

**Rahall Transportation Institute
Research Project Description Form**

Project Number: 211160

Project Title: Development of Digital Inventory and GIS Web-Based Applications for West Virginia's Outdoor Advertising Program

Primary Investigator Contact Information:

Name: Prof. Wael Zatar

Institution: Rahall Transportation Institute

Address: Marshall University, P.O. Box 5425, Huntington, WV 25703-0425

Department: Rahall Transportation Institute

Phone: 304-696-6043

Email address: Zatar@marshall.edu

External Project Contact:

Name: Bill Light

Institution: WVDOT/WVDOH

Address: Traffic Engineering, 5th Floor, Bldg 5, Capitol Complex, Charleston, WV 25305-0430

Phone: 304-558-9341

Email address: William.e.light@wv.gov

Project Objective: The primary objectives are: (a) Surveying Outdoor Advertising Programs of few other state DOTs; (b) Planning and laying out the groundwork for the study tasks and reviewing the existing WVDOH inventory for outdoor advertising; (c) Compiling a comprehensive electronic inventory for outdoor advertising; (d) Performing field study of approximately 350 sign locations; (e) Compiling a database that relates the comprehensive inventory and field attributes and images documented; (f) Developing GIS web-based applications for the WVDOH Outdoor Advertising Program; (g) Preparing a Final Report and disseminating the project findings; and (h) Providing training workshops for the WVDOH employees and other interested parties approved by the WVDOH.

Abstract: The U.S. Department of Transportation (USDOT), through its FHWA, provides Outdoor Advertising Program guidance at the federal level. At the state level, each state's Department of Transportation (DOT) administers and enforces outdoor advertising permit programs, monitors the erection and maintenance of billboards, and provides statistics on nonconforming and illegal sign removals. The WVDOH is responsible for archiving all inventory sheets and also sending staff to perform the routine inventory inspection for its Outdoor Advertising Program. Over the years, the West Virginia Department of Highways (WVDOH)

has accumulated a large number of inventory sheets and the archiving and management of the sheets became difficult. The WVDOH Stores the inventory sheets in Bldg.#5 and it seems that a more efficient search process is probably needed. An electronic document archiving and management program for the Outdoor Advertising Program needs to be developed. It would certainly be very helpful to link such an electronic inventory to road network data in the WVDOH Straight Line Diagrams (SLD). Mapping and integration of the electronically proposed inventory files into a Geographic Information System (GIS) would result in better management of the Outdoor Advertising Program. The project was planned in order to facilitate data collection, scanning services, and system development for the WVDOH Outdoor Advertising Program.

Task Descriptions:

Task 1: Survey Outdoor Advertising Programs of few other state DOTs.

Task 2: Plan and lay out the groundwork for the study tasks and review the existing WVDOH inventory for Outdoor Advertising Program and the issued permits.

Task 3: Compile a comprehensive electronic inventory for outdoor advertising.

Task 4: Perform field study for approximately 350 sign structures of the inventory in Task 3.

Task 5: Compile a database that relates the comprehensive inventory established in Task 5 and all data and images documented in Task 6.

Task 6: Develop and submit GIS web applications for West Virginia's Outdoor Advertising Program.

Task 7: Prepare a Final Report and disseminate the project findings.

Task 8: Provide training workshops.

Milestones, Dates, Schedule:

1) Survey Outdoor Advertising Programs of few other state DOTs. (Approximate Duration: 2.5 months)

2) Plan and lay out the groundwork for the study tasks and review the existing WVDOH inventory for Outdoor Advertising Program and the issued permits. (Approximate Duration: 2.5 months)

3) Compile a comprehensive electronic inventory for outdoor advertising. (Approximate Duration: 8 months)

4) Perform field study for approximately 350 sign structures of the inventory in Task 3 (Approximate Duration: 8 months)

5) Compile a database that relates the comprehensive inventory established in Task 5 and all data and images documented in Task 6. (Approximate Duration: 7 months)

6) Develop and submit GIS web applications for West Virginia's Outdoor Advertising Program. (Approximate Duration: 8 months)

7) Prepare a Final Report and disseminate the project findings. (Approximate Duration: 8 months)

8) Provide training workshops. (Approximate Duration: 3 months)

Yearly and Total Budget: \$283,988

Student Involvement: One undergraduate students and two graduate students will be involved in the project.

Relationship to Other Research Projects: N/A

Technology Transfer Activities: Presentation materials will be developed and will be used in training workshops. A final report will be developed. The project approach and findings will be presented in international conference.

Potential Benefits of this Project: This project targets achieving the following main objectives: (a) Surveying Outdoor Advertising Programs of few other state DOTs; (b) Planning and laying out the groundwork for the study tasks and reviewing the existing WVDOH inventory for outdoor advertising; (c) Compiling a comprehensive electronic inventory for outdoor advertising; (d) Performing field study of approximately 350 sign locations; (e) Compiling a database that relates the comprehensive inventory and field attributes and images documented; (f) Developing GIS web-based applications for the WVDOH Outdoor Advertising Program; (g) Preparing a Final Report and disseminating the project findings; and (h) Providing training workshops for the WVDOH employees and other interested parties approved by the WVDOH.

TRB Keywords: Transportation Asset Management; Outdoor Advertising; GIS; Web Applications; Database and Digital Inventory.