

Atlanta Regional Strategic Truck Route Master Plan



ATLANTA REGIONAL COMMISSION

WilburSmith
ASSOCIATES

Access Management
Reference Summary

Task 4 Informational Guide

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ACCESS MANAGEMENT REFERENCE SUMMARY

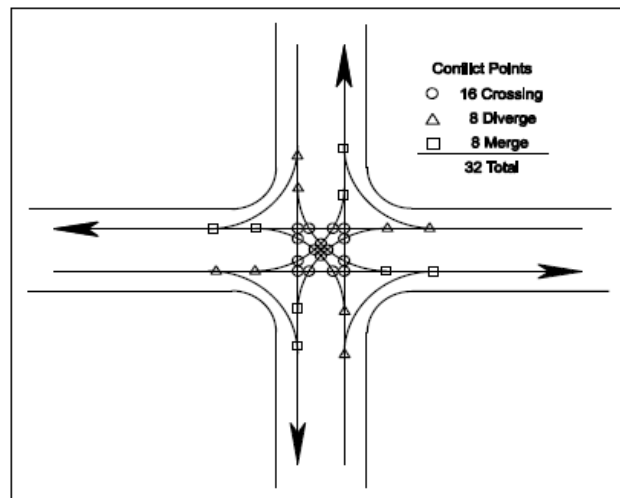
INTRODUCTION

Access management is an increasingly popular set of techniques used by state and local agencies to control access to major thoroughfares. The result is a more safe and efficient roadway network for users. Without access management, roadways could see an increase in traffic congestion, accidents, and pollution from vehicle emissions. In order to create a sample access management policy for the Atlanta Regional Commission (ARC) for use by its member jurisdictions, research of other access management strategies in various states and locales that already have access management plans in place revealed some best and worst practices. Many states currently have access management policies that are used to regulate and control access to thoroughfares. Most, if not all, of these policies are derived from the Transportation Research Board's (TRB) *Access Management Manual*, which was published in 2003. According to TRB's website (<http://www.trb.org>), TRB annually engages more than 7,000 engineers, scientists, and other transportation researchers and practitioners from the public and private sectors and academia, all of whom contribute their expertise in the public interest by participating on TRB committees, panels, and task forces. TRB describes ten (10) principles of access management, which were derived from their expertise in transportation. They include the following:

1. Provide a Specialized Roadway System: Design and manage roadways according to their primary functions.
2. Limit Direct Access to Major Roadways: Roadways that serve higher volumes of through traffic need more access control to preserve their function.
3. Promote Intersection Hierarchy: An efficient transportation network provides appropriate transitions from one functional classification to another. This results in a series of intersection types that range from the junction of two freeways or a freeway and a major arterial to a driveway connecting to a local street.
4. Locate Signals to Favor Through Movements: Long, uniform spacing of intersections on major roadways enhances the ability to coordinate signals and to ensure continuous movement of traffic at the desired speed.
5. Preserve the Functional Area of Intersections and Interchanges: The functional area of an intersection or interchange is the area that is critical to its safe and efficient operation. Access connections too close to these intersections or interchange ramps can cause serious traffic conflicts.
6. Limit the Number of Conflict Points: A less complex driving environment is accomplished by limiting the number and type of conflicts between vehicles, vehicles and pedestrians, and vehicles and bicyclists. **Figure 1**
7. Separate Conflict Areas: Separating conflict areas helps to simplify the driving task and contributes to improved traffic operations and safety.
8. Remove Turning Vehicles from Through Traffic Lanes: Turning lanes reduce the severity and duration of conflicts between turning vehicles and improves the safety and efficiency of intersections.
9. Use Nontraversable Medians to Manage Left Turn Movements: Nontraversable medians and other techniques that minimize left turns are effective in improving roadway safety and efficiency. **Figure 2**

