

**NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM  
SYNTHESIS OF STATE-OF-THE-PRACTICE**

**NCHRP Project 20-5, Synthesis Topic 40-11**

**August 18, 2009**

**“State-of-the-Practice in Highway Access Management”  
APPENDICES**

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**TRB**

**TRANSPORTATION RESEARCH BOARD**  
**Of The National Academies**  
**Washington, D.C.**

**Appendix “A”**  
**Access Management Survey**


[Exit this survey](#)

## NCHRP Synthesis Topic 40-11: State-of-the-Practice in Highway Access Management Survey

### 1. Section 1 - Background Questions:

1. Please complete the following:

Your Name:

Agency /  
Organization:

Address:

Address 2:

City/Town:

State:

ZIP/Postal Code:

Country:

Email Address:

Phone Number:

2. What type of organization do you represent?

<input type="checkbox"/> State Department of Transportation (DOT)	<input type="checkbox"/> Municipality (city or town)
<input type="checkbox"/> Metropolitan Planning Organization (MPO)	<input type="checkbox"/> Private consultant
<input type="checkbox"/> County	<input type="checkbox"/> Academia / University
Other (Please specify.) <input type="text"/>	

3. Which job function within your organization MOST reflects your daily work activities?  
(Please check one.)

<input type="checkbox"/> Transportation Planning
<input type="checkbox"/> Traffic Engineering
<input type="checkbox"/> Highway Design
<input type="checkbox"/> Permitting / Development Review
<input type="checkbox"/> Operations / Maintenance
<input type="checkbox"/> Right-of-Way
<input type="checkbox"/> Consulting
<input type="checkbox"/> Teaching / Instruction



[Exit this survey](#)

## NCHRP Synthesis Topic 40-11: State-of-the-Practice in Highway Access Management Survey

### 2. Section 2 - The BASIS for Access Management at your agency/organization:

4. Does your agency have a formal Access Management Program?

- ☐ No, access management is not considered by this agency. (Please skip to Question 6.)
- ☐ No, but access is managed as an informal part of our normal operation. (Please skip to Question 6.)
- ☐ Yes (Please proceed to Question 5.)

5. Is your Access Management Program based on statutory authority or administrative rules?

- ☐ No (Please explain below.)
- ☐ Yes (Please specify below.)

Comments:

6. Which of the following mechanisms ARE CURRENTLY BEING USED by your agency in implementing access management? (Please check all that apply and provide web-link(s) if possible.)

- ☐ General departmental policies
- ☐ Access code
- ☐ Standards
- ☐ Guidelines
- ☐ Driveway permit manual
- ☐ Roadway design manual
- ☐ Other (please explain)
- ☐ My agency/organization does not control access to public highways.

Links:

7. Which of the following mechanisms ARE BEING DEVELOPED by your agency to enhance access management implementation? (Please check all that apply.)

<input type="checkbox"/>	General departmental policies
<input type="checkbox"/>	Access code
<input type="checkbox"/>	Standards
<input type="checkbox"/>	Guidelines
<input type="checkbox"/>	Driveway permit manual
<input type="checkbox"/>	Roadway design manual
<input type="checkbox"/>	Other (please explain below)
<input type="checkbox"/>	My agency/organization is not in the process of making additions or changes to the mechanism checked in Question 6.
Comments:	
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Previous

Next

[Exit this survey](#)

## NCHRP Synthesis Topic 40-11: State-of-the-Practice in Highway Access Management Survey

### 3. Section 3 - WHAT is done?

8. What division(s) or group(s) in your agency is/are currently INVOLVED in managing access to public streets and highways? (Please check all that apply.)

<input type="checkbox"/>	Traffic Engineering
<input type="checkbox"/>	Planning
<input type="checkbox"/>	Design
<input type="checkbox"/>	Permitting / Development Review
<input type="checkbox"/>	Operations / Maintenance
<input type="checkbox"/>	Right-of-Way
<input type="checkbox"/>	Other (Please specify below.)
<input type="checkbox"/>	Access Management is not currently implemented in my organization.
Comments:	
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9. What division(s) or group(s) in your agency is/are currently responsible for LEADING the efforts involved in managing access to public streets and highways? (Please check one.)

<input type="checkbox"/>	Traffic Engineering
<input type="checkbox"/>	Planning
<input type="checkbox"/>	Design
<input type="checkbox"/>	Permitting / Development Review
<input type="checkbox"/>	Operations / Maintenance
<input type="checkbox"/>	Right-of-Way
<input type="checkbox"/>	There is no single division or group that has the lead.
<input type="checkbox"/>	Other (Please specify below.)
Comments:	
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10. Does your agency have staff dedicated exclusively to Access Management?

