

**‘Access Management’  
Program Plan  
June, 2004**

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# **‘Access Management’**

## **Program Plan**

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### **I. INTRODUCTION**

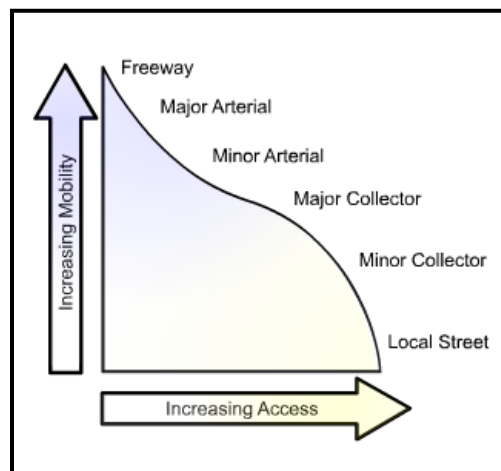
These offices in FHWA contribute to access management (AM) program initiatives and contributed to the preparation of this program plan.

- Operations (HOP)
- Planning, Environment, and Realty (HEP)
- Federal Lands Highway (HFL)
- Research, Development, and Technology (HRT)
- Resource Center (RC)
- Office of Safety

This program plan has been developed to increase awareness of what each office is doing and guide future activities. The Office of Operations has the lead within FHWA and solicits assistance and support from the other offices.

Access Management (AM) is the proactive management of vehicular access points to land parcels adjacent to all manner of roadways. Good access management promotes safe and efficient use of the transportation network. AM encompasses a set of techniques that state and local governments can use to control access to highways, major arterials, and other roadways. Access Management provides an important means of maintaining mobility. It calls for effective ingress and egress to a facility, efficient spacing and design to preserve the functional integrity, and overall operational viability of street and road systems. Access Management should address:

- Facility Hierarchy
- Intersection and Interchange Spacing
- Driveway spacing
- Traffic signal spacing
- Median treatments and median openings
- Turning lanes and auxiliary lanes
- Street connections



**Figure 1**  
Conceptual Roadway Functional Hierarchy

## II. BACKGROUND

In areas of dynamic land development, it is important for jurisdictions to develop access standards that achieve a balance between property access and functional integrity of the road system. Studies show that implementing access management provides three major benefits to transportation systems:

- Increased roadway capacity
- Reduced crashes
- Shortened travel time for motorists

All of the three benefits cited above are essentially the result of minimizing or managing the number of conflict points that exist along a corridor. Imagine the two extremes of the same corridor. In the least intrusive example, no minor-street conflicts exist. Traffic flows freely down an unencumbered corridor “pipe” influenced only by density, weather, and integrity of the roadway. When minor-street conflicts (i.e., “laterals”) in the form of driveways and streets are introduced, the mainline flow must adjust speeds and sometimes lanes to avoid all manner of delay and conflicts introduced by the myriad combination of slowing, turning, merging, entering, and stopped vehicles. In many locations, it is necessary to completely stop the mainline flow (via signals) so the minor-street vehicles can even gain opportunity to enter the flow. In short, steady progression is interrupted, and often at uneven intervals.

### **How is Access Management Accomplished?**

Access management is achieved through the application of these planning, regulatory, and design strategies.

- Policies, directives, and guidelines issued by state and local agencies having permit authority on development and roadway infrastructure improvements.
- Regulations, codes, and guidelines that are enforceable.
- Acquisition of access rights by states and local jurisdictions that serve to protect transportation interests and enable sufficient infrastructure is built.
- Land development regulations by state and local jurisdictions that address property access and related issues.
- Development review and impact assessments by state and local jurisdictions.
- Good geometric design of transportation facilities
- Understanding of access implications by businesses and property owners.

Some property owners and some local planners or permit agencies do not always consider the full effects of introducing driveways or minor streets. Further, local entities often perceive economic damage when some access management techniques are proposed, i.e., closing median breaks, relocating driveways, or limiting the number of access points. Continuous education, case studies and examples are needed to show that carefully planned development can coexist with good access management. It is important

to show that well-planned access helps maintain property values while fulfilling the FHWA role of promoting safe and efficient transportation for the general public. Public and business community involvement is essential. Effective interaction is crucial to the success of the implementation of the project.

A second challenge to implementing Access Management is its low tech/low cost nature. It is often overlooked in favor of costlier solutions. An effective new activity herein would be to market AM strategies to national and local business associations, thereby educating them that good practice can coexist with healthy businesses, and increasing their acceptance and demand for such applications.