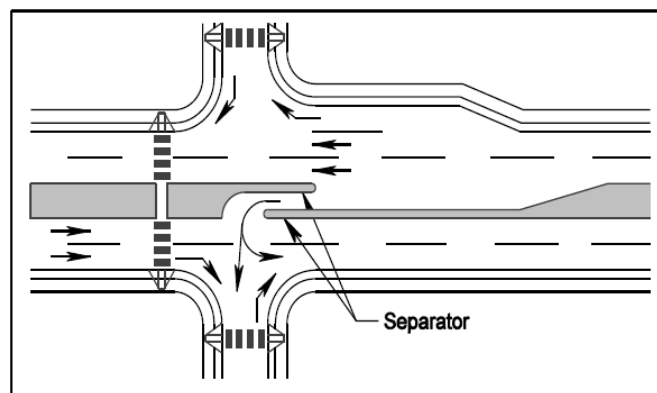
10. Provide a Supporting Street and Circulation System: Well-planned communities provide a supporting network of local and collector streets to accommodate development, as well as unified property access and circulation systems. Interconnected street and circulation systems support alternative modes of transportation and provide alternative routes for bicyclists, pedestrians, and drivers.

Figure 1: Typical Points of Conflict, Intersection



Source: TRB Access Management Manual, 2003

Figure 2: Illustration of Directional Median Opening for Left turn and U-turn



Source: TRB Access Management Manual, 2003

These principles have been adopted and implemented by various states DOTs including the Georgia Department of Transportation (GDOT), the Iowa Department of Transportation, the Massachusetts Highway Department (MassHighway), the Minnesota Department of Transportation (Mn/DOT), and the Vermont Agency of Transportation (VTrans). They have also been employed by a few jurisdictions within the Atlanta Regional Commission (ARC) area. These include Gwinnett County, Cobb County, Paulding County, and Henry County. A more detailed description of access management strategies utilized by these state transportation organizations and local jurisdictions is provided below.

STATE DEPARTMENTS OF TRANSPORTATION

Georgia Department of Transportation

The Georgia Department of Transportation (GDOT) *Regulations for Driveway and Encroachment Control*, published in 2004, details the driveway permit process on state highways, which plays a role in access management. Chapters in the document are Permit Procedures, Access Criteria, Geometric Design Criteria, Signing and Marking, Drainage Design, Special Encroachments, Residential Driveways, and Mailboxes. Discussion of the spacing and placement of driveways, spacing of median crossovers, spacing of signalized intersections, sight distance, driveway width, and corner radii criteria is pertinent to the topic of access management as access regulations are necessary in order to preserve the functional integrity of the State Highway System and to promote the safe and efficient movement of people and goods. The document is intended to clearly define the process of constructing a legal driveway or other work within the State Highway rights-of-way. The GDOT *Regulations for Driveway and Encroachment Control* is a functional implementation document that deals specifically with driveways and other access management issues rather than a higher level document that discusses the principles of access management. It is a valuable resource that should be used and expanded upon by local governments in an access management plan.

Iowa Department of Transportation

Other states have produced more detailed access management policies than GDOT. One example is the *Iowa Access Management Handbook*. The Iowa Department of Transportation published a comprehensive access management policy in 2000 that describes the importance of access management, its costs and benefits, access management strategies, how it relates to comprehensive plans, public involvement, and examples of access management ordinances. The main focus of the handbook is on access management strategies including distance between driveways, corner clearances, shared driveways, driveway throat length, turn radius, left turn lanes, traffic impact studies, and public transit.

Chapter 2 discusses current problems for communities that do not have access management policies or ordinances. It includes an explanation of how development can occur if no access management regulations are in place and the consequences of such development. To further illustrate the point, an example is given of how access problems developed in Marshalltown, Iowa, and how they were corrected by using access management techniques.

Chapter 3 defines access management, describes the hierarchy of functional classes of roads and how access should be controlled according to a road's functional classification. It also explains conflict points at intersections and how these conflict points can be reduced.

Chapter 4 explains how access management programs can be developed and implemented in zoning ordinances, site plan reviews, traffic plans, subdivision regulations, etc. It also describes different types of access management strategies. Access management strategies are divided into three categories: limiting driveway numbers, removing slower-moving traffic from arterials, and other general strategies.

