President’s Message

It is a pleasure to be the President of such a hard working organization of volunteers. It is our volunteers that provide the time, the knowledge, and sometimes tedious work that keeps our organization strong and one of the best values for the low membership fee. Your membership has value and prestige because of all the benefits and opportunities that you enjoy. There is networking, learning from others that have traveled the same path before you, leadership, facilities, technical presentations, and recognition, to name a few. We have success stories that may help you find answers to everyday problems. You have a platform to share your ideas, successes, and failures, with other professionals. Whether you are interested in honing your skills at public speaking, sharing the results about a new way of doing something, developing leadership skills, participating on a diverse team, in need of training, VASITE is here for you.

Start thinking about your future. What are you doing and what would you like to be doing? Even if you like what you are doing, you can always improve and perhaps become THE authority on the subject. Who doesn’t want to be the first person everyone thinks of to get advice from when it comes to your area of expertise? Wouldn’t that be nice?

Think about becoming a board member and a VASITE leader. How about working on a committee of your choice for some of that networking experience that is so valuable? You may be able to use VASITE as a platform to talk about something you have done or would like to see done. You can contribute by calling or sending an e-mail to a VASITE Board member. You may be surprised how easy it is to become involved.

We always can use your help. To keep VASITE rich in the tradition of providing knowledge and skills to our members, we can’t continue to improve as an organization without your help. Many firms and agencies have experienced a slowdown in work, and are having to do more with less. One common mistake is to cut corners by cutting training or organization membership. This is a good way to get behind the power curve when that next project opportunity comes around the corner or if you want to market a project to decision makers to get a project funded. Everyone knows that knowledge is power, yet we sometimes forget that if you don’t invest a little time and money in training you can fall behind quickly.

News and changes

Be sure to visit our new and improved website, you are sure to be impressed with how easy it is to use and new information being provided. We are always open to suggestions about new things that you would like to see that would make this a more valuable resource for all members.

Procedure changes

To keep our Annual meeting banquet interesting we are moving some nonessential items from the agenda. The swearing in of officers will take place at the fall meeting, which is three months from when the board takes office rather than the six months we have used in the past. This allows us to focus on awards and recognition during our annual meeting. Hopefully this will keep the banquet more interesting.

We will now have a separate Secretary and Treasurer to split the workload of the single position. Only the Secretary will be in line for progression to president. We are hoping that this change will provide for more streamlined record keeping by keeping a treasurer for more than one budget cycle.

Fall meeting

Please take advantage of our fall meeting at Wintergreen October 3rd. The facilities have been great and attendance has been good. It is a great place to get away, see some old friends and meet some new ones, and possibly learn something at the same time. Hope to see you there.

Secretary/Treasurer’s Message

We want to welcome the following new members:

John D. Fowler
The Spectra Group, Inc.
Virginia Beach
Our checking account balance on 3/31/2003 is $20,597. Our current membership total is 411.

In my last report, I emphasized that the Executive Board’s efforts at bringing VASITE’s abilities to communicate more effectively would start producing results. I think with some of the email messages and the updates on the web site, members can see the results. We have spent $5,775 toward this goal. You can help by ensuring that your information is current. Please send me any change of address, including email address, as soon as you can. My email is bill_cashman@urscorp.com.

We had a successful and dry 10th Annual VASITE Scholarship Golf Outing at Hell’s Point Golf Club on June 25th in Virginia Beach. The winning team in the Open Division for the second straight year was:

Dale Castellow,
Dwight Farmer,
the retiring Bruce Clarke,
and Bill Cashman.

The Coed Division was won for the first time by the team of:

Heather Ham,
Karen McPherson,
and Phil Pullen.