### **What is the FHWA's Role?**

- To encourage and advance the development of state and local access management policies, guidelines, and procedures for the management of facilities; and integrate these into established planning, policy and design processes.
- To increase awareness and understanding of the linkage between land use, transportation planning, corridor preservation, and management.
- To increase awareness of access management techniques by state DOTs, cities and counties.
- To increase use of access management techniques by state DOTs, cities, towns, and counties.
- To promote use of TRB Access Management Manual and other useful resources.
- To advance state of the practice through training courses and workshops that present up-to-date information and real world examples.
- To advance state of the practice in access management through research.
- To share expertise and experience at national and regional conferences
- To work with business organizations and public entities to align and advance economic development opportunities with access management strategies.

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## **III. STRATEGIC DIRECTION**

### **Program Purpose**

The purpose of the Access Management program is to bring attention to the importance and value of proactive management of access points. Ideally, this will be accomplished through the production and distribution of resource materials targeted to “spread the word” that good access management principles result in improved safety, reduced congestion along corridors, and will not impart a negative effect on the local economy.

## Program Goals

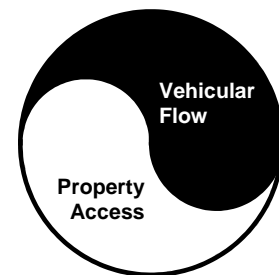
The goals of the Access Management program are to incorporate good access management principles whenever land development is pursued, and to revisit and improve upon existing facilities' operations. These goals will be realized when it is apparent that national, regional, and local business groups and authorities have, at a minimum, acknowledged the importance of good access management, and, ideally, state and local jurisdictions have incorporated and apply written guidelines, strategies, and "positions" that promote these practices.

## Program Objectives

The program objectives are 1) to develop a toolbox of resources that can be used as references, models, examples, or measures to offer to interested stakeholders, and 2) champion the application of AM techniques. The primary stakeholders are the planners and authorities responsible for reviewing and permitting site plans, roadway improvements, and long-range master plans, and also the authorities responsible to maintain the roadway facilities. Secondary stakeholders include property owners adjacent to whichever corridors are relevant to respective access discussions, decision makers, as well as the motorists who travel those corridors.

## Program Outcomes

The program outcomes will realize the benefits of managing access to all hierarchy of roadways. In simplest terms, access management is defined by the "yin and yang" relationship between property access and vehicular flow. As one is increased, the other usually decreases, in terms of driver satisfaction and expectancies.



**Figure 2**  
Driver expectancies change due to this relationship

Planners and engineers can glean successful program outcomes in terms of increasing dialogs and increasing acceptance of AM principles. Said groups would realize the benefit of proactively including these dialogs in their site- and roadway improvement planning, and retroactively improving existing facilities when opportunities avail themselves.

## Program Measures

The success of the Access Management program may be measured in the following ways.

- a. *The number of State DOTs that have adopted AM policy plans will increase.*

Twenty-seven (27) states now have access management policy plans and are implementing them. Of course, we would like to see all states adopt plans.

- b. *“Champions” within FHWA will promote AM principles and products in their respective regions or program areas.* Most FHWA Division Offices have already identified staff members to champion the access management program in cooperation with their State counterparts. We expect 100 percent participation in the field offices in the distribution of FHWA program products to state and local agencies.
- c. *The NHI Access Management course will ideally be offered at approximately 10 locations each year, training a total of 900 participants in the next three years.* The course is currently under revision and update.
- d. The number of *tools* developed in, stored in, or linked to the “toolbox” that is intended as a product of this program area will help to measure the program’s success.
- e. FHWA staff will identify and include national business organizations, including the Small Business Administration, in their stakeholder groups, to establish new partnerships, and align interests of mobility, safety, and economic health.

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#### IV. STATE OF THE PRACTICE AND NATIONAL TRENDS

In November 2003, the following were observed:

**a. Most-Active with Access Management by Policy and Plan**

National Leaders (per anecdotal evidence and national presence):  
Colorado, Florida, Kansas, Minnesota, New Jersey, New York, and Oregon

Other States with active or adopted plans, and implementation underway:  
Idaho, Illinois, Iowa, Maine, Delaware, Maryland, Missouri, Montana, Nebraska, Nevada, New Hampshire, Ohio, South Carolina, South Dakota, Texas, Utah, Virginia, Washington, Wisconsin, West Virginia, and Wyoming

**b. Authority for Access Management**

Derived from state statute: Colorado, Kansas, Florida, Illinois, Iowa, Maine, New Jersey, New Hampshire, Oregon, Delaware, Pennsylvania, Virginia, and Washington.

