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**ASHE National Membership Database Upgrade**

ASHE is excited to roll out our new web-based membership database. Each member can access and maintain his or her own membership data. National’s goal is that this database will become the common database that both National and the Sections use to maintain all membership information.

To access the database, go to www.database.ashe.pro. You must input your personal ID number which is an eight digit number located on the SCANNER mailing label. This will be your ASHE ID number for as long as you are a member of the Society. Your initial password is the zip code (including the dash if it is a nine-digit code) also on the mailing label. Change your password after your initial login to ensure the security of your data.

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President’s Message

P. Frank O’Hare, P.E., P.S.
ASHE National President 2012-2013

Happy New Year!
Construction season in the north has wound down and hopefully a short winter remains. I want to thank the ASHE members I have met as I have traveled for their hospitality and friendship. A special thank you to the Pittsburgh Section for the invitation to their Past President’s Banquet held atop Mt. Washington. After six years of introducing National Presidents at the Annual Ohio Transportation Conference ASHE luncheon, I was humbled to stand in front of my many friends in the industry at this great transportation conference as the 54th National President of ASHE.

At the first ASHE Executive Board meeting held August 29, 1962, President Russell Horn instructed the National Secretary to prepare a charter, dated September 1, 1962, for the establishment of a Franklin Section in northwest Pennsylvania. This past September, it was an honor to present the 50th Anniversary Certificate to the Franklin Section. Likewise in 1962, the fourth ASHE Section was chartered in Altoona and this October it was an honor to present to them the 50th Anniversary Certificate at the Altoona Railroaders Memorial Museum, a citadel of engineering and transportation history. In January, ASHE again celebrates a 50th Anniversary; the Southwest Penn Section was chartered as our fifth Section on January 25, 1963. All of these Sections should be proud of their accomplishments. Along with the Harrisburg and Clearfield Sections, Franklin, Altoona and Southwest Penn formed the foundation of our Society. This strong foundation was based upon a defined mission and a society open to all individuals involved in the highway industry.

As I sat and waited to make those 50th Anniversary presentations to Franklin and Altoona, I contemplated those Section’s journeys for the last 50 years. Each Section was uniquely different and remains that way today. However, two items that I have continually said make a great Section are evident in both the Franklin and Altoona Sections - leadership and program. ASHE’s Section leaders are the Society’s “boots on the ground” moving us forward. They are dedicated, educated and resourceful. They are passionate and willing to use the information age to further the mission and objectives of their individual Sections. Great Section leadership engenders enough support from the members that the Section positively evolves. They also quickly understand that generational changes in leadership will be the basis for longevity. As I researched the web for ideas about the needs of our Section and Region leadership, I discovered that the American Society of Mechanical Engineers had published “What Volunteers Need: A White Paper by Volunteer Recruitment and Retention Task Force”, by Ken Gentili and Paul Biba, Co-Chairs. In their paper they stated 13 basic needs of every volunteer.

1. A specific, manageable task with a beginning and an end.
2. A task that matches interest and reasons for volunteering.
3. A good reason for doing the task.
4. Written instructions.
5. A reasonable deadline for completing the work.
6. Freedom to complete the task when and where it is most convenient for the volunteer.
7. Everything necessary to complete the task without interruption.
8. Adequate training.
10. Follow-up to see that the task is completed.
11. An opportunity to provide feedback when the task is finished.
12. Appreciation, recognition and rewards that match the reasons for volunteering.
13. Value added to encourage employer to support volunteer efforts.

Volunteerism is an enormous economic force, yet it is never mentioned in business school or in economics departments. – Walter Hoadley, former Chief Economist for the Bank of America

For a more detailed discussion of each of these 13 needs, I am going to be a resourceful volunteer and use the informational age to further ASHE’s mission: http://files.asme.org/Volunteer/Unit/12493.pdf. I hope your Section and Region will discuss these needs and use this information to better serve the membership of ASHE.

The ASHE 2013 National Conference will take place in a wonderful location - Lake Placid, NY. (www.ashe2013.org) Make sure you put the dates of June 5-9, 2013 on your calendar. (See ad p. 5 for more.) You will be awed when you stand at the top of the ski runs and realize that the greatest reach the bottom in one piece.
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The Peak of Perfection awaits you in beautiful Lake Placid, New York, at the Crown Plaza Resort. The Central New York and Albany Sections welcome you to join us June 5-9 for a taste of perfection. Host for your 2013 ASHE National Conference, Crown Plaza Resort and Golf Club is located in the center of the Village of Lake Placid, while providing scenic views of Whiteface Mountain.