<input type="checkbox"/>	No (Please skip to Question 12.)
<input type="checkbox"/>	Yes (Please proceed to Question 11.)

11. Please indicate how many staff members are dedicated to Access Management in the following positions:

Traffic Engineers	<input type="text"/>
Planners	<input type="text"/>
Other staff (please indicate number of staff and titles)	<input type="text"/>

12. Access management at your agency is applied at the: (Please check all that apply and explain.)

<input type="checkbox"/>	Statewide level
<input type="checkbox"/>	Corridor level
<input type="checkbox"/>	Project level
<input type="checkbox"/>	Access / driveway permit level
Comments:	
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13. What elements of Access Management does your agency's program address? (Please check all that apply.)

<input type="checkbox"/>	Installation of medians
<input type="checkbox"/>	Spacing for median openings/breaks
<input type="checkbox"/>	Spacing for unsignalized public street intersections
<input type="checkbox"/>	Spacing for unsignalized private driveways
<input type="checkbox"/>	Spacing for traffic signals
<input type="checkbox"/>	Prohibition of certain turning movements
<input type="checkbox"/>	Corner clearance (distance from a public street intersection to the first driveway)
<input type="checkbox"/>	Spacing for cross-streets in the vicinity of interchanges
<input type="checkbox"/>	Intersection sight distance and setbacks
<input type="checkbox"/>	Geometric design standards for driveways
<input type="checkbox"/>	Provisions for right-turn and left-turn lanes
<input type="checkbox"/>	Purchase of access rights
<input type="checkbox"/>	Internal connection of parking lots between adjacent parcels
<input type="checkbox"/>	Subdivision restrictions for large parcels



<input type="checkbox"/> Requirements for Traffic Impact Studies
<input type="checkbox"/> Requirements for Traffic Impact Fees
<input type="checkbox"/> Other (Please explain below.)
Comments:
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14. Does your agency have an Access Classification System (different from the Functional Classification System) that is used for determining the level and type of access management that applies to different roadways?

<input type="checkbox"/> No, we do not use an Access Classification System (Please skip to Question 16.)
<input type="checkbox"/> No, we rely on the Functional Classification System for access management purposes (Please skip to Question 16.)
<input type="checkbox"/> Yes (Please proceed to Question 15.)

15. What are the considerations in your agency's Access Classification System? (Please check all that apply.)

<input type="checkbox"/> Functional classification
<input type="checkbox"/> Posted speed
<input type="checkbox"/> Urban / Rural
<input type="checkbox"/> Roadway cross-section / number of lanes
<input type="checkbox"/> Divided / Undivided
<input type="checkbox"/> Traffic volume
<input type="checkbox"/> Other (Please specify below.)
Comments:
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16. What variables are part of your agency's criteria for driveway location and design? (Please check all that apply.)

<input type="checkbox"/> Roadway classification
<input type="checkbox"/> Posted speed along the roadway
<input type="checkbox"/> Development type (i.e. commercial, residential, etc.)





<input type="checkbox"/>	Development size or intensity of use (i.e. trip generation)
<input type="checkbox"/>	Development location (e.g. urban vs. rural areas)
<input type="checkbox"/>	Others (Please explain below.)
<input type="checkbox"/>	Geometric design standards for driveways are not addressed.
Comments:	
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17. What variables are part of your agency's criteria for traffic signal spacing? (Please check all that apply.)

<input type="checkbox"/>	Cycle length
<input type="checkbox"/>	Speed
<input type="checkbox"/>	Bandwidth
<input type="checkbox"/>	Allowable movements
<input type="checkbox"/>	Other (Please explain below.)
Comments:	
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18. Please indicate the range of traffic signal cycle lengths that are typically implemented by your agency:

Minimum cycle length (seconds)

Maximum cycle length (seconds)

19. Do you have provisions for when the spacing criteria or geometric design standards cannot be met?

<input type="checkbox"/>	No (Please skip to Question 21.)
<input type="checkbox"/>	Yes (Please explain below, and proceed to Question 20.)

Comments:
-----------

20. Who makes the decision with respect to the allowable flexibility? (Please explain.)

21. Does your agency have a driveway permit application process?

<input type="checkbox"/>	No (Please skip to Question 24.)
<input type="checkbox"/>	Yes (Please proceed to Question 22.)

22. Does the permit application process also apply to changes in existing development that will result in a significant increase in driveway volumes?

<input type="checkbox"/>	No
<input type="checkbox"/>	Yes (Please explain below, and identify what represents a "significant increase" in driveway volume.)

Comments:

23. Are all driveway permit applications reviewed at the regional/district level?

<input type="checkbox"/>	Yes
<input type="checkbox"/>	No

If "No": Under what circumstances are permit applications sent to the central/headquarters level for review? (Please explain.)

