "stupid" person he is and that it is people such as the highway designer who have ruined this country.

The preamble to the ASHE constitution which talks about procuring latest data and techniques for design and construction leaves the designer very cold. His first conclusion is that all standards and design procedures are written by those who rarely leave their "ivory towers" to enter the combat zone of the real world. He may conclude from the very vocal effort of a few that no one really wants highways anyway and no matter what you do, the public will be extremely critical of your effort. This looks like a dying industry; what good can a society do?

The contractor's problems are probably even more frustrating, being faced with high labor rates, low productivity and shortage of "really skilled" workers. In addition, government requirements and plain old fashioned "red tape" have reached

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TECHNICAL CROSS SECTION

John H. Leapson, P.E.
Chairman, Technical Committee

EFFECTS OF STUDDED TIRES ON SAFETY AND PAVEMENT WEAR DEBATED IN HRB REPORT

Do studded tires really improve stopping distances and road handling of vehicles in winter weather? Is the alleged improvement great enough to justify the damage done to the pavement by the studs? Does the safety problem caused by the damaged pavement outweigh the initial benefits, if any?

These are some of the factors considered in HIGHWAY RESEARCH RECORD NO. 352, "Studded Tires Versus Pavement Wear and Safety," published recently by the Highway Research Board. Few subjects are so controversial in the highway field as that of studded tires, and the new information contained in the four reports that make up this booklet will be of assistance to the many agencies which are now debating the possible banning of studded tires within their jurisdictions.

Earlier HRB publications forecast a serious pavement wear problem if the use of studded tires became widespread, and this forecast has been proved accurate.

P. Smith and R. Schonfeld, of the Ontario Department of Highways, estimate that the additional costs of construction and maintenance due to the continued use of studded tires in Ontario for the 1970-1979 period would amount to almost $127 million dollars. Accordingly, the Ontario authorities completely prohibited the use of studded tires effective May 1 of 1971.

Wisconsin Division of Highways officials estimate that their maintenance costs will increase $12 million per year, and Michigan officials have estimated increased maintenance costs at approximately $26 million per year if the use of studded tires is continued. Other snow-belt states project similar costs.

These substantial costs have been justified by the makers of tire studs and by users on the basis that they do contribute to highway safety, and tests by the Committee on Winter Traffic Hazards have shown that studded tires do indeed reduce stopping distances on glare ice. The paper by Jean Normand, Quebec Department of Roads, and the discussion by R. M. Canner, Jr., Minnesota Department of Highways, on tests in Quebec and Minnesota respectively indicate, however, that the reduction in accidents that can be attributed to the use of studded tires is not statistically significant.

Maintenance budgets, already overloaded, are increasingly strained by the serious wear caused by the studs, and there is no practical system to repair portland cement pavements damaged by studded tires. Yet a large percentage of motorists in snow-belt states seemingly favors the continued use of studded tires. Such findings create a dilemma for authorities responsible for recommending legislation controlling the sale and use of studded tires, and for legislators responsible for making the ultimate decisions on public policy.

HIGHWAY RESEARCH RECORD NO. 352 may be purchased for $2.40 a copy from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N.W., Washington, D.C., 20418.

PUBLIC INVESTMENT PROTECTION IN TRANSPORTATION

The proper administration of good land-use controls, such as zoning and subdivision regulations, can protect and enhance the public investment in transportation. But if these controls are instituted without understanding and consideration of their effects on transportation. The transportation aspects of land-use controls has been a long-term research project of the National Cooperative Highway Research Program, which is administered by the Highway Research Board. In 1966, an NCHRP Report revealed that there was a wide range of land-use control practices in different states, and brought to light deficiencies and alternate approaches for attaining the desired objective of optimizing the relationship between land-use development and transportation facilities.

A second phase of the research project was recently carried out by Gruen Associates, Los Angeles, California, under contract to NCHRP. This phase was concerned with the range of factors besides land-use controls affecting the relationship between land-use development and the highway network transportation system. Objective of the research was to formulate general theory aimed at understanding the relationship between transportation and land use, and to develop practical criteria and guidelines that can be implemented to protect the enormous public investment in the transportation system from premature obsolescence or operational inefficiency.

Results of this research project have now been published in the form of NCHRP REPORT 121, "Protection of Highway Utility."