Derived from regulation: South Carolina, South Dakota, West Virginia, Wisconsin, and Wyoming.

Derived from adopted policy: Idaho, Maryland, Minnesota, Missouri, Montana, Nebraska, New York, Nevada, Ohio, Utah, and Texas

c. **A Nationally Recognized Manual Has Been Produced**

The *TRB Access Management Manual* (2003, hardcopy and CD-rom) and the website [www.accessmanagement.gov](http://www.accessmanagement.gov) (which is primarily managed by TRB Committee ADA70) are national leaders in providing the most up-to-date resource (former) and links to other resources (latter) that promote access management. FHWA supports these initiatives through involvement in committees, funding, and promotion, review, and distribution of these related products. Inclusive to these products are promotions of national dialogs and meetings (for example, the 6<sup>th</sup> national conference on this topic is scheduled to begin August 29, 2004, in Kansas City, MO.) FHWA has membership on the TRB Committee and is active in planning the conference program and monitoring AM initiatives elsewhere.



**Figure 3**  
TRB Manual

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## V. FOCUS AREAS

FHWA will pursue a number of initiatives to increase general awareness. Access Management principles will also be championed by FHWA to realize the benefits of such techniques.

a. **Awareness, Outreach and Partnering**

This focus area is intended to disseminate information via distribution of products, and to promote this program through attendance and participation in committees, meetings, conferences, targeted interaction with agency partners, impromptu or periodic interactions, scheduled presentations, web meetings, teleconferences, and similar. As products are assimilated, efforts will continue to “spread the word” about the benefits

of effecting access management principles so they are reflected into site- and roadway improvement plans. For example, one relatively recent area of interest has been that HSA has included information and links on access management in their “Geometric Design” program area. Specific to “partnering,” FHWA will seek to expand our circle of partners to include business organizations and agencies that have interest in economic development. Through this, we will seek to promote existing and new ideas and ways to realize effective access management, while continuing to maintain safety and economic viability.

b. **Tools and Guidance**

This focus area is intended to develop and use products that can be distributed through the outreach program. For example, copies of the TRB Manual and/or CD-rom have been distributed to all Division offices and more. The AM website has an interactive screen listing 10 principles of access management. Thousands of AM brochures and similar fliers have been distributed by FHWA staff at meetings and conferences. Development of an updated video (also to be introduced on CD too) is a targeted roadmap goal. Another goal is to update the 2002 AM CD Library, originally produced for FHWA by the *Teach America Corporation*, Frank Broen, President.

c. **Education and Training**

The revision and updating of the NHI Access Management training course #133078A is on-going and is representative of the opportunity to educate interested parties in the many principles and practices available to improve access points on roadways and corridors. By identifying “champions” within each Division, FHWA can be better situated to keep State DOTs and others informed of any new developments in this field. FHWA’s participation in developing the 6<sup>th</sup> national AM conference program and in promoting same is evidence of current attention to this subject.

d. **Research**

FHWA staff is participating on an NCHRP panel for Project #08-46 “A Guide for Including Access Management in Transportation Plans”. HEP sponsored a “right-of-way and planning” scan in San Francisco in 2003, wherein, AM was only a sub element of the right-of-way and planning topic. Therefore, there is desire for a national scan focusing on AM.

e. **Interstate Policy**

Recent issues were brought to bear concerning access to interchanges. FHWA will assess, define, and convey our mission and role as a champion of effective AM practices specifically here, but in all AM arenas too. Depending on the outcome of the assessment, a policy memorandum or guidance document will be developed and disseminated.



## **VI. RECENTLY COMPLETED TASKS**

In order to create a recent baseline, the following completed activities are noted.  
(approximately within the previous two calendar years)