Chapter 5 explains how access management can be incorporated into a community's comprehensive plan. It goes into detail about how the comprehensive plan can address access management through the use of its goals, policies, and strategies to designate commercial development in such a way as to limit strip development, require traffic impact studies, require cluster development along arterials, along with other access management strategies. A comprehensive plan's capital improvement plan can require that developers pay for transportation improvements necessitated by the development and/or it can require that future public infrastructure improvements are meant to discourage strip development. Lastly, the future land use plan and map can recommend zoning patterns that discourage strip development and encourage cluster development, commercial centers, rural business districts, and low-intensity commercial districts along arterials. Access can also be improved on corridors that have already been developed. This can be accomplished by retrofitting the roadways to improve access. Retrofitting techniques include consolidating driveways, increasing corner clearances, increasing driveway throat lengths, adding right and/or left turn lanes, adding medians, and adding frontage roads. All of these techniques can improve access to and from thoroughfares.

Chapter 6 discusses how public involvement programs can become part of access management projects. A successful public involvement program will:

1. Build trust and enhance relationships
2. Strengthen agency credibility
3. Educate and inform
4. Increase the likelihood of public acceptance
5. Reduce costly delays
6. Help avoid hearings or litigation
7. Lead to better outcomes
8. Make it more likely that decision-makers will approve the project

Appendices include examples of access management ordinances for both a city and a county and excerpts of Iowa code that pertain to access management.

Massachusetts Highway Department

Another state that addresses access management is the Massachusetts Highway Department (MassHighway), which devotes a chapter to access management as part of its 2006 *Project Development and Design Guide*. In it, access management is based on area types, such as zoning and roadway types (or the roadway functional class). Appropriate measures vary according to roadway classification and existing context. Based on these criteria, access management techniques are developed. Access management techniques include the following:

1. Driveway spacing and consolidation
2. Corner clearance
3. Turning treatments (left and right turn lanes)
4. Median treatments
5. Signal spacing and timing
6. Inter-parcel connections and internal roadway systems
7. Frontage roads
8. Full access control highways
9. Land use controls
10. Retrofitting existing development

Besides describing access these access management techniques and the context in which access management is commonly used, the Design Guide also addresses MassHighway's role in managing access, including guidelines and driveway design, as well as land use strategies that local jurisdictions can use as part of an access management program.

Minnesota Department of Transportation

The Minnesota Department of Transportation (Mn/DOT) is currently in the process of producing its *Access Management Policy: Access Category System and Spacing Guidelines*. Four of the eight chapters that will make up the final document were released in 2008, with the remaining chapters to be released at a later date. The chapters that have been released are *Chapter 2: Highway Access Category System*, *Chapter 3: Guidelines for Public Street and Driveway Connections*, *Chapter 4: Development and Permit Review*, and *Chapter 5: Traffic Impact Study Guidance*.

Chapter 2 describes the state's access category system and lists its seven primary categories and five subcategories. The primary categories are based on functional classification, and the subcategories address highway facility types and land use patterns. The primary categories are:

1. High-Priority Interregional Corridors
2. Medium-Priority Interregional Corridors
3. Regional Corridors
4. Principal Arterials in the Twin Cities Metropolitan Area and Primary Regional Trade Centers
5. Minor Arterials
6. Collectors
7. Specific Area Access Management Plans

Subcategories that fall under the primary categories are:

- Subcategory F – Interstate Freeway
- Subcategory AF – Non-Interstate Freeway
- Subcategory A – Rural
- Subcategory B – Urban/Urbanizing
- Subcategory C – Urban Core

The document points out that the access category designations are for a 20-year planning horizon, not existing conditions of the roads. Lastly, it explains development of a Category 7 Specific Area Access Management Plan.

Chapter 3 discusses guidelines for locating streets and driveways for each access category that is described in Chapter 2. Guidelines for the location and spacing of street connections to the highway system are based on the following:

1. Network Connectivity
2. Urban Arterials: Balancing Safety and Mobility through Coordinated Signal Progression
3. Rural Areas: Maintaining the Historical Road Network
4. Rural Areas: Providing Adequate Intersection Geometrics

Two tables are included that provide recommended street and signal spacing for each access category and subcategory. In addition, guidance is given for the location and design of streets and driveways for the following criteria:

1. Number of driveways
2. Sight distance
3. Spacing between driveways
4. Corner clearance and access within the functional area of an intersection
5. Offset driveways and streets
6. Restricted movements and median openings
7. Shared driveways
8. Interim access
9. Auxiliary or turn lanes

Chapter 4 discusses the process involved in obtaining an access permit from Mn/DOT. The process is divided into three phases with multiple steps within each phase. Lastly, the effects and benefits of a permit and the permitting process are discussed.

