

MISSISSIPPI'S UNIFIED LONG-RANGE TRANSPORTATION INFRASTRUCTURE PLAN



2035



MISSISSIPPI DEPARTMENT OF TRANSPORTATION

FINAL REPORT

APPENDIX M: ACCESS MANAGEMENT

MAY 2011

Table of Contents

- 1. Introduction..... 1
- 2. MDOT Access Management Manual 2
 - 2.1 Roadway Classifications..... 2
 - 2.2 Levels of Access 3
 - 2.3 Geometric Requirements 3
 - 2.4 Median Policy 3
 - 2.5 Traffic Impact Analysis 4
 - 2.6 Administrative Procedures..... 4
- 3. Best Practices Review 4
 - 3.1 Implementation Strategies 4
 - 3.2 Access Management Strategies In Selected States 6
- 4. Key Findings And Recommendations 7

1. INTRODUCTION

The purpose of this report is to evaluate the operation and effectiveness of access management policies in Mississippi. It includes a review of the recently enacted MDOT Access Management Manual, as well as an analysis of access management best practices in other states. The report draws on an extensive review of available transportation-related research and interviews with MDOT staff and representatives of local planning agencies. The resulting findings and recommendations focus on options for further strengthening Mississippi’s access management policies and programs to meet the state’s overall transportation goals and objectives.

The 2003 Transportation Research Board (TRB) *Access Management Manual* defines access management as the “systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway”. Numerous studies have documented that access management programs provide significant benefits, including increased roadway capacity, reduced crashes, and shortened travel time for motorists. These benefits generally result through minimizing the number of conflict points that occur along a roadway. However, this objective must be weighed against the requirement to provide reasonable access to the adjacent land use. As a result, access management fundamentally involves balancing the two competing functions of roads – moving traffic and providing access to property.

Effective access management is achieved through the careful application of planning, regulatory, and design strategies. Key components of an access management program include the following:

- An access classification system that assigns standards to roadways in accordance with their level of importance to mobility;
- Defining allowable access levels and spacing for each roadway class that do not degrade its function in the hierarchy (identifying when and where access can be permitted and setting appropriate criteria for the spacing of access points);
- Applying appropriate geometric design criteria and traffic engineering analysis to each allowable access;
- Using permit procedures and regulations to ensure that decisions are reasonably enforceable and that the government agency can manage effectively roadway design and operation; and
- Providing a mechanism for granting variances when reasonable access cannot be provided.

2. MDOT ACCESS MANAGEMENT MANUAL

The MDOT Access Management Manual was published on January 21, 2010. The manual implements provisions contained in various MDOT administrative rules, including Rule No. 37.1.7501.04018 (“Access Management Manual”), and is statutorily authorized under the broad authority granted to MDOT under Sec. 65-1-8 et seq. of the Mississippi Code. As stated in the manual, this document constitutes MDOT’s policy for access location determination and procedures for coordinated development between state highways and the abutting properties that they serve. The manual is intended to accomplish the following:

1. Maintain the overall safety of the transportation system;
2. Minimize congestion;
3. Minimize crashes;
4. Provide for efficient traffic flow;
5. Preserve existing system capacity;
6. Provide for pedestrian safety;
7. Maintain roadway aesthetics; and
8. Provide appropriate access to adjacent business properties.

The manual and enclosed standards are applicable to all state highways. With certain exceptions, all new construction and reconstruction projects must incorporate access management guidelines. An exception applies when the existing local road network or access to existing developments cannot be modified without the result of relocation impacts that would not otherwise occur or excessive right of way costs. The access management policy applies to all developments or re-permitting of existing access points due to changed land use.

The following discussion identifies and summarizes key elements of the manual. Importantly, this summary is intended to provide a general overview of the contents of the manual and is not inclusive of all MDOT access management requirements.