- a. Memorandums were sent to each Division requesting them to designate an AM point of contact. All but the following ten have identified a contact: AK, AR, CA, KY, MN, MO, MT, NC, PA, and WV. (HOP)
- b. Each Division contact was provided with a complimentary 2003 AM manual. (HOP)
- c. Divisions were asked to identify a state contact/champion for AM. (HEP)
- d. AM “Benefits” brochures were printed for field distribution and conference use. \$3000 (HOP)
- e. Divisions were asked to provide the state champion a complimentary 2003 manual, AM fact sheet, copies of the 2002 Benefits brochure and electronic file of brochure, CDs, videos, etc. (HOP & HEP)
- f. The LTAP center libraries were given a complimentary TRB AM manual. Opportunities continue to be sought to provide articles or links to LTAP newsletters. (HOP & HEP)
- g. The 2002 AM Poster promoting the new manual was used at the AASHTO ROW and IRWA conferences. (HEP)
- h. A 2003 HEP Domestic Scan was completed in San Francisco. \$75,000 (HEP)
- i. HEP staff manned the 2003 TRB AM booth: distributed brochures and displayed the AM poster.
- j. The web site “[accessmanagement.gov](http://accessmanagement.gov)” was improved, including adding an interactive page showing 10 AM principles. Click on them for expanded information.

## **VII. ACTION ITEMS**

### **A. Awareness, Outreach, and Partnering**

- a. Promote the updated NHI course when completed.
- b. Planning is underway for the August 29 - September 1, 2004, national conference in Kansas City, MO, and is sponsored by TRB, FHWA, KDOT, MoDOT and the Midwest Transportation Consortium in Iowa. (HEP).
- c. Share AM information, techniques, brochures and videos as opportunities avail. Use links on the HOP, HEP, and HSA websites. (HOP, HSA & HEP)
- d. Develop strategies with Division contacts and state champions to increase awareness by cities and counties. (HOP & HEP)

- e. Promote the TRB AM manual by including fliers with each 2002 “CD Library” CD sent out. (HEP)
- f. Target audiences at the local level, i.e., community leaders, developers, property owners and businesses. (HOP & HEP)
- g. Look for measures of success at the local level, i.e., adoption of AM policies/ plans, new ordinances/codes or partnerships with the state DOT for corridor preservation. (HEP, HOP & RC)
- h. Order and distribute additional copies of TRB 2002 AM CD’s and/or Manuals. \$7,500 (HOP, **FY04**)
- i. Target an **FY 05** Domestic Scan. \$75,000 (HOP)
- j. Monitor research, conference feedback and input from users of the AM manual to determine what revisions are needed to course material, manual, brochures and CD/DVDs. (HOP & HEP)
- k. Teleconference(s) and/or web meeting(s) to promote one or more aspects of “championing,” “partnering,” or “outreach” described elsewhere in this document.
- l. Partnering activities:
  - i Identify one or more national business association(s)
  - ii Identify potential champions at same
  - iii Identify contact at Small Business Administration
  - iv Identify new partner interests related to AM
  - v Identify opportunities of mutual interest or facilitation
  - vi Gain trust of business community in general
  - vii Build advocacy and partnerships
  - viii Generate demand for Access Management by non-transportation partners

## **B. Tools and Guidance**

- a. Aid in the development of a new generic AM video in **FY 04 or FY05**. (Note--this work could be combined with the Washington State DOT video production that is being funded the Technology Transfer funds. \$15,000 (HOP, RC & HEP)
- b. Fund and distribute 2004 national conference proceedings. \$25,000 (HOP, **FY04**)
- c. Promote development of PowerPoint presentation, potentially with video clip enhancements, to showcase AM manual. \$5000. (HOP, **FY05**) Said presentation can be advertised for use by a city engineer at a public meeting. Video clips would be drawn from available videotapes recorded for purpose of updating the generic AM video.
- d. Support publication of addendums to the TRB Manual in the form of updates based on new research reported by the TRB Subcommittee on Access Management. \$30,000 (HOP & HEP, **FY06**)
- e. Update the 2002 “Benefits” brochure and flier. \$10,000 (HOP & HEP, **FY05**)

- f. Participate on NCHRP Study on AM adjacent to Interchanges.
- g. Phase 1 of AM Toolbox: Identify products, design and set parameters, initiate toolbox, and advertise same. \$10K Phase 1 (HOP **FY06**)

### **C. Education and Training**

- a. Revision of the NHI Course #133078A – Access Management, Location and Design is underway. The course RFP was advertised in April 2004. The following individuals have agreed to be on the proposal review team: Neil Spiller, Kathy Facer, and Grant Zammit. \$125,000 (HOP, HEP & RC)
- b. Arrange for ADA & Pedestrian panel at 2004 conference. (HEP)
- c. Arrange and facilitate poster sessions at 2004 conference and 2005 TRB annual meeting. (HEP and RC)
- d. Moderate/present/facilitate 2004 conference. (HOP & HEP)
- e. Support 2006 AM conference in Salt Lake City, UT. \$25K (HOP, RC & HEP **FY06**)
- f. Help publicize 2005 roundabout conference in Vail. (HOP, RC & HEP)
- g. Customize training packages and content to reach smaller audiences, such as locals. Develop a distance-learning course based on the TRB Manual, and aimed at local jurisdictions. \$50K Phase 1; **FY06**. \$50K Phase 2 **FY07** (HOP & HEP)

