



Transportation Vanguard Award Nomination Form

2014

INFORMATION ON NOMINEE:

Last Name: Chamberlain	Michael	9/26/2014	
Email: Michael.chamberlain@txdot.gov		Position Title: Director, Data Management section	
Department: Texas Department of Transportation		Phone: 512.486.5052	
Street Address: 118 E. Riverside	City: Austin	State: TX	Zipcode: 78704
AASHTO Committee Membership (optional) Click here to enter text.			

NOMINATOR INFORMATION:

Last Name: Koch	First Name: James	Date: September 26, 2014	
Email: james.koch@txdot.gov		Position Title: Director, Transportation Planning and Programming division	
Department: Texas Department of Transportation		Phone: 512.486.5003	
Street Address: 118 E. Riverside	City: Austin	State: TX	Zipcode: 78704
Endorsement of Member Department Secretary/Director: endorsed by LtGen J. F. Weber, USMC (Ret), Executive Director			

INSTRUCTIONS:

Using a maximum of 2 additional single-sided pages, please provide reasoning as to why this individual should be selected as the Transportation Vanguard Award recipient. Please include as much specific information about the candidate as possible, including special projects, personal attributes, dedication, etc.

Send nominations by **Friday, September 26, 2014**, via e-mail to mvitale@ashto.org. Nominations must be submitted as a single file in MS Word format using ***TVA2014_Nomination_Nominee_Name.doc*** as the file name.

Michael Chamberlain is nominated to receive the AASHTO Transportation Vanguard Award for his dedicated efforts in redefining the way transportation engineers and planners access and use complex data to develop innovative transportation solutions. Michael is the Director of Data Management for the Transportation Planning and Programming Division (TPP) with the Texas Department of Transportation (TxDOT). Michael and his team advance TxDOT as a best in class transportation agency by remaining on the forefront of emerging technology and incorporating the newest technologies in data collection, analysis, reporting, and storage in daily operations.

Michael, a change leader in transportation programming, has been influential in providing technical avenues for the evaluation of transportation projects. He spearheaded the development of a methodology and process where project attributes, such as safety, roadway, and traffic data are input into a department wide database which then assigns values to the criteria allowing for projects to be scored and ranked. Michael created a Sharepoint data access site that allows for real-time collaboration and publication on project information. Automating this process has increased efficiencies and reduced individual input and human error. Different groups can see and interact with the project information on Sharepoint via web conferences. In addition, Michael led the development of individual project sheets with a map of the project and a detailed listing of the criteria scores. The new project evaluation process is being used by the department, Administration and Transportation Commission to select projects for funding in the Unified Transportation Program, a 10-year \$32B program of projects.

Michael's leadership and use of progressive ideas is also exemplified by the development of the Geospatial Roadway Inventory Database (GRID). TPP maintains key information assets such as the State's roadway network and inventory data which is used to support statewide transportation planning and support nearly all of TxDOT's core business functions. Further, these data are reported to the Federal Highway Administration (FHWA) in the annual Highway Performance Monitoring System (HPMS) report. The data submitted in HPMS are used for apportionment of federal-aid highway funds and form the basis of the national *Conditions and Performance* reports provided to Congress.

The roadway network and inventory data currently reside in two legacy mainframe environments - the Texas Reference Marker (TRM) system and Roadway Inventory Application (RIA); a client-server geographical information system (GIS) environment - TPP GIS; and a desktop database environment - the District Data Collection System (DDCS). Each environment has a unique data formats, file structures, data dictionaries, and quality assurance (QA) procedures. These legacy systems are cumbersome to operate and expensive to maintain. They duplicate many data items, and the manual procedures required to synchronize data updates among them often lead to errors and omissions. Several staff are dedicated solely to performing these manual procedures and resolving the resulting errors and omissions. Manual processes are also required to integrate the roadway inventory data with the GIS data in order to visualize or analyze the information in a map form.

GRID will provide a complete overhaul of these data maintenance systems and processes. GRID will be the new system to replace these legacy systems with a fully geospatial environment, including tools for data input, maintenance, quality control/assurance, analysis,

and reporting. GRID will eliminate redundant mainframe files, thereby improving both the value of TxDOT's roadway inventory data management system and the efficiency with which it is maintained resulting in a reduction of staff time required to find and correct errors. GRID will also be instrumental in increasing the availability of data to other divisions, districts, and offices, as well as enabling TxDOT to meet new HPMS reporting requirements and avoid penalties in the amount of \$25M annually. The first phase of GRID is near completion and the department will soon realize significant improvement in efficiencies.

Michael has also implemented new ways for the department and other entities to obtain and share transportation data. He initiated a cooperative effort with other state agencies and metropolitan planning organizations to purchase statewide orthographic imagery. The combined effort will allow for the shared use of expensive orthographic photography amongst several user groups with a reduced cost. He also led an effort to map, for the first time, all of the several thousands of highway projects listed in the departments Design Construction Information System.

Michael led the development of a roadway cost estimation data query tool for the Statewide Planning Map. The tool is being used to conduct early sketch planning analysis of potential highway improvements. Data from typical construction costs and roadway configuration is matched with physical features, such as topology and water features to produce an estimated construction cost for alternatives.

Michael has been with TxDOT since 2000. He is an effective and knowledgeable leader focused on open communication and professional and personal development of his staff. He prides himself on developing new ways to make transportation information more available and understandable. He is married with children.