24. Under what circumstances is a Traffic Impact Study required as part of the driveway permit application? (Please explain.)

25. Does the Traffic Impact Study identify improvements to mitigate impacts?

☐ No (Please explain below, and skip to Question 27.)

☐ Yes (Please proceed to Question 26.)

Comments:

26. Please answer the following questions:

Who pays for  
the identified  
ON-SITE (e.g.  
access  
driveway)  
improvements?

Who pays for  
the identified  
OFF-SITE  
improvements?

27. Is a Traffic Impact Fee collected?

☐ No (Please skip to Question 29.)

☐ Yes (Please proceed to Question 28.)

28. On what basis is the Traffic Impact Fee determined?

<input type="checkbox"/>	Based on the projected traffic impacts.
<input type="checkbox"/>	Based on the size and type of development.
<input type="checkbox"/>	Other (Please explain below.)
Comments:	
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[Previous](#) [Next](#)


[Exit this survey](#)

## NCHRP Synthesis Topic 40-11: State-of-the-Practice in Highway Access Management Survey

### 4. Section 4 - HOW is access management implemented?

29. What resources (if any) do you use or consult when addressing access-related issues in your daily work? (Please check all that apply.)

<input type="checkbox"/>	Reference documents developed by your agency (Please cite below, and provide a web-link or paper copy if available.)
<input type="checkbox"/>	Access Management Manual (TRB)
<input type="checkbox"/>	A Policy on Geometric Design of Highways and Streets (AASHTO "Green Book")
<input type="checkbox"/>	Highway Capacity Manual (TRB)
<input type="checkbox"/>	NCHRP reports (Please specify below.)
<input type="checkbox"/>	ITE reports or Journal articles (Please specify below.)
<input type="checkbox"/>	Research papers (Please specify below.)
<input type="checkbox"/>	Other publications (Please specify below.)
<input type="checkbox"/>	I don't use or consult any resources.
Comments:	
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30. How is access management at your agency enforced? (Please check all that apply.)

<input type="checkbox"/>	Access permits are required.
<input type="checkbox"/>	Other types of permits are required (Please specify below.)
<input type="checkbox"/>	Negotiations among parties involved.
<input type="checkbox"/>	Legal action is taken.
<input type="checkbox"/>	Other (Please specify below.)
<input type="checkbox"/>	The policies are not enforced.

Comments:

31. Please indicate if there is coordination between your agency and the local land use agency on the following items: (Please check all that apply.)

<input type="checkbox"/>	Zoning / rezoning
<input type="checkbox"/>	Corridor overlay zones
<input type="checkbox"/>	Site plan review
<input type="checkbox"/>	Subdivision review
<input type="checkbox"/>	Building permit approvals
<input type="checkbox"/>	Other (Please specify below.)
Comments:	

32. How are transportation and land use decisions, as related to access management, typically coordinated among two or more agencies (e.g. State, county, municipality)?

<input type="checkbox"/>	The agency that has jurisdiction over the subject roadway typically governs.
<input type="checkbox"/>	The agency that has jurisdiction over the land use typically governs.
<input type="checkbox"/>	Coordination meetings occur among the involved agencies.
<input type="checkbox"/>	An Access Management Plan is prepared.
<input type="checkbox"/>	Transportation and land use decisions are made separately and not coordinated.
<input type="checkbox"/>	Other (Please explain below.)

Comments:

33. If access-related conflicts arise between your agency and other agencies, how are these conflicts resolved?

- ☐ The more restrictive regulations among the involved agencies apply.
- ☐ The less restrictive regulations among the involved agencies apply.
- ☐ Coordination meetings occur among the involved agencies.
- ☐ Other (Please explain below.)

Comments:

34. Does your agency have an appeals process?

- ☐ No (Please skip to Question 38.)
- ☐ Yes (Please proceed to Question 35.)

35. What decisions can be appealed? (Please explain.)

36. What is the basis for the appeals process? (Please explain.)

37. Who has the authority to decide an appeal? (Please explain.)

38. As part of your program, are there provisions for the preparation of Access Management Plans or Corridor Management Plans?