### **D. Research**

- a. Panel-participant on NCHRP Project 08-46 “A Guide for Including Access Management in Transportation Plans” (HOP)
- b. Distribute research results. (HEP, HSA, RC & HOP)
- c. Participate on NCHRP Project 35-06, “Acquisition of Access Rights” panel. (HEP & HOP)
- e. Liaison with TRB Performance Measurement Committee. Determine if there are any economic based indicators and report accordingly.(HEP)
- f. Identify tools to predict the economic impact of deploying AM. (HOP & HEP)
- g. Focus on AM impact on business and property value. Research positive and negative impacts on business on access managed routes. Extract pertinent information to provide an executive summary brochure targeted for key decision makers and other specialized audiences. \$30K (HEP & HOP, **FY05**)

## **E. Interstate AM Policy**

- a. Assess and define our mission and role as a champion of effective access management practices on interstate highways through formation of task force to review this issue. (AA/Mgmt council activity)
- b. Develop and disseminate outcome of task E-a above. (i.e., produce memorandum of guidance or similar as determined most effective)

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## **VIII. STATUS OF CURRENT AM-RELATED RESEARCH ELSEWHERE**

### **A. NCHRP-Related Activities**

- a. Project 8-46: A Guide for Including Access Management in Transportation Plans. Dye Management, with Urbitran, Herb Levinson, CUTR. Completing the first tasks. Survey done in Sept. 2003.
- b. Project 8-44: Incorporating Safety into Long Range Transportation Plans. University of Arizona, (Dr. Simon Washington) and Georgia Institute of Technology (Dr. Michael Meyer). Phases 1 to 8 are reported to be in draft to be reviewed by the panel. Phase 1 draft includes state of the practice information. Public distribution anticipated in mid-2005.
- c. Project 17-21: Safety of U-turns at Unsignalized Median Openings. Nearing completion, publication anticipated in 2004. By the Midwest Research Institute (Ingrid Potts), with Urbitran Assoc., and Levinson.
- d. Project 3-72: Lane Widths, Channelized Right Turns, and Right-Turn Deceleration lanes in Urban and Suburban Areas. By the Midwest Research Institute (Ingrid Potts). Synthesis of practice is complete and may be available on the TRB website. The research phase will be completed in 2005 with expected publication in late 2005.
- e. Synthesis 34-12: Access Location on Crossroads in the Vicinity of Interchanges. Final draft is completed. Marc Butorac, Kittelson & Associates. Publication expected soon.
- f. Project 35-06: Acquisition of Access Rights. Contracted awarded to Del Huntington at Kittelson Associates. This study will report on the best practices with anticipated publication date in 2005.
- g. Project 35-3 Best Practices in Crash Reporting and Processing. The intent of the research project is to create / collect better data to understand what factors contribute to crashes.
- h. Synthesis 34-7: Cooperative Agreements Between State and Local Agencies to Manage Arterial Corridors to Preserve Mobility and Safety. Newly awarded.

- i. Project 15-30: Median and Median Intersection Design for High Speed Facilities. Panel member volunteers requested.

**B. FHWA –Related Activities**

**Related research by Safety, Research and Development**

- a. Development of an informational guide for signalized intersections. This guide will be published by FHWA in the fall of 2004. A TechBrief is now available to promote the Signalized Intersections: Informational Guide in paper form and soon to be on [www.tfhrc.gov](http://www.tfhrc.gov).
- b. Evaluation of roundabout access for pedestrians with visual impairments and testing of treatments to improve the perception of safer crossing decisions. The study is ongoing and planned for completion at the end of this year.
- c. A new project will soon be initiated to evaluate the safety, and operational performance of the New Jersey jug handle intersection designs.
- d. An ongoing research is developing a model that will extract safety surrogate measures for intersections from existing traffic simulation models and to evaluate these surrogate measures with field data.
- h. Other ongoing studies are evaluating the performance of non-traditional and novel intersections, and spacing considerations between roundabouts and signalized intersections.
- h. Activities are on-going in the area of surveillance and detection that aim to result in improved operation of traffic signals with regard to minimizing delay introduced as a result of a minor street or driveway interruption.

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