Chapter 5 discusses traffic impact studies (TIS) and the circumstances where they might be required in conjunction with a project. The purpose of the TIS guidance is as follows:

1. Identifies circumstances that do not warrant detailed traffic impact studies
2. Identifies the circumstances for which Mn/DOT does recommend that a TIS is completed
3. Helps to ensure a consistent statewide approach to traffic impact analysis
4. Provide Mn/DOT staff, local government units, developers, consultants, and other interested parties with a guide to Mn/DOT's traffic impact analysis process and recommended methodologies

Vermont Agency of Transportation

The Vermont Agency of Transportation (VTTrans) has produced two separate documents that pertain to access management. One is *Access Management Program Guidelines*, which was published in 1999 and revised in 2005. The other is *Vermont Best Practices for Access Management*, which was published in 2004. In *Access Management Program Guidelines*, the two main topics discussed are the access management process and the classifications system and standards. Under the access management system process, the major areas of discussion are the benefits of access management, the basic principles of access management, and the consequences of not managing access.

The primary access management techniques focus on the regulation of the spacing and design of the following:

1. Driveways and streets
2. Medians and median openings
3. Traffic signals
4. Freeway interchanges

The benefits of applying these access management techniques include:

1. Reduce crashes and crash potential
2. Preserve roadway capacity and the useful life of roads
3. Decrease travel time and congestion
4. Improve access to properties
5. Coordinate land use and transportation decisions
6. Maintain travel efficiency and related economic prosperity

Six basic principles are identified that will produce the benefits listed above. They are:

1. Limit the number of conflict points
2. Separate conflict points
3. Separate turning volumes from through movements
4. Locate traffic signals to facilitate traffic movement
5. Maintain a hierarchy of roadways to function
6. Limit direct access on higher-speed roads

However, if access is not managed in an effective manner, the roadway network will not function properly. Some of the consequences of not managing access are:

1. The efficiency of our transportation system will deteriorate, and traffic and land use conflicts will also increase.
2. Poorly planned strip commercial development will be encouraged.
3. The number of driveways will proliferate.
4. The existence of more driveways means more traffic conflicts, crashes, and congestion.
5. The public's investment in Vermont's roadways will be diminished.
6. Roads will have to be widened at great public expense to make up for capacity lost to inefficient traffic operations.
7. The incompatibility of providing land service and traffic service will become more severe.
8. Neighborhood streets will be used to bypass congested intersections.

Under the classification system and standards, the major areas of discussion are access category standards, and design standards and specifications. There are six access categories that are based on the functional classification system for roadways. Each category has its own degree of access control, direct property access, driveway controls, traffic operations, and design features. The six categories are as follows:

1. Principal Arterials (Interstate)
2. Principal Arterials (Non-Interstate), Other Principal Limited Access Arterials, Limited Access Major Collectors
3. Principal Arterials (Non-Limited Access), Other Principal Arterials (Non-Limited Access), Minor Arterials, Non-Limited Access Major Collectors on State Highways and Class I Town Highways
4. Minor Collectors, Minor Arterials on State Highways and Class I Town Highways, Non-Limited Access Major Collectors on State Highways and Class I Town Highways
5. Frontage or Service Roads
6. "Urban" Sections of Highways

VTrans also developed design standards and specifications to manage access on the roadways.

Those standards and specifications are in the following categories:

1. Access Width
2. Access Radii
3. Access Surfacing & Pavement Markings
4. Speed Change Lanes (Auxiliary Lanes)
5. Corner Sight Distance
6. Access Spacing
7. Corner Clearance at Intersections
8. Other Design Elements

In *Vermont Best Practices for Access Management*, the main topics of discussion are access management categories, appropriate access management strategies for each category, access management techniques, action strategies for implementing access management, and access management strategies for communities. Much of the information is very similar if not the same as what is found in the *Access Management Program Guidelines*. It is just more concise and in a different format.