In order to assure a broad-based approach to the study of this complex problem, the researchers assembled a multidisciplinary team of related professionals. The study has attempted to concentrate on fundamental relationships, developed systematically as a basis for establishing general principles and guidelines. These principles and guidelines can be put to use by responsible agencies immediately in newly developing areas where full commitments for development and growth have not already been made. Opportunities for implementation are not as great in already built-up areas where major changes may be impractical. In such areas, existing practices may have to to be continued, but corrective measures may be taken where feasible.

The report includes a discussion on the general land use - transportation relationships and the theory, design, and application of functional highway classification systems. In addition, the report presents a traffic generation vocabulary that classifies traffic generation by the various land-use categories. Application opportunities for this vocabulary are identified to help in the land-use decision making process. The report treats in detail the intrinsic highway control measures that can be employed. This includes such matters as freeway and arterial access spacing; driveway spacing, design, and control; site design; service roads; and rear collector roads. Multiple use of public corridors, and their development and design, are treated in a separate chapter. Special attention is given to the problem of land-use controls for areas around freeway interchanges. The report discusses interchange characteristics, development, and problems, and how such problems can be handled through proper access design and interchange protection.

The study concludes that the opportunities for achieving long-lived highway utility are relatively favorable at this time. The basic tools and implementation techniques are already available in those areas where the problems are most severe. Effective implementation of current tools and of the new techniques proposed in this study can further enhance the opportunities available for the prevention

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of highway obsolescence. The principles and guidelines presented in this report provide the basis for sound decision-making by land-use and highway administrators, which can assure maximum protection of highway utility.

NCHRP REPORT 121 is available for $5.60 a copy from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N.W., Washington, D. C., 20418.

BRIDGES AND BRIDGE FOUNDATIONS

Nine papers covering various aspects of bridges and bridge foundations are contained in HIGHWAY RESEARCH RECORD NO. 354, recently published by the Highway Research Board. Five papers are concerned with the dynamic reaction or performance of structures, or portions of structures, under actual service conditions. Three papers deal with pile capacities, and one paper discusses curved plate girders.

C. F. Galambos (Federal Highway Administration), and C. P. Heins, Jr. (University of Maryland), report on how they instrumented a rural bridge in Maryland. They recorded the vehicle passages, loading characteristics, and stress experience that was endured by the structure. Techniques of interpreting the data are discussed as well as efforts to estimate the fatigue life of the structure from the data obtained. They concluded that the main stress-carrying members of a structure are not likely to be susceptible to fatigue distress.

W. T. McKeel, Jr. and H. L. Kinnier (Virginia Highway Research Council) confined their interest to a dynamic stress study of steel rockers as contrasted to elastomeric pads. Contrary to some expectations, the elastomeric pads did not noticeably reduce the vibrations of the spans, neigher did they reduce the flexural stresses. In fact, there seemed to be a trend toward somewhat increased deflections with the elastomeric pads at all speeds of the test vehicle.

The control of bridge vibrations also was the concern of Thomas F. Derby and Peter C. Calcaterra (Barry Control Co.), as they measured the dynamic response of bridges to the passage of heavy loads. They considered four different bridge designs and then directed their study toward methods of controlling the vibration. They compared the cost effectiveness as well as the dynamic response of each of the control methods.

The dynamic properties of suspension bridges were studied by V. R. McLamore and Ian R. Stubbs (Teledyne Geotronics) and Gary C. Hart (University of California). The experimental determination of the vibrational characteristics of two different suspension bridges was recorded. The similarities in occurrence of higher order modal frequencies were compared to the lower modal frequencies. The authors hoped to develop some rules of thumb that will be helpful during the design of suspension bridges.

A study of the static and fatigue behavior of composite beams containing a two-inch square precast, prestressed tension element was made by J. F. Mirza and Paul Zia (North Caroline State University) and J. R. Bhargava (Atlas Prestressing Corp.). This was a novel use of prestressing in that the tendon was encased in these square rods of concrete and then set into the forms more or less like conventional reinforcing steel. Results revealed that the use of these tension elements for continuity connections creates a superior section, materially increasing the cracking load and providing better protection of the reinforcement against corrosion.

Charles G. Culver (Carnegie-Mellon University) studied the different effects of various flange width-thickness ratios for both A-36 and A-441 steel girders. The results indicate that the factor of safety against local buckling using the developed criteria for curved girders, fabricated by welding or by heat-curving with web-thickness ratios equal to or less than current AASHO requirements, is about the same as that for straight girders. It was also found that the factor of safety decreases as the ratio of warping to bending normal stress increases.