The 2013 Conference Committee is dedicated to scheduling a rewarding weekend for individuals and families of all ages. The 2013 Conference offers the tranquility of the Adirondack Mountains, along with the excitement of the Olympic venue. While embracing the Olympic spirit, Central New York and Albany Sections challenge all other Sections to a timed bobsled competition, complete with a medal ceremony. Furthermore, participants will be able to enjoy an elegant dinner at the renowned Olympic Ski Jump facility, while Olympic hopefuls put on display their acrobatic routines exclusively for our ASHE members. Also, those in attendance will have the opportunity to participate in an Olympic Torch Lighting Ceremony, as well as skate on the historical “Miracle on Ice” Rink.

The 2013 National Conference will provide an opportunity for professionals to educate themselves on subject material related to World Trade Center construction, the Tappan Zee Bridge, the Crown Ridge Bridge, and much more. Whether you’re teeing off at one of the mountain golf courses, or shopping in the Village of Lake Placid, there are countless activities for participation. Conference attendees may also decide to get outdoors and sit on a gondola ride to the top of Whiteface Mountain, go biking, hiking, enjoy a scenic flight over the magnificent Adirondack Mountain, or even go whitewater rafting. Also available will be guest tours to the breathtaking Ausable Chasm, the Adirondack Museum on Blue Mountain Lake, and the Wild Center in Tupper Lake.

Come find the “Peak of Perfection” at the 2013 ASHE National Conference at Lake Placid’s Crown Plaza Resort and Golf Club. For more information and updates, please visit the 2013 ASHE Conference website at www.ASHE2013.org
The ASHE Albany Section held their second Annual Dinner Meeting at the Century House in Latham, NY, September 27, 2012. The keynote speaker this year was New York State Department of Transportation’s newly appointed Chief Engineer, Phillip Eng, P.E. Attendees traveled from as far as New York City to the Capital Region to hear Mr. Eng deliver his first public remarks as Chief Engineer for the Department.

Master of Ceremonies for the event was the ASHE Albany Section President, Thomas Cascino, P.E. The evening started with registration and a cocktail hour, followed by Mr. Cascino’s opening remarks. After conclusion of dinner, the new ASHE Albany Section officers were installed by Past President Mike Hurtt, P.E. After the new officers were recognized, Mr. Cascino presented Mr. Hurtt with a two-year service plaque on behalf of the board of directors and general membership. The evening concluded after the keynote address and a Q&A session with the NYSDOT Chief Engineer. The ASHE Albany Section would like to thank Mr. Eng for his thoughtful remarks.

The ASHE Albany Section was chartered in October 2010, with 78 members and is rapidly approaching the 100 member milestone. In the Section’s first two full years on record, seven events were held in 2010-11 and twelve events were held in 2011-12. Twelve additional events are currently planned for the 2012-2013 program year. The selected beneficiary of the Albany Section’s annual golf outing / fundraiser is the Capital District Region Future City Competition held each year to encourage middle school students in sixth, seventh and eighth grades to pursue careers in the fields of planning, engineering, science and construction. The Albany Section has raised $2,000 in each of the last two years ($4,000 total to date) for the Capital District Region Future City Competition and is currently planning our third annual event.
ASHE Central Ohio Adopt-A-Highway

Saturday, November 10 was our Section's last cleanup of the Grandview/I-670 interchange for the year, but don’t worry we will continue next year. At this last cleanup we had a dozen volunteers scouring the interchange for all manner of things. This time Clark Rausch won the gift certificate for most unique item found with a stuffed mouse and bunny rabbit. Rich Weigand won the prize for most trash collected by working an embankment covered with beer bottles. We had a nice, sunny day, especially for November, and enjoyed lunch together.

Thank you to all of the following that have volunteered their time this year to participate in our Adopt-A-Highway program.

Patrick Herl
Jennifer Cross*
Scott Seaman
Joe Musleman
Samantha Moffett
Joe Bolzenius
Ted Beidler*
Bill Waller
Shannon Weigand
Aaron Call
Stacy Bolzenius
Clark Rausch
Joe Sommer
Rich Weigand
Robert Ballard
Dave Jones
John Xu
Angela Fedak
Jason Lutz
Scott Roe

* Participated in all three cleanups this year
Delivering Transportation Solutions

Parsons Brinckerhoff is proud to work with the Pennsylvania Turnpike Commission in delivering the eight-mile widening and reconstruction project from Irwin to New Stanton, Pennsylvania.