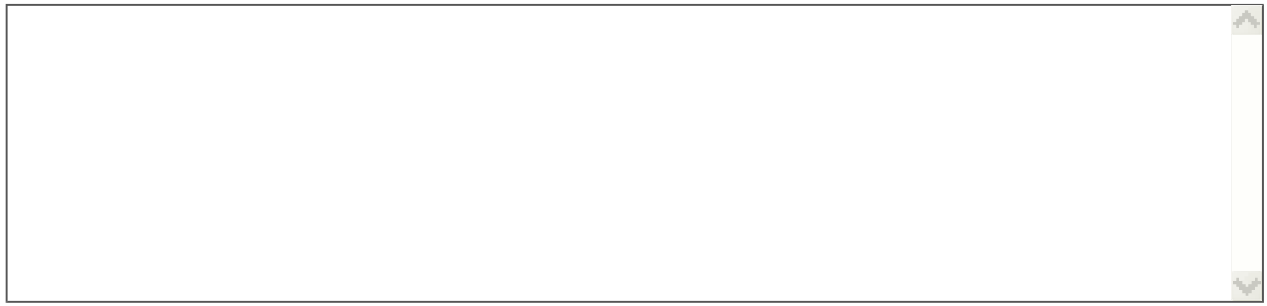
<input type="checkbox"/>	No (Please skip to Question 46.)
<input type="checkbox"/>	Yes (Please proceed to Question 39.)

39. Who is involved in preparation of the Plan? (Please explain.)

40. Why would a Plan be developed? (Please explain.)

41. What is included in the Plan? (Please explain.)



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42. Who pays for the Plan? (Please explain.)

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43. How is the Plan implemented? (Please explain.)

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44. How frequently have such Plans be developed? (Please explain.)

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45. How successful have these Plans been? (Please explain.)

46. Is driveway reduction or consolidation considered in highway reconstruction projects?

☐ No

☐ Yes (Please explain below.)

Comments:

47. Have any independent access management-related studies or research been undertaken at, or for, your agency?

☐ No

☐ Yes (Please cite below, and provide a web-link or paper copy if available.)

Comments:

48. Have exclusive access management projects targeting the reduction or consolidation of driveways and medians openings been attempted by your agency?

☐ No

☐ Yes

If "Yes": How effective have these projects been with respect to improving highway operations and safety? (Please explain.)



[Exit this survey](#)

## NCHRP Synthesis Topic 40-11: State-of-the-Practice in Highway Access Management Survey

### 5. Section 5 - What educational and outreach activities have been undertaken?

49. Have any education or training opportunities related to Access Management been provided within your agency?

☐

No

☐

Yes

If "Yes": To whom? What has been the response and/or outcomes?

50. Have any community outreach activities been undertaken by your organization with respect to access management?

☐

No

☐

Yes

If "Yes": To whom? What has been the response and/or outcomes?

[Previous](#)

[Next](#)



[Exit this survey](#)

## NCHRP Synthesis Topic 40-11: State-of-the-Practice in Highway Access Management Survey

### 6. Section 6 - What have been the RESULTS and LESSONS LEARNED related to access management?

51. Have your agency's access-related decisions been challenged in the courts?

☐ No (Please describe below.)

☐ Yes (Please describe below.)

Comments:

52. On what basis were your agency's access-related decisions challenged in the courts?  
(Please check all that apply.)

☐ Rational / essential nexus (Please specify below.)

☐ Access would not provide "reasonable access" (Please specify below.)

☐ Lack of "direct access" (Please specify below.)

☐ Inequity relative to access allowed for other properties in the area (Please specify below.)

☐ Reduction in property value (Please specify below.)

☐ Other (Please specify below.)

Comments:

53. Were the U.S. Supreme Court cases of Nollan vs. California Coastal Commission or Dolan vs. City of Tigard cited in court rulings that affected your access management program?

☐ No



<input type="checkbox"/> Yes
If "Yes": How was your program affected?
<div></div>

54. Is there an access management-related practice or procedure applied by your agency that you believe would be of particular value to other transportation agencies?

<input type="checkbox"/> No (Please skip to Question 56.)
<input type="checkbox"/> Yes (Please explain below, and proceed to Question 55.)
Comments:
<div></div>

55. Would this practice or procedure make an appropriate case study to consider including in the Synthesis report?

<input type="checkbox"/> No
<input type="checkbox"/> Yes

56. What would an ideal access management policy/document include? (Please check all that apply.)

<input type="checkbox"/> Authority to manage access.
<input type="checkbox"/> Authority to deny access.
<input type="checkbox"/> Access spacing standards.
<input type="checkbox"/> Geometric design standards.
<input type="checkbox"/> Traffic impact analysis requirements.
<input type="checkbox"/> Other (Please explain below.)

Comments:
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57. On a scale of 1 to 5 (with 1 being "not considered" and 5 being "very relevant"), to what extent does Access Management at your agency consider the following:

	1	2	3	4	5
Transit-oriented development (TOD)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sustainability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Context-sensitive solutions (CSS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Transit provisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pedestrian provisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Any comments?

58. Please identify any RESOURCES that you would like to see developed to help improve the implementation of access management.