The perennial subject of accurate pile load capability has a dynamic approach in the paper by Paul F. Gnirk, Kenneth E. Krause, Vernon L. Bump, and Kenneth E. Anderson (South Dakota Department of Highways). Dynamic response of the pile is recorded during the driving process and then correlated with static load tests. In eight cases the quantitative agreement was quite good. Consideration is also given to simulating the hammer-soil-pile system on an analog computer.

M. Barrett Clisby (Mississippi State University) and Robert M. Mattox (Mississippi State Highway Department) compared laboratory and field tests of load carrying capacity tests on single- and multiple-underreamed bored piles. Bell spacing and failure planes in the soil were studied. It was determined that multiple belling of cast-in-place piles can result in economical designs for many soil conditions.

The effects of subsurface lateral loads on piles was measured and described by N. D. Nicu (New Jersey Department of Transportation), D. R. Antes (formerly King and Gavaris Consulting Engineers), and R. S. Kessler (King and Gavaris Consulting Engineers). The instrumentation of a pile-supported abutment over soft compressible soil is described. The findings permit the tentative establishment of limiting values for stresses imposed on compressible layers under conventionally designed abutments and suggest remedial measures against backward tilting.

HIGHWAY RESEARCH RECORD NO. 354 is available for $3.00 a copy from the Highway Research Board, Publications Department 805, 2101 Constitution Avenue, N.W., Washington, D. C. 20418.

DELAWARE VALLEY SECTION

A. A. Antonucci

An interesting slide presentation on the Occupational Safety and Health Act was presented by Mr. Bernard P. Landry at the October meeting. Mr. Landry is a Safety Engineer with the Federal Highway Administration. A lively question and answer period followed the formal presentation.

The November meeting featured Mr. Jason R. Nathan, President and Chief Executive Officer for the Franklintown Corporation who discussed "Franklintown — Philadelphia's New Community". This new community right in downtown Philadelphia will provide high density residential, commercial and recreational uses on 50 acres of land. The remarkable part of the proposal is that the cost estimated at more than 400 million dollars will be financed solely through private capital.

Mr. Nathan, as a former Regional Director of Urban Renewal for HUD had some very strong feelings on highway land acquisition procedures. The benefits of joint acquisition by public agencies was discussed.

NEW MEMBERS

Menajem M. Bessalel, P.E., Westville, New Jersey, Consultant.
Joseph H. Heinz, P.E., Philadelphia, Pa., Consultant.
George Warrick, Jr., Cochranville, Pa., Materials Producer
Russell G. King, Berwyn, Pa., Consultant.

PRESIDENT'S MESSAGE

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an all time high. The problems of new safety regulations appear to be almost insurmountable; he is almost certain after reviewing the requirements that the only way it will work is to have one safety engineer assigned to each employee. After the second reading, he is not certain that one safety engineer is adequate.

The contractor is faced with unprecedented loss of independence due to environmental requirements, staging of construction, traffic maintenance, and labor standards to only name a few factors. The term independent contractor may only become a very academic text book term. Even though the contractor's method of operation is strongly controlled by governmental requirements, he is more vulnerable than ever in the courts. "Third party" claims against contractors are rising constantly. After all of these many requirements are imposed on the contractor, he is told that his prices are too high.

As in the case of the designer, the contractor may not be able to see the benefit of ASHE.

Probably most frustrated of all is the material supplier. Recently enacted environmental requirements have placed many industries in a very precarious financial position. Proposed environmental requirements will place an unbearable burden on many industries. A reasonable transition period is essential under some cases; a complete re-evaluation of the proposed standards is absolutely essential in others.

The material supplier asks, "how can a group like ASHE help with such complex issues"?

There are many ASHE Members who do not fit directly into the three groups discussed, but are faced with equal frustration. Many PennDOT construction personnel see a period of very low construction activity in certain parts of the state. These men are quite concerned for their future. They ask, "Is this a short temporary problem or is it true that no more highways will be built"?

The benefits of ASHE membership certainly do not appear evident to these men.

Those involved with maintaining highways find themselves faced with more and more miles of responsibility, less than adequate budgets and a very demanding public. These men find it increasingly harder to determine the benefits of ASHE.

The raising of these questions is good for the society. The leadership of ASHE has recognized that we are in a period of change and that some of the society activities emphasized in the past cannot continue with major emphasis in the future. It has been suggested in many instances that the social activities receive far too much attention. What can be done by ASHE to adjust to the changing situation?