EXISTING LOCAL ACCESS MANAGEMENT PLANS

A few access management plans and ordinances already exist within the ARC area and outside the study area. They include an Access Management Plan that is part of the Gwinnett County Comprehensive Transportation Plan, an Access Management Toolkit as part of the Paulding County Comprehensive Transportation Plan, the access management section of the Bruton Smith Parkway Design District ordinance for Henry County, and the access management portion of the US 19 Overlay District in Levy County, Florida. These access management plans are detailed below.

Gwinnett County Access Management Plan

The Gwinnett County Department of Transportation produced a Comprehensive Transportation Plan in 2008 that was part of the Gwinnett Unified Plan. The Gwinnett Unified Plan integrates the Comprehensive Transportation Plan and the Consolidated Plan into a single document. Within the Comprehensive Transportation Plan, a section was devoted to implementing an access management plan. This access management plan lists adverse impacts of a failure to manage access. They are as follows:

1. Increase in crashes, including those involving pedestrians and bicycles
2. Reduction in roadway efficiency
3. Proliferation in commercial strip development
4. Degradation of scenic landscapes
5. Increase in cut-through traffic in residential areas
6. Increase in commute times, fuel consumption, and vehicular emissions

In order to achieve efficient access management, the following principles must be applied:

1. Provide a specialized roadway system
2. Limit direct access to major roadways
3. Promote intersection hierarchy
4. Locate signals to favor through movements
5. Preserve the functional area of intersections and interchanges
6. Limit the number of conflict points
7. Separate conflict areas
8. Remove turning vehicles from through traffic lanes
9. Use non-traversable medians to manage left-turn movement
10. Provide a supporting street and circulation system

In addition, several policies are suggested in order to effectively implement access management.

1. Grandfather existing non-conforming access
2. Roadway classification and access categories
3. Access management overlay districts
4. Access management ordinance
5. Limited driveway permits
6. Retrofitting corridors
7. Acquire limits of access
8. Raised medians
9. Multi-jurisdictional approach to access management
10. Public involvement in access management

Finally, some of the most common and effective access management techniques are listed along with criteria for those techniques. The techniques are:

1. Interconnecting driveways/interparcel access in order to eliminate multiple direct accesses to major roadways
2. Limit access to lots with multiple frontages
3. Provide adequate corner clearances
4. Provide minimum distances between driveways
5. Encourage shared driveways for residential sites

The Gwinnett County Access Management Plan gives a broad summary of ways to manage access on roadways. Other, more specific plans would be most useful in developing a regional access management plan and ordinance.

Paulding County Access Management Toolkit

The Paulding County Department of Transportation produced a Comprehensive Transportation Plan in 2008. Included in that plan is an Access Management Toolkit. This toolkit provides objectives and techniques in order to create and maintain efficient access management within Paulding County. The goals and objectives of the toolkit are to promote the following ideas:

1. Proactive access management policy
2. Fewer driveway accesses
3. Proper connection spacing (driveways and side streets)
4. Reduce the costs of access management improvements
5. Reduce conflict points

In order to accomplish these goals, a set of techniques were developed to solve access management issues. These techniques are as follows:

1. Intersection Spacing Access Management Techniques
 - a. Intersection spacing
 - b. Spacing of signalized intersections

2. Driveway and Minor Intersection Access Management Techniques
 - a. Driveway spacing standards
 - b. Driveway location and design – sight distance
 - c. Corner clearance
 - d. Corner radius, driveway width, and driveway angle of intersection
 - e. Driveway throat length
 - f. Landscaped buffer
3. Turning Movement Access Management Techniques
 - a. Right turn lane
 - b. Left turn lane
 - c. U-turn lane
 - d. Raised median
 - e. Median with turn lanes
4. Land and Subdivision Controls
 - a. Reverse frontage road
 - b. Maximum number of driveways per lot
 - c. Connectivity of supporting streets
 - d. Service roads
 - e. Shared driveways – residential development
 - f. Shared driveways – non-residential development
 - g. Outparcel requirements
 - h. Right-of-way dedication