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This $165 million improvement project, located in Essex and Union counties, NJ, was a unique joint-agency endeavor between the New Jersey Turnpike Authority (NJTA) and the New Jersey Department of Transportation (NJDOT) with full oversight from the Federal Highway Administration (FHWA). The project was led by Gannett Fleming as the designer of record, that provided civil, structural, facilities design, environmental services, and served as the full-time construction liaison. Gannett Fleming provided insight into the design process, as well as feedback for potential changes in real time. Union Paving and Construction Company served as general contractor, and AECOM was the construction manager.

Constructing two new flyover ramps fulfilled the NJTA initiative to provide connectivity for the missing links. The main structural challenge was to accommodate the curved and sharply skewed ramp crossings with minimal impacts to span lengths, structure depths, and profile grades. The use of steel box cross girders integrated with the curved steel longitudinal girders resulted in reasonable span lengths and girder depths, which allowed for practical and realistic profile grades. The cross girders were placed radial to the main girders, thereby eliminating skewed elements and associated negative skew effects. Single drilled-shaft substructures supported the ends of the cross girders. This system helped to reduce the bridge footprints for both the construction phase and for the final condition to accommodate the sharply skewed ramp crossings. While the two flyovers were the most prominent structures on the project, there were a total of five new bridges, 10 bridge widenings, nine retaining walls, and several noise walls. Structural steel for the entire project totaled 4,103 tons. Additional interchange enhancements included operational and safety improvements including increased sight distances, wider ramp geometry, increased weaving distances, and installation of new overhead signs.

For more than three decades, motorists traveling the Garden State Parkway (GSP) in northern New Jersey had no direct connection between GSP northbound to Interstate 78 (I-78) westbound and GSP southbound to I-78 eastbound.

To make the connections, motorists used local exits to make U-turns to double back onto I-78. Area drivers had been inconvenienced by traffic delays and congestion at Interchange 142 since its opening in the late 1970s because of these missing movements or “links”.

Completed I-78 and GSP Interchange 142 Improvement project.
The mature urban setting of this project site presented a variety of challenges in traffic safety and redevelopment and required many innovative, cost effective, and unique solutions. Mechanically stabilized earth retaining walls supported by controlled modulus columns were utilized to improve the soil prior to construction. Construction and design techniques to minimize traffic congestion in the work area included traffic patterns utilizing crossovers in medians to shift work areas, and on-site snow removal and emergency services. These methods were cost-effective and provided excellent performance with the challenging subsurface soil conditions and the confined construction areas under live traffic conditions.

The GSP remained open 24 hours per-day throughout the construction phase of this project, increasing the complexity of construction with high-traffic volumes of more than 100,000 vehicles-per-day. Real-time travel alert technology and staging of reconstruction minimized impacts on these high-traffic major roadways.

Recognizing the need to minimize impacts to traffic and complete the proposed improvements as quickly as possible, the team included liquidated damage clauses in the specifications tied to the completion dates of specific project milestones. Subcontractors were contracted to share in the liquidated damages to keep all parties motivated to meet the aggressive project schedule, resulting in this project being completed six months ahead of schedule.

Upon completion in 2011, the I-78 and GSP Interchange 142 Project improved the daily commute for 23,000 motorists by providing the long-awaited missing movements between the GSP and I-78. This project eliminated approximately 1,200 vehicles-per-hour from making a two mile U-turn and reduced the number of vehicles by approximately 250 per-hour from exiting the GSP to use local roads, saving these motorists 10 to 20 minutes at peak travel times and keeping highway traffic on the highway.
more than a road, a hole in one.

To accommodate stormwater for the I-595 improvements in Florida, RS&H designed an innovative shared-use drainage system using ponds in nearby golf courses. The result: over $50 million in right-of-way savings, plus improved greens for the community. No denying that’s a win.

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Pennsylvania Turnpike Total Reconstruction in Southwestern Pennsylvania

MP 67 to 75, Irwin to New Stanton, PA
Brad Heigel, P.E., Pennsylvania Turnpike Commission and Jim Walter, P.E., Parsons Brinckerhoff, Inc.

As America’s first superhighway, the Pennsylvania Turnpike (I-76) provided the framework for today’s interstate system. Design criteria established in the 1930’s by the engineers was unprecedented with a maximum curvature of six degrees and vertical grades of 3%, especially in the high mountains and narrows, and twisting river valleys of central and western Pennsylvania. Parsons Brinckerhoff provided traffic and revenue estimates for the original planning and financing of the Turnpike in 1937. Now, with the Turnpike into the second half-century, significant improvements to the Turnpike are being implemented by the Commission. This article is about an 8-mile segment; however similar improvements are being executed across the Commonwealth of Pennsylvania.