The one common factor that draws all segments of this Society together is the continued threat of cutbacks in the highway program. In view of the great need of the road user, you may say that additional cutbacks are unlikely. Not so, the very vocal anti-highway forces have never been more powerful.

ASHE must embark on a well planned long range public information program to keep everyone informed on proposals affecting highways. As a small example, during the recent period of PennDOT Capital Budget legislative "crisis", the ASHE Public Relations and Legislative Review Committee worked actively with PHIA to support the capital budget and to support billboard legislation as proposed by the Secretary of Transportation.

The passing of this budget is not a highway panacea; it merely authorizes development of projects which should have been approved in 1970 and 1971. A capital budget for 1972/73 should be worked on immediately to prevent another crisis.

Dealing with each of these individual crisis situations is important, but it does not really deal with the long range problem of maintaining a well planned orderly highway program.

It is imperative that action be taken to remedy the costly stop-start design situation and that steps be taken to provide the necessary lead time for land acquisition so that a proper level of construction activity can be maintained to meet the road users' needs. This is not an easy task; optimistic estimates indicate that it may take years to accomplish this task. Regardless of time required, effort must start immediately.

ASHE cannot accomplish this task along; however, ASHE can offer great assistance to a combined effort with other interested groups. Our Society can provide a significant amount of information to the public. This can only be accomplished with a planned program, which includes National, Section and individual activity. The type of public information needed is not fancy words but plain honest talk dealing in facts, not emotion.

Most of the discussion on the highway program has been dealing with the State level of activity. The problems in Washington related to the future of the highway program are even more uncertain. In 1972 significant federal legislation related to the highway program will be considered. Groups like PHIA cannot do the task alone, they need our help in keeping the public informed on the issues.

I plan to guide the Society in 1972 in the direction of a strong public information program, geared for both state and national issues. The Public Relations and Legislative Review Committee under Co-Chairmen Don Rimmer and Jim Weaver will provide the coordination with the membership. The help of every member is needed, if we are to be successful.

SOCIETY PROFILE

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phia.

In 1963 Mr. Mazza organized the District Utility Relocation Unit and became the District Utility Relocation Engineer. Even more challenging duties were assumed in 1967 when he became District Location Engineer. In this position he is responsible for feasibility and design location studies for all projects in the district. As an additional responsibility he has been recently made District TOPICS Co-ordinator.

As Vice-Chairman of the Delaware Valley Regional Planning Commission's Technical Advisory Committee on Highways, he adds important technical know how to an important planning function.

Matt received a Master of Civil Engineering in Transportation from Villanova University in 1971. He resides in the Norristown area of Montgomery County with his wife and four children.

We are pleased to salute Matt Mazza, a hard working and dedicated engineer who adds to the strength of PennDot and ASHE.

EAST PENN SECTION

Fred W. Wolf, Public Relations

The October meeting featured an address by Mr. Sherman J. Rosen on "Man and His Environment". In November a most interesting program on weathering steel was presented by Robert Huzzard of Bethlehem Steel.

Mr. Norman Cochrane of the Regional Paving Division of the Portland Cement Association, Harrisburg, Pennsylvania spoke on Concrete Shoulders for Highway Construction at the December meeting.

FRANKLIN SECTION

At the September meeting Bill Smith of the Oil City Sand and Gravel Company presented a program on "Dredging in the Allegheny River."

A film program on the use of studded tires was the feature for the October meeting.

Ladies night in November was a success.

The convention committee headed by Arnold Wright, Roswell Brown and Dick Fox is actively preparing for the 1972 National Convention.

A preliminary meeting with national representatives of ASHE headed by Robert E. Martzall, Society past President, was held on December 15th. Convention headquarters will be at the Cross Creek Motor Lodge near Titusville. Golf will be a major attraction with 27 holes available and a reduction in greens fees for conventioneers. Watch for future announcements and keep the dates of May 18th to May 21st open.

NEW MEMBERS

Jack L. Ricalton, P.E., Franklin, Pa., PennDOT.

Richard E. Williams, Geneva, Pa., PennDOT.

HARRISBURG SECTION

The Harrisburg Section adopted a Transportation Policy Position Paper which has been used by the section as part of a public information program. The paper notes that an integrated and balanced transportation system including urban mass transit, airways, railroads and highways is supported. It further identifies that highway travel is the predominant mode of travel and that highway development and construction activity has been greatly reduced.

To relieve this state of stagnation for the highway program positive measures are recommended:

1 - Establish balanced transportation program with an accelerated timetable for completion.