2.1 Roadway Classifications

The manual establishes three roadway classification types, including: Type 1 (Freeway), Type 2 (Partially Controlled Access Highway), and Type 3 (Conventional Highway). On Type 1 roadways, no property abutting the through traffic lanes is permitted except at interchanges constructed at intersecting streets and highways. On Type 2 roadways vehicular access from abutting property directly to and from through traffic lanes is permitted under specified conditions. On Type 3 roadways vehicular ingress and egress from abutting property directly to and from the through traffic lanes is permitted, except that direct access may be restricted for safety and/or as indicated in the manual and MDOT rules. For determining levels of access and minimum standards such as driveway spacing, conventional highways are subcategorized by speed and area type (rural versus urban).

2.2 Levels of Access

The manual establishes certain requirements relating to spacing for interchanges, intersections, driveways and frontage roads. For example, the manual provides the following spacing requirements:

- On Type 1 roadways in urbanized areas, the minimum interchange spacing should not be less than 1 mile; minimum spacing for rural freeway interchanges on the Interstate System should not be less than 3 miles apart or 2 miles apart for non-Interstate facilities;
- On Type 2 roadways the minimum spacing for signalized intersections is 1/3 mile for urban areas and 2/3 mile spacing for rural areas;
- On Type 3 the minimum spacing for signalized intersections will be 1/3 mile for urban areas and 2/3 mile for rural areas; for Type 3 roadways the minimum driveway spacing for commercial driveways is variable based on posted speeds and traffic volume (average annual daily traffic or AADT).

2.3 Geometric Requirements

While the manual establishes certain guidance for roadway design, the MDOT Roadway Design Manual establishes specific geometric requirements for intersections/interchanges and urban arterials. The manual provides that unless an exception is provided, the minimum corner clearance for entrances on Type 2 and Type 3 roads will be established by a queuing analysis or 125 feet for unsignalized intersections and 125 feet for signalized intersections, whichever is larger. The connection depth of a driveway (throat length) must be of sufficient length to allow a driver to enter the site without interfering with the mainline of traffic. Minimum throat lengths vary based on site activity.

2.4 Median Policy

The manual states that in order to promote safety and preserve capacity, multilane highways with design speeds greater than 40 miles per hour and annual average daily traffic exceeding 30,000 should be designed with a raised or restrictive median. Facilities having a design speed of 40 miles per hour or less and AADT's of less than 30,000 should include restrictive medians where appropriate to improve safety and traffic operations. The manual references the principles of functional design adopted by the AASHTO "Green Book" in setting the median openings priority. In terms of median opening placement, the manual provides that the normal spacing between full median openings will not be less than 1760 feet in rural and urban areas. The normal spacing between directional median openings shall not be less than 1760 feet for rural areas. For urban roads with posted speeds equal to or greater than 45 miles per hour the minimum spacing for directional median openings will not be less than 1760 feet and for posted speeds less than 45 miles per hour the minimum spacing is 880 feet. The manual also includes a discussion of how access management projects and medians can benefit adjacent businesses.

2.5 Traffic Impact Analysis

A traffic impact study is required for any proposed site that would generate 100 or more directional trips during the peak hour of the traffic generator or the peak hour of the adjacent street. A change or expansion at an existing site that results in an expected increase of 100 or more directional trips will require a traffic impact study. A traffic impact study will also be required if the resident engineer determines that the proposed development will have a significant impact on the operations at the proposed access point.

2.6 Administrative Procedures

The manual provides that a state highway permit is required for the following: new driveways, alterations to existing drives, changes on the property serviced by the existing driveway/entrance that result in a daily trip increase of 10% or 100 daily trips whichever is greater, or property use changes from non-commercial to commercial. If an applicant's permit is denied by MDOT, the applicant may submit within 10 days after the receipt of a notification of the adverse decision a written appeal to the District Engineer who will then forward the appeal, along with supporting documentation, to the State Maintenance Engineer. The State Maintenance Engineer will then forward the appeal to the Access Management Review Committee. The Committee will review the appeal and determine whether any means exist by which the reasons for the decision may be mitigated and an exception approved.