The Pennsylvania Turnpike segment between Milepost 67 and Milepost 75 (Irwin to New Stanton) was part of the original PA Turnpike constructed in 1939. The Pennsylvania Turnpike Commission (PTC) is modernizing the roadway to current standards to improve safety and mobility. The typical section of the existing roadway along this segment included a 10 foot median with two 12-foot travel lanes in each direction and a 10-foot right shoulder.

This eight mile segment of the PA Turnpike has a design year average daily traffic of 46,600 with 33% truck, which is high by many standards. These improvements included complete reconstruction from subgrade, and lanes were increased from two to three in each direction to improve roadway capacity for travelers and commercial vehicles. The additional third lane provided the needed capacity, and facilitated maintainance of two lanes of traffic in each direction during construction. Furthermore, the median was increased to 26 feet with an effective right shoulder of 12 feet. The final project construction cost was $152,590,000.

The project included the following features:

- Six overhead concrete, bridge structures (four two-span; two three-span)
- Six miles of mainline widening/reconstruction, plus two miles mainline relocation
- Nine retaining walls
- Four noise walls
- Stormwater Management Best Management Practices (BMPs)
- 5,500 linear feet of stream relocation
- Utility relocations, including gas, water, cable, telephone and overhead electric lines
- Two lanes of traffic maintained in each direction of mainline during construction
Mainline Realignment

The most significant feature was the development of a two-mile mainline relocation in the middle of the eight-mile segment of roadway. This particular roadway section involved two substandard horizontal curves with a vehicle crash rate higher than statewide averages for similar roadways. The selection of this new alignment, off-line to the south of the existing Turnpike, was dependent on achieving various factors, including an effective traffic management strategy, reduced right-of-way acquisition, reduce utility relocations and earthwork, stormwater management (SWM) and the replacement of two mainline bridges.

Parsons Brinckerhoff developed a horizontal and vertical alignment within the rolling topography of western Pennsylvania that met the above requirements. Earthwork waste was reduced by one million cubic yards and used instead as embankment for a fill area in an adjacent valley. Right-of-way impacts were kept to a minimum while relocating only two residences. The SWM for this two mile portion required three major infiltration basins to control post construction stormwater. One sediment basin at the base of the waste area, used for erosion control measures during construction, was converted to a permanent SWM basin after construction. The other two SWM basins were constructed within the original right-of-way after traffic was shifted onto the new realigned section, eliminating the need for additional right-of-way.

Bridge Clearances

During the initial study phase, Parsons Brinckerhoff investigated vertical bridge clearance requirements for interstate standards of 16 feet. This section of the PA Turnpike had existing clearances of 13 feet or less in some areas for the five existing overhead side road bridges. In order to improve the vertical clearance, Parsons Brinckerhoff developed a balanced approach by either lowering the mainline and/or raising the overhead bridges. This resulted in multiple design alternatives to evaluate the vertical geometry of the side roads and the mainline to avoid extensive impacts to adjacent property and side road reconstruction. Roadway profiles and alignments, as well as bridge beam depths, were designed uniquely for each of the six overhead bridges.

The Turnpike Commission and Parsons Brinckerhoff developed a strategic implementation plan which included six separate plans, specifications and estimates to comply with funding availability and to optimize bid results. Six overhead bridges were replaced under three separate construction contracts to allow for widening of the highway.

Sustainable design elements of the reconstruction project were addressed as follows:

- Recycled existing concrete and older pipes for fill material where needed.
- Recycled plastic was used for the guiderail offset brackets.
- Designed to reuse fill material from adjacent construction site for Seanor Church Road overpass embankment construction.
- Reused arch culvert from under the Seanor Church Bridge to maximize life, save money and avoid unnecessary excavation of the PA Turnpike roadway.
- Removed abandoned fuel tanks, tested the existing soil, and installed monitor wells at the former Hempfield service plaza to monitor the surrounding soil.
- Utilized reinforced concrete beams for sustainability by eliminating the need for painting.

The Parsons Brinckerhoff Team provided planning, preliminary engineering, environmental clearance support, final design and construction phase services for this transportation improvement.
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Brown County, South Dakota, is dealing with declining rural populations, aging infrastructure, agricultural changes, limited access to services, getting products to market, and environmental issues. Even with limited resources and aging or declining populations, it is important to plan for the future.

As people move from farms to towns and from small towns to cities in Brown County, the rural population is declining. The US population living in rural communities is now 16%, down from 20% in 2000 and 72% in 1910 (US Census Bureau.) Along with declining population, Brown County faces aging infrastructure with many of the county roads being decades old. The two issues exacerbate one another when trying to plan for transportation needs. The county has hundreds of miles of old roads and little funds to make improvements.