We also want to thank the sponsors. The following sponsors’ support enabled us to raise $900 for the scholarship fund:

Bryant Goodloe
Accurate Locating
Air Survey Corp.
Wilbur Smith Associates
URS Corporation
TY Lin
HNTB
Kimley-Horn
Clark-Nexsen

We hope golfers will also join us on October 2nd at Devil’s Knob Golf Course at Wintergreen. This is a casual outing, and both individuals and groups are welcome. There is no formal competition or prizes, and side wagers will be left to the golfer’s discretion. Visit website for information, see below or contact me at bill_cashman@urscorp.com.

Bill Cashman
2003 VASITE Secretary-Treasurer

Fall Seasonal Meeting
October 1-3, 2003

GOLF

Fall Meeting Golf Outing to be held at Virginia’s Highest Course

Date:
Thursday, October 2, 2003

Location:
Devil’s Knob Golf Course,
Wintergreen, VA

Cost:
$75.00 per person
(includes cart)

The registration deadline for this fun event is September 30, 2003.

CONTINUING EDUCATION

Topic:
Roadway Lighting

Date:
October 1-2, 2003

Time:
8:30am-4:30 pm

This two-day course will include discussion on the fundamentals of roadway lighting as well as discussion on the types of lamps and luminaries. Roadway lighting design guidelines will be presented, including:

illuminance,
luminance,
small target visibility, and
comparison results.

Discussion concerning the application of these various guidelines will also be included. Lighting examples will be designed using AG132 software. The course will be focused on the intermediate lighting designer and attendees are expected to have
some experience with roadway lighting. The course instructor is Dr. Ronald B. Gibbons, a lighting research scientist with the Virginia Tech Transportation Institute.

The registration cost for this two-day training course is $80.00 for VASITE members and $100.00 for non-members.

Registration and payment must be made prior to September 12, 2003. See the website for more details on this great course.

AGENDA

The following presentations and presenters are scheduled for the Fall Seasonal Meeting:

**Application of VDOT Subdivision Standards** – Bryant Goodloe, President, Bryant Goodloe, P.C.

**VDOT Roundabout Committee** – Dewey Litton, Location & Design Program Supervisor, Virginia Department of Transportation

**US Route 29 - Hydraulic Road Intersections** – Harrison Rue, Executive Director, Thomas Jefferson Planning District Commission

**Modern Roundabout Design Considerations** – Bill Baranowski, Transportation Engineer, Kobilins Transportation Group

**Virginia Beach ITS Master Plan** – Steve Shapiro, Associate Principal – DMJM+Harris, Inc. & Frank Hickman, Transportation Engineer – City of Virginia Beach

**Development of an ITS Evaluation Test-Bed Using Simulation** – Ilsoo Yun, Student University of Virginia

**Guidelines For The Retrofit Installation Of Accessible Pedestrian Signals** – Gene Arnold, Senior Research Scientist – Virginia Transportation Research Council

**Retiming of Traffic Signals in the District of Columbia** – Daniel Worke, Senior Transportation Engr. DMJM+Harris, Inc.

Annual Meeting Highlights

The Annual Meeting was a great success! The accommodations were terrific and the presentations were very informative. The Awards Banquet was a memorable evening as always. Believe it or not, the weather was even beautiful. All in all, spending June 24-27, 2003 at the VASITE Annual Meeting was time well spent!

Here are a few of the topics that were presented during the meeting. At the end of the articles, you can find a complete listing of presentations and presenters from the Annual Meeting. Please contact the speaker if you would like to know more.

Additionally, you will find a complete listing of awards and recognition from the Annual Banquet. If you need assistance, contact me at abooker@hsmm.com.

Did you know???

In London, pedestrian crosswalks were first known as zebra crossings due to the black and white triangular markings used to denote the crossing. Throughout the years, improvements were made to the crossings and the names have included panda, pelican and puffin.

The panda crossing used flashing lights to indicate a pedestrian right of way to cross the street. The lights, flashing slowly at first, begin to flash rapidly as the pedestrian phase came to an end.