2 - Establish orderly method for timely passage of capital budgets.

3 - Provide separate capital budgets for engineering and right of way cost.

4 - Maintain the Department of Transportation at a high professional level.

5 - Establish design, construction and maintenance programs which proceed in a well planned orderly manner. Avoid costly fluctuations.

6 - Provide additional funding for highway projects by increasing the funds supplied by the highway user.

The transfer of Robert A. Haynos from the Pittsburgh Section is welcomed. Bob is now an Administrative Assistant with the Associated Pennsylvania Constructors.

SOUTHWESTERN PENNSYLVANIA SECTION

Robert M. Sica, Public Relations

The Section commenced its fall season with its regular monthly meeting on September 29, 1971. The attendance was excellent and the program dealing with the use of steel studded tires was both interesting and enlightening.

President Terry Conner, Assistant District Engineer for Construction for PennDOT, presided and promulgated an aggressive discussion concerning the use of studded tires on Commonwealth highways. The films produced by the Minnesota State Department of Highways and the Government of the province of Ontario indicated that steel studs are responsible for excessive wear on both macadam and concrete road ways. In fact, the results of these tests have influenced the thinking of many within our state to the extent that some are seriously considering the possibility of outlawing their use within the Commonwealth.

The program committee of James Griffin, Paul Miller and Ben Crimbley provided Mr. Jim Hobbs from PennDOT District 11 as the speaker for the October meeting and those who failed to attend, missed a good one. Mr. Hobbs spoke on "Traffic Operation Program to Increase Capacity and Safety". This presentation also elicited many questions from the group which the speaker answered.

President Conner announced during the business session the Christmas Party was scheduled for Friday, December 10, for the Pleasant Valley County Club. The committee of Henry Bunting, John McCune, Allan Jones, Frank Merendino and Frank Patrarca is to handle all the arrangements.

The November meeting was held on the 27th with the program committee placed in some what of a squeeze because the speaker originally scheduled to appear begged off at the last moment due to an unexpected emergency. Instead, films were shown depicting the use of specialized heavy equipment, particularly Clark Equipment Company's Super High-Lift and one dealing with curbing machines.

President Conner announced that a membership contest has been planned by the executive committee to commence with the January meeting and terminate with the April meeting. Prizes have been established as an inducement for members to get on the ball and will be made public at the January meeting.

The big event of the month of December is the Christmas party. As this article goes to press reservations for the event have reached an all time high and it is evident the affair will be the largest ever.

Members are urged to make every effort to attend the regular meetings as well as the special events. Informative and interesting programs have been held during the past and even more exciting programs are projected for the future. The objective is to make the Southwest Unit the most aggressive in the state. This will be accomplished only if each member does his share. President Conner solicits the cooperation of all members to this end.

NEW MEMBERS

Donald R. Gearhart, Greensburg, Pa., Contractor.

George Rizak, Brownsville, Pa., PennDOT.

Francis A. Griffith, Hagerstown, Md., Materials Producer.

Kenny R. Williams, Smithfield, Pa., PennDOT.

Robert L. Garbart, Lemont Furnace, Pa., PennDOT.

ALTOONA SECTION

John A. Barone, Public Relations

On October 20, 1971 the regular monthly dinner meeting was held at the Old Canal Inn in Hollidaysburg. The meeting was sponsored by New Enterprise Stone and Lime Company and the guest speaker was Dick Shaffer, Research Coordinator of the Bureau of Materials Testing and Research for PennDot. Dick talked and showed a movie about the effects of studded tires on pavement.

The November meeting was also held at the Old Canal Inn and was sponsored by Gwin Engineers, Inc. of Altoona. The guest speaker was John E. Young, Chief Engineer of Highways for Gwin Engineers. John talked about the highways in District 9-0 as to the improvements in design and construction, landscaping, esthetics, etc. and showed slides of different highway projects.

NEW MEMBERS

Edwin A. Trofino, Johnstown, Pa., PennDOT.

SOCIETY HONORS RETIRING SECRETARY

Seated: Left; Robert M. Sherr, P.E., Incoming Secretary. Right; Ralph T. Smith, Retiring Secretary.
Standing: Left to right; Robert E. Martzall, P.E., Past President; John H. Leapson, P.E., President; George K. Hart, Treasurer; Robert S. Kepner, P.E., a past President; Donald C. Rimmer, Vice President. (See other photo on page eight.)