59. Please identify any RESEARCH that you would like to see be performed to help in the implementation of access management.


[Exit this survey](#)

## NCHRP Synthesis Topic 40-11: State-of-the-Practice in Highway Access Management Survey

### 7. Section 7 - Program Evaluation

\*\*\*PLEASE NOTE: Responses to questions in this Section will be anonymous and not associated with any particular agency.\*\*\*

60. On a scale of 1 to 5 (with 5 being "very successful" and 1 being "very unsuccessful") how would you rate the success of your agency in managing access?

<input type="checkbox"/>	5 (Please explain below.)
<input type="checkbox"/>	4 (Please explain below.)
<input type="checkbox"/>	3 (Please explain below.)
<input type="checkbox"/>	2 (Please explain below.)
<input type="checkbox"/>	1 (Please explain below.)
Comments:	
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61. What are the strengths of your agency's access management program? (Please check all that apply.)

<input type="checkbox"/>	It provides uniformity in controlling access.
<input type="checkbox"/>	It provides flexibility for judgment decisions.
<input type="checkbox"/>	It represents a defensible administrative rule.
<input type="checkbox"/>	It has strong organizational commitment.
<input type="checkbox"/>	Other (Please explain below.)

Comments:

62. What barriers or difficulties have you or your organization encountered in implementing access management? (Please check all that apply and specify.)

<input type="checkbox"/>	Technical (Please explain below.)
<input type="checkbox"/>	Political (Please explain below.)
<input type="checkbox"/>	Legal (Please explain below.)
<input type="checkbox"/>	Organizational / Institutional (Please explain below.)
<input type="checkbox"/>	Staffing / resources (Please explain below.)
<input type="checkbox"/>	Other (Please explain below.)
<input type="checkbox"/>	Barriers to implementing Access Management have not been encountered (Please skip to Question 64.)

Comments:

63. What are your suggestions as to how these barriers can be overcome? (Please explain.)

64. Are changes needed to make your agency's access management program more effective?

<input type="checkbox"/>	No (Please skip to Question 66.)
<input type="checkbox"/>	Yes (Please proceed to Question 65.)



65. What areas of your agency's access management program need to be improved? (Please check all that apply.)

<input type="checkbox"/> It needs to be reviewed and updated.
<input type="checkbox"/> It is regarded as only a guide, and is subject to political influences.
<input type="checkbox"/> Is is subject to interpretation and applied inconsistently.
<input type="checkbox"/> Other (Please explain below.)
Comments:
<div></div>

66. Are any changes to your agency's access management program planned or currently being implemented?

<input type="checkbox"/> No
<input type="checkbox"/> Yes (Please explain below.)
Comments:
<div></div>

67. Does your organization have performance measures for identifying progress being made in access management?

<input type="checkbox"/> No
<input type="checkbox"/> Yes (Please explain below.)

Comments:



[Exit this survey](#)

## NCHRP Synthesis Topic 40-11: State-of-the-Practice in Highway Access Management Survey

### 8. Section 8 - Follow-up:

68. Please identify any MPOs, county, or municipal agencies that have access management programs that you would recommend we invite to participate in this survey.

69. If needed, who in your organization could we contact for additional follow-up information?

☐

It is OK to contact me for additional follow-up.

☐

Please contact someone else. (Please provide their name, telephone number, and e-mail address below.)

Recommended contact person:

[Previous](#)

[Done](#)

**Appendix “B”**  
**List of Responding Agencies**

## **U.S. States**

- Alabama Department of Transportation
- Alaska Department of Transportation and Public Facilities
- Arizona Department of Transportation
- Arkansas State Highway and Transportation Department
- California Department of Transportation
- Colorado Department of Transportation
- Connecticut Department of Transportation
- Delaware Department of Transportation
- Florida Department of Transportation
- Georgia Department of Transportation
- Hawaii Department of Transportation
- Idaho Transportation Department
- Illinois Department of Transportation
- Indiana Department of Transportation
- Iowa Department of Transportation
- Kansas Department of Transportation
- Kentucky Transportation Cabinet
- Louisiana Department of Transportation and Development
- Maine Department of Transportation
- Maryland State Highway Administration
- Massachusetts Executive Office of Transportation and Public Works
- Michigan Department of Transportation
- Minnesota Department of Transportation
- Mississippi Department of Transportation
- Missouri Department of Transportation
- Montana Department of Transportation
- Nebraska Department of Roads
- Nevada Department of Transportation
- New Hampshire Department of Transportation
- New Jersey Department of Transportation
- New Mexico Department of Transportation
- New York State Department of Transportation
- North Carolina Department of Transportation
- North Dakota Department of Transportation
- Ohio Department of Transportation
- Oklahoma Department of Transportation
- Oregon Department of Transportation
- Pennsylvania Department of Transportation
- Rhode Island Department of Transportation
- South Carolina Department of Transportation
- South Dakota Department of Transportation
- Tennessee Department of Transportation
- Texas Department of Transportation