The CMAQ program was first authorized under the ISTEA Legislation in 1991 and reauthorized in 1998 under TEA-21. Between 1991 and 2003, the Hampton Roads region received a total of approximately $90 million of CMAQ funding. These funds were allocated to over 100 CMAQ-eligible projects including, intersection geometric and signal system improvements, new transit services, bikeway and pedestrian projects, intelligent transportation systems, and rideshare program.

The Hampton Roads Planning District Commission staff has developed a methodology to rank proposed projects according to their cost effectiveness ratios in reducing VOC and NOx emissions. Details of the process and methodology may be found at the HRPDC website (www.hrpdc.org).

The allocation process is primarily based on:
- High level of local participation
- Consensus building
- Consistent with regional plans and goals
- Formal application process
- Performance-based process
- Technical evaluation and ranking
- Multi-modal
- Multi-year funding allocations

In 2002, the HRPDC staff conducted a study to evaluate the effectiveness of CMAQ projects in reducing ozone-related emissions. Results of this study indicated that the most cost effective project in terms of both VOC and NOx reductions was the geometric improvement to the Battlefield Boulevard/Great Bridge Blvd intersection in Chesapeake. The cost was $1,569 per ton of VOC and $3,914 per...
ton of NOX reductions. The least cost effective project in terms of VOC emission reduction was the Hampton-Norfolk fast ferry service at slightly over $1.2 million per reduced ton of VOC emissions per year. The Ferry service served mainly tourists and never caught on with commuters, and therefore resulted in high operating expenses. The service was discontinued in May 2002.

The study concluded the following:

- CMAQ project ranking should continue to be based on cost effectiveness ratios for NOX and VOC.
- Project proposals need to include better planning estimates.
- Post evaluation of projects should be conducted on a regular basis.
- Validate project evaluation methodology.

Details of the study may be found on the HRPDC’s website.

COMPARISON OF RESIDENTIAL TRIP GENERATION RATES

Arkopal Goswami

Residential trip generation rates, defined herein as the total number of vehicle trips per household during a 24-hour period, are a fundamental component of transportation planning. When agencies have different estimates of these rates for the same metropolitan area, the cost of the planning process increases since agencies must collect additional field data. To investigate discrepancies in these rates, residential trip generation rates based on four sources were compared: (i) ground counts collected by VTRC at nine suburban neighborhoods, (ii) household surveys distributed to the same neighborhoods, (iii) nationally published Institute of Transportation Engineers (ITE) trip generation rates, and (iv) rates derived from the trip generation component of VDOT regional urban travel demand models.

Field data showed that for neighborhoods comprised solely of single-family detached homes, an average residential trip generation rate of 10.8 was observed based on VTRC ground counts whereas an average rate of 9.2 was observed based on VTRC household surveys. Although this study raises the possibility that underreporting of trips on written questionnaires contributed to this disparity, statistical analysis showed that these rates were not significantly different at the 95% confidence level. Furthermore, significant differences were not observed between ground counts collected by VTRC and ground count rates reported by ITE.

However, when comparing rates based on VTRC household surveys and the corresponding rates derived from VDOT regional models, significant differences were observed when the VDOT rates were based on person trips as opposed to vehicle trips. This disparity resulted even though the person trips predicted by the VDOT long-range model were subsequently converted to vehicle trips using average auto occupancies. The implication, therefore, is that when a data source gives the number of “vehicle trips per household” it is important to know if vehicle trips were measured directly or were calculated from person trips.

When a consistent method of determining trip generation rates is used, the differences in rates that have been observed between neighborhoods are explained by the large and random variations that are fundamental to all trip generation studies. Accordingly, when a precise trip generation rate is required to forecast travel from a single neighborhood, the rate should be determined from field data if possible. When a single trip generation rate is required for a group of neighborhoods, (as is often the case with sub-area studies) then the average rate that should be used is the value observed in this research study or the value reported in national studies by ITE. Ground count data collected in this study for a set of seven neighborhoods of single family detached homes produced a mean trip generation rate of 10.81 with a range of 9.4 and 12.2 vehicle trips per dwelling unit at the 95% confidence level. The ITE mean rate based on 348 neighborhoods is 9.57 vehicle trips per DU. As the number of neighborhoods increases, the range for the mean rate will decrease.