The access management toolkit further illustrates these ideas by providing recommendations for an access management ordinance. These ordinance recommendations were developed by reviewing best practices currently in use by other states as well as the TRB's *Access Management Manual* and the American Association of State Highway and Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets*, commonly referred to as the "Green Book". In addition, compliance with the GDOT *Design Policy Manual* and *Regulation for Driveway Encroachment Control* was ensured. The ordinance recommendations are as follows:

1. Intersection Spacing
 - a. Roadway Spacing: Intersection spacing distances are provided
 - b. Spacing for Signalized Intersections: Signal spacing lengths are provided based on the roadway functional classification and as a function of the operating speed and signal cycle length
2. Driveway
 - a. Driveway Access Spacing: Driveway spacing lengths are provided based on the roadway functional classification and the 85th percentile speed on routes
 - b. Sight Distance
 - c. Intersection Sight Distance: 14.5 feet based on eye height of 3.5 feet and object height of 3.5 feet
 - d. Stopping Sight Distance (SSD): Based on speed limit and grade of roadway
 - e. Sight Distance Left (SDL) and Sight Distance Right (SDR): Based on the 85th percentile speed and number of lanes
 - f. Left-Turn Sight Distance (LTSD): Based on the type of traffic control
 - g. Corner Clearance: Based on roadway functional classification and intersection radii
 - h. Corner Radius, Driveway Width, and Driveway Angle of Intersection

- i. Corner Radius: Based on operating speed, number of pedestrians crossing, and type of vehicle to be accommodated
 - j. Driveway Width: Based on driveway use
 - k. Driveway Angle of Intersection: Minimum angle based on driveway use
 - l. Driveway Throat Length: Based on the type of retail establishment
3. Turn Lanes and Medians
 - a. Right/Left Turn Lane: Right/Left turn lane need is based on the level of service (LOS), volume warrants, safety warrants, posted speed limit, annual average daily traffic (AADT), and number of lanes.
 - b. Medians: Median opening spacing is based on accident rates, sight distance, proximity to signalized intersections, roadway functional classification, and speed limit
 4. Enforcement of Driveway Access Control

The Paulding County Access Management Toolkit is a very thorough and comprehensive document. It not only covers the goals and objectives of access management, but it also provides specific techniques that are accompanied by charts and tables to calculate spacing, distance, etc. This toolkit provides a very good roadmap to develop a regional access management plan and ordinance.

Cobb County Comprehensive Transportation Plan

Some counties have recommended or instituted access management overlay districts. The Cobb County Comprehensive Transportation Plan, published in 2008, recommends the incorporation of Access Management Overlay Districts within the Cobb County Zoning Ordinance. The Comprehensive Transportation Plan goes into further detail by recommending access management techniques based on the roadway functional classification and the adjacent land use type.

Appropriate access management techniques include the following:

1. Median installation with infrequent openings
2. Interparcel driveway connections
3. Driveway consolidation
4. Rear access driveways
5. Right-in, right-out driveways
6. Adequate signal spacing
7. Grade separation of intersecting roadways
8. Turn lane installation
9. Adequate corner clearance

The Cobb County Comprehensive Transportation Plan provides an example of how access management programs can be developed and implemented through local plans. A regional access management plan and ordinance could recommend the implementation of access management techniques through local and regional plans and ordinances.

Bruton Smith Parkway Design District

The Bruton Smith Parkway Design District ordinance, which was enacted in 2006, is located in Henry County and includes a section devoted to access management through an Access Management Overlay District. Access management techniques included in the overlay district are as follows:

1. Joint driveways
2. Cross access drives
3. Minimum driveway width
4. Number of access points
5. Minimum access point spacing
6. Deceleration lanes
7. Turning radii
8. Traffic islands

Specific design districts and access management overlay districts, such as the Bruton Smith Parkway Design District, could be recommended in a regional access management plan as yet another tool to implement specific access management techniques and as a way to specify the location of such techniques.