- Utah Department of Transportation
- Vermont Agency of Transportation
- Virginia Department of Transportation
- Washington State Department of Transportation
- West Virginia Department of Transportation
- Wisconsin Department of Transportation
- Wyoming Department of Transportation

#### **U.S. Counties**

- Graham County (Arizona)
- Pinal County Public Works (Arizona)
- Larimer County (Colorado)
- Palm Beach County Traffic Engineering (Florida)
- Cherokee County Planning Department (Georgia)
- Forsyth County Government (Georgia)
- McHenry County Division of Transportation (Illinois) –
- Buchanan County (Iowa)
- Cedar County (Iowa)
- Cherokee County (Iowa)
- Clinton County (Iowa)
- Denison County (Iowa)
- Dickinson County (Iowa)
- Dubuque County (Iowa)
- Keokuk County (Iowa)
- Linn County (Iowa)
- Louisa County (Iowa)
- Lyon County (Iowa)
- Osceola County (Iowa)
- Union County (Iowa)
- Wright County (Iowa)
- Hancock County (Indiana)
- Jefferson County Highway Department (Indiana)
- Harford County (Maryland)
- Kent County Road Commission (Michigan)
- Scott County (Minnesota)
- Mercer County Planning Division (New Jersey)
- Licking County Planning (Ohio)
- Washington County (Oregon)
- Beaufort County (South Carolina)

**U.S. Cities**

- City of Monterey (California)
- City of Baltimore Department of Planning (Maryland)
- City of Durham (North Carolina)
- Town of Cary (North Carolina)
- City of Columbus Transportation Division (Ohio)
- City of Springfield (Oregon)
- City of Tigard (Oregon)
- City of Sioux Falls (South Dakota)
- Metro Nashville Department of Public Works (Tennessee)
- City of Federal Way (Washington)

**U.S. MPOs**

- Atlanta Regional Commission (Georgia)
- Rochester-Olmsted Council of Governments (Minnesota)
- OKI Regional Council of Governments (Ohio)

**Consultants**

- Gewalt Hamilton Associates, Inc.
- Hatch Mott MacDonald
- HDR Engineering, Inc.
- Jacobs Engineering
- King Engineering Associates
- Michael Baker Jr., Inc.
- Traffic Analysis and Design, Inc.
- TranSystems
- Yarger Engineering, Inc.

**Appendix “C”**  
**Summary of Survey Responses**

## SURVEY OF STATE TRANSPORTATION AGENCIES

Total Number of Respondents: 58

### 2. What type of organization do you represent?

- State Department of Transportation (DOT) (58)

### 3. Which job function within your organization MOST reflects your daily work activities? (Please check one.)

- Transportation Planning (14)
- Traffic Engineering (13)
- Highway Design (5)
- Permitting / Development Review (17)
- Operations / Maintenance (2)
- Right-of-Way (3)
- Consulting (1)
- Teaching / Instruction (0)
- No Answer (0)
- Other (3)

#### Comments:

- *CA*: “ Also Operations/Maintenance ”
- *OR*: “ Program development and management ”
- *WI*: “ access engineering ”
- *CT*: “ Project Development “
- *CO*: “ Staff section originates, implements and then administers specific regulations, guidelines, policies and internal procedures effecting agency activities statewide, to achieve legislatively mandated, and agency adopted assigned mission and goals. The six regional offices act to issue permits and related engineering, design, and right-of-way actions and decisions based upon the regulations, policies and procedures developed at the central office and adopted by the Commission. Responsible for regulatory enforcement, the litigation and representation as necessary to carry out the goals, objectives, and purposes of the enabling legislation. Manage all legal proceedings involving access regulatory actions including court hearings, negotiations, official rule making, settlements, in collaboration with the Office of the Attorney General. Section provides attorneys with all necessary factual and theoretical information regarding access management. Oversee and analyze recommendations from local governments and others calling for rule revisions to highway access regulations and make determinations and recommendations available to Commission and Executive Office regarding amendments and adoption. Investigate proposals, analyze submitted research reports, materials and traffic studies, for both technical completeness, policy and consistency. As the senior agency authority in the subject matter, provide daily expertise and assistance to regional offices and other agency divisions and branches, as well as local governments. Collaborating with Transportation Safety, Traffic Engineering, right-of-way appraisers and specialists, roadway design, traffic and construction engineers and technicians, transportation planners, maintenance specialists, county and city engineers and planners in regards to access control elements within their tasks and duties. Provide similar expertise to citizens and private consultants in regards to state highway issues. Develop and implement the procedures, forms, and guidelines to