At a surprise luncheon held in Carlisle on November 3, 1971 several ASHE members met informally to express appreciation to Ralph T. Smith for his untiring efforts on behalf of the Society. Action of the Board of Directors on October 15, 1971 designated Ralph T. Smith "National Secretary Emeritus". George K. Hart presented Ralph with a wrist watch on behalf of the Society. The ASHE emblem is embossed on the watch.

Ralph the founding Secretary of the Society, had been a major influence in the growth of the Society since its organization in 1956.

A formal testimonial had been planned to honor Ralph, however an extended stay in the hospital and an early departure to Florida by Ralph caused postponement of this event. It is planned that the testimonial will take place at the Society's annual convention to be held next May 19, 20 and 21 at Cross Creeks. We are looking forward to seeing Ralph next Spring.

CLEARFIELD SECTION

Past Presidents of the Clearfield Section were honored at the September meeting held in Curwensville.

Jim Barnicle presented a movie on quarrying operations entitled "Rock and Roll" at the October meeting held in Clearfield.

A tour of the Cirro Copper and Brass Plant, Bellefonte, was the feature of the November meeting.

NORTHEAST PENN SECTION

In October a program by Mr. Reed L. Grosvenor, AAA Motor Club presented a program to the Section.

Mr. Omer G. Thrasher, District Conservationist addressed the Section at the November meeting.

The Section Christmas Party was held December 10th.

PITTSBURGH SECTION

Bill Katzenmeyer, Public Relations

The opening meeting in September was well attended to hear an address by Mr. Anthony Gaeta, P.E., District Engineer, District 11. In spite of competition with the Pirates-Orioles night game, the attendance was good for a program headed by Mr. Charles Way of Richardson Gordon Associates who discussed "The Highways Meet the Airport".

In November "Dutch" Huber, Environmental Specialist for PennDot, discussed the current environmental impact to contractors and the resulting effects on consultants and road planners.

The membership drive is in full swing and the early enthusiasm indicates that last years achievements may be exceeded.

NEW MEMBERS

Harry E. Bradley, Coraopolis, Pa., Construction Engineer, Oil Company.
Robert B. Fay, Fox Chapel, Pa., Contractor
James K. Finn, Allison Park, Pa., Utility Company.
Irwin W. Jackson, Glenshaw, Pa., Contractor.
Bernard V. Lecce, Leechburg, Pa., Equipment Sales.
Frank E. Baker, IV, 42-A Longfellow Drive, Munhall, Pa., PennDOT.
John E. Flaherty, Sewickley, Pa., Utility Company.
Eugene J. Lewandowski, Pittsburg, Pa., PennDOT.
James R. McDonald, Washington, Pa., PennDOT.
Michael Pavia, Verona, Pa., PennDOT
Anthony J. Picciafoco, Pittsburgh, Pa., Construction Contractor.
John A. Rosa, Pittsburgh, Pa., Supervisor, Utility Company.
Donald U. Gennuso, Pittsburgh, Pa., PennDOT.
Ted E. Sandin, Irwin, Pa., Utility Company
Walter J. DeJaiffe, Greensburg, Pa., Utility Company.

WILLIAMSPORT SECTION

Mr. Harold C. Poulson, Deputy Secretary of Transportation, presented a program on "Goals of the Present Administration in Highways" at the September meeting. In October Mr. Kenneth E. Mayer, Executive Secretary of Ready Mixed Concrete and the Sand and Gravel Associations discussed sand and gravel deposits in Pennsylvania.

Mr. Don Harris of Atlas Chemical Industries, at the November Meeting presented a film program on explosives.

The Williamsport Section has added a former all american football star to its

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membership list. Neal R. Smith played at Penn State in 1967, 68 and 69, playing in one Gator Bowl game and two Orange Bowl classics. Neal at his safety-man position was on UPI All-American first team in 1969. He is employed by Faylor-Middlecreek Inc., highway contractors in Winfield, Union County.

NEW MEMBERS

James T. Wolyniec, Williamsport, Pa., Materials Producer.
Frank P. Wolyniec, Sr., Williamsport, Pa., Materials Producer.
Frank P. Wolyniec, Jr., Williamsport, Pa., Materials Producer.
Neal R. Smith, Mifflinburg, Pa., Construction Contractor.