3. BEST PRACTICES REVIEW

The safety, mobility, and economic benefits of access management are well established. However, state transportation agencies often encounter a variety of challenges in implementing access management programs. The most commonly cited obstacles include political resistance, organizational limitations, and the lack education and training opportunities. The purpose of this section is to identify key policy and programmatic considerations that have allowed other jurisdictions to overcome these barriers and implement effective access management programs. This section draws on FHWA guidelines and federally-sponsored research that synthesizes experiences in other states to identify best practices. In view of the relatively recent adoption of the MDOT access management manual the following discussion focuses primarily on *implementation* strategies.

3.1 Implementation Strategies

Legal Authority – The legal basis for managing roadway access establishes the means for balancing the public interest and private property rights in making access management decisions. Because individual courts make their determinations based on the specific facts of a particular case, it is difficult to generalize with regard to the ability of transportation agencies to regulate access. However, it is clear that states with clear and specific robust access management authority (either statutory or administrative rule) have the strongest legal basis for their access management programs.

Access Classification System (ACS) – An ACS is used to establish the level of allowable access for roadways of varying levels of importance in a state highway system. The process involves defining access management categories; establishing whether access should be permitted, and related access spacing and design criteria for each category; and assigning an access management category to each roadway or roadway segment. The ACS provides the overall framework and constitutes a critical element of a successful access management program.

Organizational Commitment – Access management is most successful in cases in which the agency has the institutional commitment to implement the program and integrate it into the daily business functions. This could involve planning, permitting, traffic engineering, project delivery, and operations and maintenance activities to form a strong foundation for access management within the transportation agency.

Staffing Support – Implementation efforts have the greatest effect when state transportation agencies can dedicate staff to access management. The number of staff members devoted to access management—as well as their roles, staff levels, and location (i.e., central versus district office)—vary widely. In most states, the staff devoted to access management also has responsibilities in other areas.

Access Champion – Effective access management programs generally require a person (or persons) to emphasize and support the role of access management within an agency. Ideally, these “champions” are people who are empowered to make changes and withstand challenges resulting from political pressure.

Education and Training – Training efforts need to be in place to educate new staff members and reach existing staff throughout an agency. It is advisable to provide early and ongoing training for agency staff dealing with, or expected to deal with, access management–related issues.

Community Outreach – The education of elected officials, in particular, is a key element of implementing a successful access management program. Outreach efforts to local communities, business groups, and the public were cited as major successes in informing stakeholders of the potential safety and operational benefits of access management.

Stakeholder Cooperation – Access management is best achieved when state, regional, county, and local units of government cooperate in land use and transportation management decisions. A critical element of access management is the land use authority exercised by local units of government. It is crucial that local governments be aware of the traffic- and access-related ramifications of their local land use decisions.

Monitoring and Evaluating – Access management programs benefit from continuous monitoring and evaluation to identify issues and resolve problems.

3.2 Access Management Strategies In Selected States

This section provides a comparison of access management practices in selected states. In consultation with MDOT staff the states of North Carolina and Louisiana were selected for inclusion in this comparison. The following analysis is not intended to be a comprehensive review of access management policies in those states. Instead, this section focuses on specific access management approaches in those states that might be of interest to MDOT as it implements its new access management program.

North Carolina – The North Carolina DOT has established the Access Management Group (within its Traffic Engineering and Safety Systems Branch) to oversee the administration of the NCDOT Access Management Manual. The primary responsibility of the group is the review of major development access and its potential impact on the state’s roadways. Each development review typically entails background research, a comprehensive trip generation and distribution analysis, capacity analyses, queuing analyses, and an evaluation of both internal and external traffic flow. In addition, the group is responsible for investigating requests for median breaks on existing divided facilities associated with new development. The group is also responsible for encroachment reviews, access and right-of-way investigations, and special assignments. Representatives of NCDOT reported that the creation of the group has helped solidify the function and placement of access management within NCDOT.