carry out work unit functions as well as assist central and regional offices in accomplishing their decision making and regulatory compliance. Example; Such as overseeing the development (by contract programmer) of a special software application that automates the permitting process at the region level and ensures more accurate processing, regulatory compliance and record keeping while improving Region efficiency. Instruct regional and central office staff, and local government officials of several disciplines, in the policies, concepts, principals and theories, practices and procedures of access management so they can integrate access management into their assigned duties and responsibilities efficiently and in compliance with all applicable laws, policies and procedures. Evaluate, analyze and determine the fiscal and programmatic impacts of any proposed legislation, regulations, revisions to agency policies, that may impact the access program, and make recommendations and determinations available to supervisor and agency executive office. Represent agency before local governments and other state agencies, private citizens and organizations, to explain (orally or in writing), and clarify the purposes of the work unit, the access program and regulations by educating them in the concepts, theories and supporting data and benefits, in order to gain their support and understanding in the complex and often controversial program. Oversee quality control of the permit decisions of six regional offices including audit, review, training, oversight, indirect review of permitting decisions and procedural practices, in order to ensure that the six offices are achieving statewide legal consistency and proper implementation in their daily actions and decisions and to determine program performance. Act in similar but less direct manner regarding actions of traffic, design, construction and real estate specialists and planners, who's specific actions fall into the scope access laws and procedures. After investigating all aspects of a proposed regulatory enforcement action in regards to a difficult permittee or property owners or local government, in collaboration with legal counsel, determine if CDOT should go forward with formal legal proceedings or proceed with settlement negotiations. During review of regional decisions, determine what, if any, actions may be necessary due to apparent procedural or decision making errors. Actions may include litigation, training, and file corrections, as may be effective. Research, investigate, formulate (invent) text, procedures, standards, including several alternatives, then choose and implement best alternative in either statewide regulation, policy or selected standards or procedures, systems and guidelines, that will best continue, improve or correct the performance of the overall access program. ”

- *IA*:“ I manage the state code that establishes access policy. ”
- *NC*:“ Highway Safety - Traffic Engineering Field Ooperations & Investigations ”
- *NV*:“ Traffic Analysis and ITS Design ”
- *NY*:“ local planning, outreach and training ”
- *OR*: “Program development and management ”

**4. Does your agency have a formal Access Management Program?**

- Yes (Please proceed to Question 5.) (40)
- No, but access is managed as an informal part of our normal operation. (Please skip to Question 6.) (17)
- No, access management is not considered by this agency. (Please skip to Question 6.) (0)
- No Answer (1)

**5. Is your Access Management Program based on statutory authority or administrative rules?**

- Yes (Please specify below.) (32)

- No (Please explain below.) (10)
- No Answer (16)

Comments:

- AZ:“We are currently finalizing our program and will be using a agency guidance directive until the Rule making process is complete “
  - CA: “Access management is based on both statutory authority and administrative rules. California's Streets & Highway Code (similar to the Civil Code or the Criminal Code) gives the Department full possession and control of all state highways and all property and rights acquired for state highway purposes. The Code states that the Department may do any act necessary for the maintenance or use of all highways. It also states that the Department may issue written permits authorizing the permittee to make an opening in any state highway or place, change, or renew an encroachment. Direction is then given in the Highway Design Manual and in the Permits Manual regarding the placement of driveways and control of access.”
  - CO:“The first state to have a system-wide comprehensive access management program was Colorado. The state legislature declared in 1979 that all state highways were controlled access highways. This simply meant that access to the highway could only be obtained with permission from the state by a permit. The State Highway Commission was directed by the Legislature to establish the standards for such approvals and in 1981 a new regulatory code of standards and procedures was adopted. What made Colorado's new approval process different from earlier permit systems in Colorado and other states, was the application of the principals of access management to all state routes, including principals, secondaries, rural and urban - even local frontage roads - not just freeways and expressways. While the 1979 legislation in Colorado was generally considered progressive, one could argue the state was acting on 77 years of accumulated knowledge. The legislative concept was simple, if access control reduced accidents and improved the public highway system, therefore saving tax dollars and lives, why shouldn't such principals be applied to all public highways? The only difference between freeways, expressways and regular arterials would be the level of application, the strength of the standards. The Colorado law has the important provision that the level of access control should be commensurate with the function of the highway and also consider other aspects, such as highway volumes and types, the character of land abutting the highway and the plans of the community. As a result, the Colorado Access Code now has 8 such levels of classifications in the 1998 edition. The lower levels allow more access than the upper levels. The higher levels serve roads with higher volumes and or with higher speeds over longer distances. The lower categories serve roads of lower performance and providing shorter trips. For all levels, the spacing of access (where permitted) is based on the stopping sight distance at the posted speed. Several local governments, both cities and counties, have also incorporated access controls into their development ordinances, and some use access categories to set the level of control.”
  - FL:“Access management Statute Access Permit Administrative Rule  
<http://www.dot.state.fl.us/planning/systems/sm/accman/pdfs/1496.pdf> Access  
Management Standards Rule  
<http://www.dot.state.fl.us/planning/systems/sm/accman/pdfs/1497.pdf> ”
- “There are related statutes but I am most familiar with our Florida Administrative Codes 14-96 and 14-97 that spell out access classifications, criteria, along with driveway connection process.”
- GA:“Administrative rules, based on Driveway Manual”  
“Authority is established in the Georgia Code.”