The Brown County Master Transportation Plan, completed in June 2012, applies good planning practices to help the county prioritize needs and identify funding options for the roads. Many believe the most important part of a transportation plan is to make it implementable, and Brown County’s plan falls into that category.

The Brown County Master Transportation Plan focused on the following areas:
- Traffic trends
- Truck traffic
- Hotspots
- Prioritized projects
- Funding sources
Traffic Trends
Many rural parts of the county have no traffic growth, yet other areas experience moderate traffic growth. A recently added rural subdivision, grain elevator, or plant causes an influx of traffic onto the one county road that serves the area, while the traffic volume on other roads is stagnant. Understanding these and other traffic trends helps identify priority routes and develop an applicable functional classification system of roads for the rural area of the county.

Truck Traffic
Some rural areas in Brown County have a disproportionately high number of trucks on the roads. The trucks are heavier than other vehicles and cause more damage to older roads. Trucking is important to the rural communities as it is the main method farmers move their goods to market. Analyzing truck traffic trends was an important aspect of creating the rural transportation plan.

Hotspot Analysis
Rural Brown County does not experience congestion, but officials still identified several problematic transportation areas around the county. The areas included large truck generators like gravel pits and grain elevators, the Richmond Lake recreation area with tight curves, the high school with pedestrian conflict areas, among others. Understanding the true nature of the problem at these locations and developing a plan to address each was an important component of the plan.

Prioritized Projects
A key aspect of the Brown County Master Transportation Plan is helping the county focus limited funds on projects that give the biggest “bang for the buck”. This was accomplished by developing a realistic project list based on the needs and available resources of the county, and then prioritizing projects using performance measures based on the values of the community.

Funding Sources
People may argue that spending already limited funds on a transportation plan is not a good use of money, but many believe the opposite is true. Investing a small amount on a transportation plan can help rural communities meet requirements for state and federal funding programs. The Brown County Master Transportation Plan includes a section which identifies possible funding sources for transportation improvements. Completing the transportation plan was a good investment for Brown County.

The planning tools and exercises help in communicating important information to the South Dakota Department of Transportation leadership, major stakeholders, elected officials, as well as the general public. The Brown County Master Transportation Plan is a great asset for the rural community.

Special consideration was given to projects that help reduce crashes or improve safety. The prioritized list of transportation projects resonates with the community's residents and gives elected officials a clear focus for funding allocation.

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Best of all, each item only takes about two weeks from the time you order till you have it in-hand!

**Rush Service Available!**

www.ashe-store.cathyrossner.com

OR

www.highwayengineers.org

Use the pull down menu for ASHE Company Store

For more info:
Cathy Rossner
775-787-2003
cathyrossner@earthlink.net

Creative Marketing Group
A Division of PROforma Albone & Co.
### ASHE Membership

#### Northeast Region
- Albany: 105
- Altoona: 192
- Central New York: 52
- Clearfield: 94
- Delaware Valley: 368
- East Penn: 18
- First State: 129
- Franklin: 205
- Harrisburg: 329
- Long Island: 33
- Mid-Allegheny: 97
- New York Metro: 133
- North Central New Jersey: 181
- North East Penn: 130
- Pittsburgh: 501
- Southern New Jersey: 296
- Southwest Penn: 296
- Williamsport: 158
- Subtotal: 3321

#### Mid Atlantic Region
- Blue Ridge: 70
- Carolina Piedmont: 58
- Carolina Triangle: 244
- Chesapeake: 176
- Greater Hampton Roads: 110
- North Central West Virginia: 35
- Old Dominion: 87
- Potomac: 171
- Potomac Highlands: 43
- Subtotal: 994

#### Southeast Region
- Central Florida: 44
- Georgia: 427
- Gold Coast: 7
- Middle Tennessee: 156
- Northeast Florida: 198
- Tampa Bay: 98
- Subtotal: 930

#### Great Lakes Region
- Central Ohio: 172
- Circle City: 49
- Cuyahoga Valley: 110
- Derby City: 67
- Erie: 118
- Lake Erie: 43
- Triko Valley: 115
- Subtotal: 677

#### North Central Region
- Central Dacotah: 123
- Subtotal: 123

#### Rocky Mountain Region
- Phoenix Sonoran: 125
- Subtotal: 125

### At-Large Membership

- At-Large: 2
- Subtotal: 2

### National Total
- National Total: 6172
- Professional Status: 54%
- Government: 13%
- Consultant: 69%
- Contractor: 6%
- Other: 12%