ECOLOGY OF TRANSPORTATION

Mr. Jacob Dekema, a California State Highway District Engineer, presented some very fascinating facts in an address to the ARBA convention:

Highway critics protest that transportation in downtown Los Angeles consumes more than 50% of the total ground area. Yet, Pierre L'Enfant's plan for Washington, D.C., provided 59% of the land for streets, and that grand plan was developed long before the automobile came along. Los Angeles and San Diego freeway systems actually occupy only about 2% of the land and carry about 60% of the travel.

Transportation and Agriculture: Lately there has been a great hue and cry concerning smog damage to agriculture. Let us all realize that if it weren't for modern transportation, there wouldn't be any modern agricultrue with its vast productivity in which one farm worker feeds 30 to 40 people compared to more backward areas where a one-to-one relation is more common.

Wreckless Equestrians: Even here the picture is far more cheerful than is generally recognized. In 1909 about 26 million horses traveled some 13 billion miles and 3,850 people were killed in accidents involving horse-drawn vehicles. This gives a mileage death rate of over 30 per 100 million vehicle miles, more than ten times as high as the rate on California's freeways, and further improvements are on the way.

A study by the American Medical Association in a rural county in Illinois showed that 16 physicians take better care of more people than 42 doctors could 40 years ago. The reason, of course is faster, safer, more convenient transportation.

A return to the horse and the mule is obviously out of the question. Already we have a problem of disposing of 2.3 billion tons of steer manure a year, out of a total solid waste of 4.4 billion tons. The average horse produces 35 pounds of solid and 18½ pounds of liquid excrement per day. There simply would not be enough disposal sites available for the mountains of manure even if we could find the continental size pasture area required. If we were to maintain our present standard of living by means of live instead of mechanical horses, there would be one ton of solid waste and one-half ton of liquid per person per day. Viewed in this light, our pollution problem has already been solved.

The purpose of transportation is not merely to achieve the most economical and efficient vehicles conceivable. The purpose of transportation is civilization itself. From the dawn of civilization those cities and states having the best transportation systems have achieved the highest standards of living, have advanced their culture ahead of their time and have been able to maintain themselves militarily against envious and aggressive neighbors.

SOCIETY MEMBERS PROMOTED

Alfred F. Lyng, Vice President of Erdman, Anthony & Associates, Camp Hill, Pa., recently announced the expansion of the Environmental Resources unit in their firm. Continuing concern over the general ecology of the nation, and the engineer's role in the preservation of its natural resources have brought new emphasis to this division of their engineering services. Richard B. Ulp, P.E. has been assigned as the Associate in charge.

Mr. Ulp received his B.S.C.E. from Bucknell University, his M.S. at Cornell University in 1958 and since that time has had a wide experience in the resources field.

At the same time, Mr. Lyng announced the promotion of Albert J. Bedard, Jr., P.E., to the position of Chief Engineer of their Highway Division. Mr. Bedard is a graduate of Penn State University and has had many years of experience in both highway and structural design.

Both Messrs. Ulp and Bedard are full Associates of the firm and will be working directly with both private and public agencies in the performance of their new assignments.

LP-GAS CAR SCORES HIGHEST IN CLEAN AIR RACE

A standard model car powered by LP-gas engine fuel had the highest score and the best exhaust emissions record of all 42 cars that entered the 1970 transcontinental collegiate Clean Air Car Race.

The LP-gas car, named the Propane Gasser, was a Chevy II Nova entered in the 3,600-mile race by engineering students of Worcester Polytechnic Institute of Worcester, Massachusetts. It was one of five cars entered by WPI in the race from Cambridge, Massachusetts to Pasadena, California.

The Propane Gasser had the high score of 3,636 points based on exhaust emissions, performance, elapsed time, and fuel economy. In cold start tests, the Propane Gasser bettered 1975 Federal exhaust emissions standards for all pollutants, and bettered the then 1980 Federal standards for all pollutants except nitrogen oxides where it was very close to the 1980 limit. The car was powered by a Chevrolet LP-gas opiton V8 engine which had 350 cubic inch displacement.

This outstanding car was judged winner in the class of vehicles using internal combustion engines powered by gaseous fuels. Other cars in this class were powered by liquified natural gas and compressed natural gas.

Most of us find it difficult to take advice from others who need it more than we do.

An egotist is a chap who is always blowing his knows.

Some are asked for autographs — others for fingerprints.

There are speakers who drive home facts; others, the audience.

Some minds are so open that it's hard for them to hold a conviction.

The trouble with staying home from work is that you have to drink coffee on your own time.

Beware of those who fall at your feet. They may be reaching for the corner of the rug.