Variation among the four types of rates (VTRC ground counts, VTRC household surveys, ITE ground counts and VDOT regional models) is greater that the variation of rates from one location to another. This result suggests that when, as a cost saving measure, trip generation rates are based on previous studies (i.e. VTRC or ITE) rather than using field data, the selected rates should be consistently from the same source.

PLANNING FOR HURRICANE EVACUATIONS

James Mock

Traditionally state DOT’s only played a supportive role in the event of a Hurricane Evacuation. However in recent years with the tremendous growth in coastal populations and the associated rise in vehicle registrations, DOT’s are now major players.

In Hampton Roads, Virginia, as many as 800,000 people are at risk. Moving that amount of people, who will generate at least 300,000 vehicles, in less than 24 hours, is a challenge for traffic engineers.

Several techniques and technologies are being used. Phased evacuation, ramp metering and contra-flow operations are all part of a detailed plan known as the Hampton Roads Hurricane Evacuation Traffic Control Plan.

Technology such as ITS, CCTV, roadway vehicle detection, Changeable Message Signs and Highway Advisory Radio are all deployed and available for emergency operations. These technologies allow VDOT to monitor evacuation routes and disseminate critical information to both the motorist and to other emergency response agencies.

Hurricanes are the most destructive weather events on Earth. In our highly mobile society, DOT’s must have well-developed and coordinated plans to move at risk populations away from coastal areas in a safe and effective manner.
What is Smart Growth? How do you design for Smart Growth? Does it really make a difference in a community?

These were just a few of the issues discussed in this presentation. The City of Suffolk is working to create a Smart Growth community and some of the successes and shortcomings were shared with the group. The presentation covered the model of how the City of Suffolk began by updating its Comprehensive Plan. This included a very successful process with the citizens asked what they liked, disliked, and what their vision for the City was. Next the ordinances that guide growth and development plan design was updated. A review of how not to accomplish this update was given with the main emphasis being to follow the methods utilized in the Comprehensive Plan update, which included not excluding the public from the work until the later stages of the process.

The presentation next dealt with the key Traffic Engineering items that the City of Suffolk includes in its vision of Smart Growth. They include, stringent turn lane requirements, right of way dedication and reservation, roadway construction, extensive landscaping, Traffic Impact Studies and Access Management. An overview of other items that are given considerable review were also noted. These included traffic signal design and coordination, transition lengths, sidewalks and bikeways, street connectivity and general layout including traffic calming.

Finally, examples were shown and discussed of good and bad design from a smart growth viewpoint. The presentation finished with a spirited discussion of the issues and philosophy of Smart Growth.

Annual Meeting Presentations & Presenters

**VDOT 2003 Work Zone Manual Update**
David Rush – Senior Transportation Engineer, VDOT Mobility Management Division

**Crash Safety Report**
Keith Nichols – Transportation Engineer, Hampton Roads Planning District Commission

**Hurricane Evacuation Plans**
James Mock – Director of Operations, Hampton Roads Smart Traffic Center

**City of Suffolk Smart Growth Program**
Robert Lewis – Traffic Engineer, City of Suffolk

**Using GPS/GIS for Mapping Traffic Signal Systems**
Lynn Allsbrook – Traffic Engineer, City of Hampton, Susan Gregg – Public Works Operations GIS Manager, City of Hampton, Dave Reaves – Street Operations Manager, City of Hampton