US 19 Overlay District

Another overlay district with access management requirements is the US 19 Overlay District in Levy County, Florida. The overlay district, which was produced in 2001, contains several sections devoted to access management. Some of the requirements include:

1. Minimum connection spacing
2. Minimum median opening spacing
3. Minimum signal spacing
4. Minimum corner clearance
5. Joint and cross access
6. Rear access to residential lots
7. Unified access
8. Turn lanes
9. Minimum driveway throat length

The Cobb County Comprehensive Transportation Plan, the Bruton Smith Parkway Design District, and the US 19 Overlay District are all overlay districts that are designed to manage access on specific routes within a district. Although they provide good principles and techniques of access management, they are limited to specific thoroughfares. Access management plans and ordinances are much better suited to covering entire municipalities and/or regions.

ACCESS MANAGEMENT POLICY / ORDINANCE JUSTIFICATION

Many local governments utilize access management practices. However, these practices are not usually part of a specific access management plan. For instance, access management practices such as driveway spacing, median treatments, and corner clearance are typically discussed in local subdivision regulations, zoning ordinances, design guidelines, and standard drawings but are not consolidated into a separate document meant to describe access management practices. Therefore, many states have developed access management plans. By doing so, all access management issues are conveniently presented in a single document. Unfortunately, very few local governments have enacted access management plans at the municipal level. The ARC can help continue breaking new ground by joining the few local communities across the country that have created access management plans by developing an effective and comprehensive access management plan that can apply to the Atlanta Regional Commission member jurisdictions. Such policies implemented by the ARC and its communities would be an example of progressive transportation planning efforts.

CONCLUSION

As evidenced in the summaries of other states' access management plans and policies and existing local plans and ordinances, there are many useful and effective guidelines in place throughout the country. Many of these access management policies are very similar due to the fact that they are all based in part on the TRB *Access Management Manual*. While all of the examples offer helpful access management techniques and strategies, some of them provide better explanations for the actual application of these strategies. For example, the *Iowa Access Management Handbook* details how access management can be incorporated into a community's comprehensive plan supplying a practical tool for implementing access management. Iowa also gives examples of access management ordinances for both a city and a county and excerpts of Iowa code that pertain to access management, which provide useful examples of access management applications. The VTrans *Access Management Program Guidelines* is well organized, offering very specific lists that aid in the implementation of access management. Also, the Paulding County Access Management Toolkit is a quality plan that includes charts and calculations to apply techniques. The techniques from these existing plans that should be considered for incorporation into a regional access management plan and ordinance are as follows:

1. Non-traversable medians with left turn lanes
2. Minimum median opening spacing
3. Right turn/deceleration lanes
4. Driveway consolidation
5. Driveway spacing
6. Minimum sight distance
7. Minimum corner clearance
8. Minimum driveway throat lengths
9. Frontage roads
10. Minimum corner radii
11. Minimum traffic signal spacing
12. Traffic signal timing
13. Minimum driveway width

The techniques utilized by each government entity are documented in **Appendix A**. The next step is to incorporate parts of these resources that would be most effective for the ARC into an access management policy.

Appendix A: Cross Comparison of Access Management Techniques by Plan Reviewed

	<i>Management Plans Reviewed</i>									
	GDOT	Iowa DOT	Mass Highway	MN/DOT	VTrans	Gwinnett County	Paulding County	Cobb County	Henry County	Levy County, FL
<i>Techniques for incorporation into a regional access management plan</i>										
Non-traversable medians with left turn lanes		X	X	X	X	X	X	X		X
Minimum median opening spacing	X		X	X	X		X	X		X
Right turn/deceleration lanes	X	X	X	X	X		X	X	X	X
Driveway consolidation		X	X	X	X	X	X	X	X	X
Driveway spacing	X	X	X	X	X	X	X		X	X
Minimum sight distance	X	X	X	X	X		X			X
Minimum corner clearance		X	X	X	X	X	X	X		X
Minimum driveway throat lengths		X					X			X
Frontage roads		X	X				X			
Minimum corner radii	X	X	X		X		X			
Minimum traffic signal spacing	X		X	X	X	X	X	X		X
Traffic signal timing			X		X					
Minimum driveway width	X	X	X		X		X			X