Louisiana – The Louisiana Department of Transportation and Land Development has developed a traffic impact study process that helps to ensure requests for new access are evaluated in a consistent manner by using objective data to facilitate decision making. The policy applies to requests for access associated with new businesses and subdivisions (and incremental additions, if the addition was not part of the full build-out) or any development that will generate more than 100 additional peak hour– peak direction trips. The rigorous requirements of the traffic impact study provide developers and the department with the information needed to make sound traffic management decisions regarding operations and safety. Additionally, the process provides some assurance to stakeholders that access decisions are being undertaken in a fair, equitable, and transparent manner.

4. KEY FINDINGS AND RECOMMENDATIONS

The adoption of the Access Management Manual and the supporting administrative rules in 2010 represented a significant accomplishment for MDOT. This multiyear initiative codified and updated a number of antiquated agency policies and procedures. Similarly, it facilitated a collaborative effort involving a number of MDOT offices and personnel. The resulting product is comparable to access management manuals implemented in other states, and generally conforms to model access management guidelines. Representatives of local planning agencies have applauded MDOT's progress in developing a formal access management program. Unfortunately, due to the limited time in which the program has been in effect, it is difficult to evaluate the overall impact of the new manual or how it is being applied in practice. The following discussion draws on research and interviews with program stakeholders to identify a number of specific actions that MDOT should consider to ensure that the new access management program is effectively implemented and meets the state's transportation goals and objectives.

Make a long-term commitment to access management – MDOT should commit the necessary resources to ensure that access management is integrated into its planning, permitting, project delivery, operations, and maintenance activities. The department should assign responsibility for access management to a senior manager who has the proper authority within the agency to support and foster the access management program. Similarly, the department should consider following the example of the North Carolina DOT by expanding the role of the Access Management Review Committee to create a strong foundation for access management within MDOT. Finally, the department should provide ongoing training and educational opportunities for staff dealing with access management-related issues.

Balance firmness and flexibility in program administration – Successful implementation of the access management program will require MDOT to adhere to program specifications and standards while allowing applicants some flexibility in meeting the larger objectives of the program. For example, research in other states highlights allowances for design waivers and flexible guidelines as significant strengths in program design and implementation. The challenge for MDOT will be to retain some flexibility in making judgment decisions while remaining fair, consistent, and transparent in its decision making process. Similarly, MDOT should remain vigilant in its administration of permitting to ensure the proper balance of mobility and accessibility is maintained.

Partner with local transportation and land use planning agencies – In order for the access management program to truly succeed MDOT will need to strengthen its coordination with the three Mississippi MPOs, as well as numerous local government planning agencies. Stakeholders agreed that coordination of permit and access management decisions will require closer cooperation between, state, regional, and local agencies. The advent of the access management

program also provides an opportunity for these entities to enhance coordination of transportation and land use planning in general. Joint educational and training opportunities are the logical first step in this partnering process.

Engage elected officials and the business/development communities – MDOT should initiate an education outreach campaign focusing on elected officials, business groups, the development community, and the general public. An educational outreach effort directed at impacted parties has been cited as a major success in informing stakeholders of the potential safety and operational benefits of access management. Real-world case studies that clearly illustrate the benefits of access management are instrumental in convincing elected officials, state and local government officials, the development community, and other decision makers of its merits. MDOT should initiate programs to demonstrate how access management improvements, including median treatments, can significantly benefit adjacent businesses and properties.

Focus on a corridor approach to access management – MDOT should consider following the example of some other states that have recently focused on strategic highway corridors. These initiatives generally involve a collaborative effort among multiple state agencies to preserve and maximize mobility and connectivity on a core set of highway corridors. This is accomplished by developing a long-range, consensus-based vision for each corridor to guide decisions related to funding, project planning, design, driveway permit approvals, and local land use decisions. This approach would offer MDOT, partnering agencies, and other stakeholders an opportunity to consider a long-term vision when making land use decisions, as well as design and operational decisions on the highway system.