**Traffic Signal Systems for Visually Impaired Pedestrians**
Sam Smith – Polara Traffic Systems

**Use of Cameras to Stop Red Light Running**
Lt. Tony Zucaro – Virginia Beach Police Department

**Residential Trip Generation Rates**
Arkopal Goswami – Research Engineer, Virginia Transportation Research Council

**Hampton Roads CMAQ Post Evaluation Study**
Camelia Ravanbakht – Principal Transportation Engineer, Hampton Roads Planning District Commission

**Richmond District Smart Traffic Center Plans for Growth**
Robb Alexander – Director, VDOT Richmond District Smart Traffic Center

**Overview of Hampton Roads Smart Traffic Center**
Stephanie Hanshaw – Director, Hampton Roads District Smart Traffic Center

**Using ITS to Find Better Time-of-Day Intervals**
Brian Park – Assistant Professor Civil Engineering Department, University of Virginia

**Richmond Trolley Study**
Dr. Robert Hodder – Planner, Greater Richmond Transit Company

**Operations and Maintenance**
Duane Cook – Systems Maintenance Manager, Hampton Roads District Smart Traffic Center

**Recap on Conference to Reduce the Number of Fatalities on Highways**
Mark McMillen – Chairman of Hampton Roads District Safety Committee, VDOT

Elizabeth Tunnel Annual Awards Banquet

Congratulations to the all of the awards recipients at our Annual Awards Banquet.

I want to thank Gene Arnold and Owen Curtis for serving on the Awards Committee. I also appreciate my wife, Elizabeth, for her tireless efforts behind the scenes.

The following awards for the year 2002 were presented at the Annual Meeting held in Virginia Beach in June:

**Outstanding Young Member** - Anne Booker was recognized for her outstanding work with the organization. She served on a number of committees, including leading the efforts for facilities for meetings in the western part of the state. She has been one to respond enthusiastically to the many requests of the organization and has agreed to be responsible for the VASITE newsletter. She received an engraved plaque.
Outstanding Individual Activity - Tim Foster was recognized for his long term involvement in VASITE which has always involved extra efforts. Among his many contributions, he served as District 5 Representative and has been actively involved with the Southern District meeting. He received an engraved plaque.

Distinguished Service Award – John Kaoudis was recognized for his many years of service and contributions to VASITE. He has served in all offices of VASITE and has been a recognized leader for many years. He was one of the Tri-Chair for the Southern District Meeting held in Williamsburg, which was a very successful. John has continued to be involved in the organization long after he left the Board. He received an engraved plaque for his recognition.

The following people received certificates at the Annual Meeting in Virginia Beach, June 26, 2003:

Pete Leavitt was recognized as Chairman for local arrangements for the Fall Meeting at Wintergreen, the Spring Meeting at Fredericksburg, and the Annual Meeting at Virginia Beach. He received a unique certificate for his outstanding work, especially designed to reflect his Wonderful sense of humor.

Mike Shahsiah was recognized as Chair-man for the Technical Program for the Fall Meeting held at Wintergreen. Regis Shuler, John Hendrickson, and Jack Shick were recognized for their work as Tri-chairs for the Technical program at the Annual Meeting held in Virginia Beach.

Mike Martin, President of VASITE for the year 2002, received a framed certificate and an engraved gavel plaque in recognition of his outstanding leadership. Bob Gey, Vice-President and Tim White, Secretary-Treasurer, received certificates for their service as officers. Linda Smith, Director (Affiliate), Ray Khoury, Director (ITE), and Mike Greenwood, District 5 Representative, were given framed certificates, recognizing their service.