The toughest part of a diet isn't watching what you eat; it's watching what your friends are eating.

A pessimist expects nothing on a silver platter except tarnish.

Taking a tranquilizer may not relax you, but it will make you enjoy being tense.

Women may have been a man's rib once, but now she's many a man's backbone.

1971 - 1972 NATIONAL OFFICERS

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MEMBERSHIP FACTS

Thirty-one new members have been accepted in the Society since September 1971; however two members were dropped during this period for various reasons, reflecting a net gain of twenty-nine. At press time, the total membership of the society was 1777. The membership by sections is:

Harrisburg Section	311
Clearfield Section	112
Franklin Section	158
Altoona Section	121
Southwestern Pa. Section	115
Williamsport Section	104
East Penn Section	143
Indiana Section	81
Pittsburgh Section	231
Delaware Valley Section	270
North East Penn Section	141
Total	1777

One advantage of small cars is that you can squeeze twice as many of them into a traffic jam.

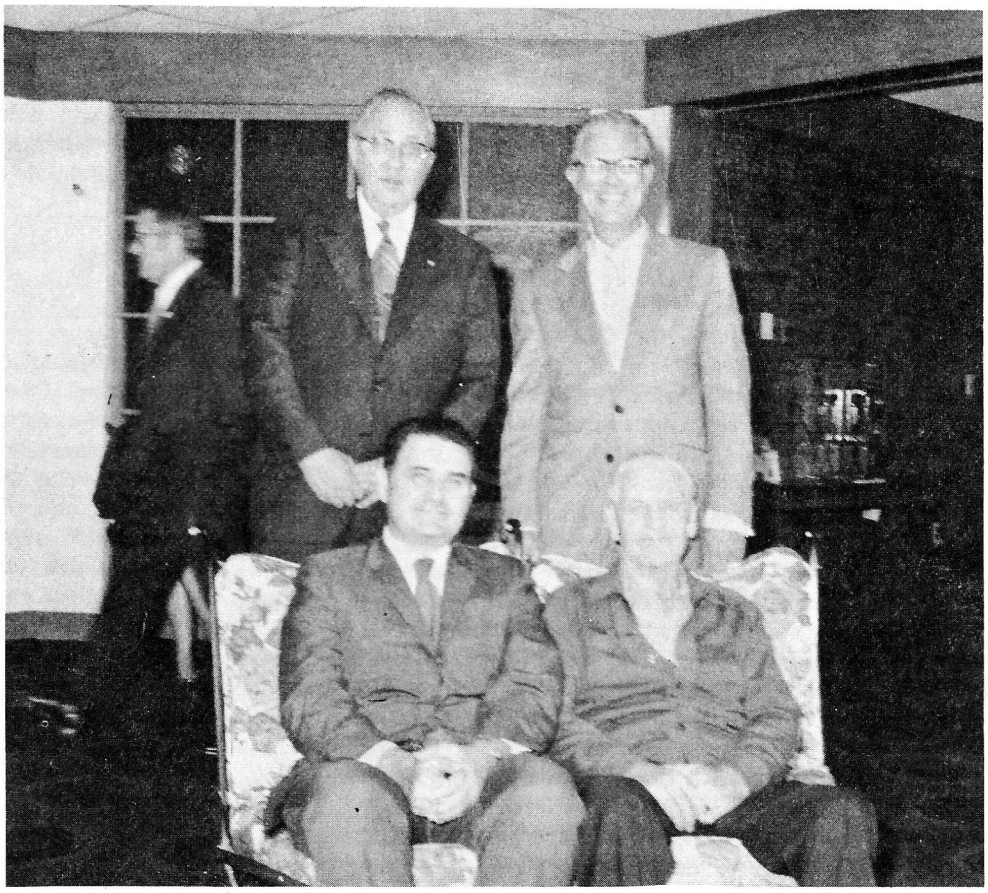
Today is the tomorrow I worried about yesterday and it didn't happen.

The way the legislators spend our tax money makes you think they are using a credit card.

The most dangerous wheel of chance is the steering wheel.

When you start forgetting that you're forgetful, that is the time to start worrying.

NATIONAL OFFICERS HONOR RETIRING SECRETARY



National Officers honor retiring Secretary. Seated left to right: John H. Leapson, P.E., President; Ralph T. Smith, Retiring Secretary. Standing left to right: George K. Hart, Treasurer; Donald C. Rimmer, Vice President.

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Please notify us when you change address!