CLASSIFIED ADS

GIS Manager

Richmond Regional Planning District Commission seeks a professional GIS manager to conduct the agency’s GIS data management and product development, support agency programs, and provide technical planning assistance to member localities. Individual should also possess a thorough understanding of computer applications. Individual should be highly organized and have an excellent understanding of local government processes, procedures and data needs. Individual is required to maintain the agency’s GIS server and guide other staff’s GIS work by determining work procedures, providing necessary training, maintaining harmonious relations, and promoting efficiency. Work is performed under the direction of the Planning and Information Systems Director. Position requires a master’s degree in Engineering, Geography, Earth Sciences, Information Systems, or a related field, with a concentration in GIS technology and a minimum of five years of experience in GIS and two years in a supervisory capacity, or any equivalent combination of experience and training that provides the required knowledge, skills and abilities. Salary range starts at $44,422.10. Excellent fringe benefits package and VRS retirement. Position open until filled; EOE. Submit an application available from the web site, www.richmondregional.org, with a cover letter and resume in confidence to: Richmond Regional Planning District Commission, Executive Secretary, 2104 West Laburnum Avenue, Suite 101, Richmond, VA 23227. Phone 804-367-6001. Fax 804-367-4375. e-mail: kbarrett@richmondregional.org. Applicants selected for interview will be requested to provide work samples.

Transportation Engineer

Parsons Brinckerhoff’s Norfolk office is seeking a traffic / transportation engineer with 2-10 years experience (depending on educational background and working experience). Experience with HCS, Synchro and Corsim required. BSCE required, MCE a plus. Position includes work on diverse tasks including capacity analysis, traffic safety, and signal/sign design. Project management experience a plus. What makes PB Norfolk different? Not only the vision and technical skills to see the future of the transportation industry, but the proven track record in planning, designing and implementing urgently needed solutions. Our clients recognize the talents of the PB Norfolk staff and consistently choose PB for the projects that they see as challenging. For more than 15 years this office has been building a solid reputation for successfully bringing clients the most responsive engineering solutions to their endeavors. This office is a place for quality people doing quality work on quality projects. Please send your resume to:

M.J. Fendrick
6161 Kempsville Circle, Suite 110
Norfolk, VA 23502
FAX 757.466.1493
fendrick@pbworld.com
EOE M/F/D/V

Engineering

Wilbur Smith Associates, an international Top 500 consulting firm, is seeking a registered professional engineer with 15+ years experience in transportation and traffic engineering to lead staff in the Falls Church, VA office. Responsibilities include management of traffic engineering and transportation planning staff, oversight of ongoing projects, and business development. Must have experience managing projects for both public and private sector clients. Successful candidate should have technical knowledge of HCS, CORSIM and Synchro and business knowledge in scoping projects, budgeting and invoicing. Please submit resume with cover letter to resumes@wilbursmith.com or fax to 803-251-2664.
The traffic lite newsletter is the official publication of the Virginia section of the Institute of Transportation Engineers (VASITE), which is a professional society of persons involved in transportation engineering activities in Virginia. It is affiliated with the ITE, which is an international professional society of transportation engineers. The primary goal of VASITE is to promote sound transportation engineering practices in planning, design, operation, and management of transportation facilities and equipment for the safe, convenient and efficient movement of people and goods.
MARK YOUR CALENDARS FOR UPCOMING EVENTS

Continuing Education – October 1 & 2, 2003
Fall Golf Tournament – October 2, 2003
Fall Seasonal Meeting at Wintergreen – October 3, 2003

Continuing Education - March 10 & 11, 2004
Spring Seasonal Meeting - March 12, 2004

VASITE 2003
Current Officers are:

President ................................................................. Robert Gey
City of Virginia Beach
Vice President ............................................................... Tim White
Wilbur Smith Associates
Secretary-Treasurer ....................................................... Bill Cashman
URS Corporation
District 5 Representative .............................................. Tim Foster
County of Henrico
District 5 Representative .............................................. John Yorks
City of Hampton
Director (ITE) ............................................................ Mike Shahsiah
City of Virginia Beach
Director (ITE) ............................................................ Cheryl Lowrance
DMJM+Harris
Director (Affiliate) ...................................................... Pete Leavitt
City of Virginia Beach
Director (Affiliate) ...................................................... Irene Shuman
VDOT
Immediate Past President ........................................ Michael Martin
Volkert & Associates

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