“GA Code Section 32-6-133 and Department Policies and Procedures.”

- HI: “We are currently in the process of developing a formal access management program. The results of this study may result in administrative rules. Our informal access management program is generally based on statutory authority.”
- IA: “The policy is based on administrative rules established by the Office of Traffic & Safety within the Department of Transportation.”
- ID: “Administrative rules”
- IN: “Driveway Permit Manual and Site Traffic Impact Study Procedures, Draft Access Management Manual under development”
- KS: “Kansas statute deems authority to the Secretary of Transportation. The Secretary then delegates authority to the District Engineers (6 of them in KS) to approve and execute Highway Access Permits.”
- LA: “We are developing policies as administrative rules, but have not completed the process.”
- MD: “We have two primary components to our access management program: 1.) A funding category used to purchase access controls from willing sellers along certain “access management corridors”. This funding has been used primarily along MD's eastern shore (rural) where there are long stretches of agriculturally zoned properties fronting the access management corridor. We have had success with this program in the past - however in part because of the pool of willing sellers and in part because the funding level for this category has been decreasing in recent years - the level of activity with respect to this component of our program has slowed. 2.) Access Management Plans we have developed Access Management plans along approximately a dozen corridors throughout the state. These plans are developed in close coordination with the local jurisdictions and where there is support to do so from local elected officials. The plans identify proposed access closures, redirected access to local / side roads, service roads, cross-parcel connections, median openings/closings, as well as recommendations for access control or parcel purchases (relates to #1). The plans are implemented primarily through the redevelopment process in conjunction with the local development review and our access permitting process. The plans can also be incorporated into capital projects along the respective corridors where widening projects may be programmed.”
- ME: “Statutory authority and rules”
- MN: “Mn/DOT's Access Management Program was a legislative initiative in 1997, but it is not a statutory requirement. The program using existing driveway permitting rules and local land use authority to support the objectives of the program”
- MS: “Administrative rules”
- MT: “Both”
- NC: “North Carolina has not been successful in securing and establishing a formal Statewide statutorily based/supported Access Management Program. Our day to day operational Access Management efforts are currently primarily focused within driveway permit review efforts, however significant advances have been made with regard to the identification, promotion and improved protection of the traffic operational and traffic safety integrity of North Carolina's Strategic Corridors (link: <http://www.ncdot.org/doh/preconstruct/tpb/SHC/overview/> ). Core Safety Improvement Programs like North Carolina's Highway Safety Improvement Program and Spot Safety Program both are utilized to identify, treat and evaluate many access management countermeasures that are applied at isolated and corridor locations.”
- NE: “The right to acquire access control is granted by statute and management is by administrative rule”
- NJ: “N.J.A.C 16:47 New Jersey State Highway Access Management Code”

- NM: “We have a State Access Manual that establishes access requirements to protect the functional integrity of the state highway system. The manual is enabled by state legislation directing the State Highway Commission, through the Department of Transportation to enact any policies or regulations necessary to manage and build freeways &/or access controlled highways, as well as other state or federal roadways.”
- NV: “We have access management guidelines that we try to achieve. They are located at: [http://www.nevadadot.com/business/forms/pdfs/TrafEng\\_AccesMgtSysStandards.pdf](http://www.nevadadot.com/business/forms/pdfs/TrafEng_AccesMgtSysStandards.pdf)”
- NY: “Our statutory authority certainly provides us with the authority to establish and enforce an access management program except to the extent that it would conflict with home rule. But our access management activities are implemented as a natural extension of project planning and design activities on a case by case basis.”
- OH: “Access Management is established by ODOT policy.”
- OR: “Both”
- SC: “Currently, we have limited statutory authority in the SC Code of Laws.”
- SD: “We had a set of Administrative Rules which govern our decision making with regards to Access Management. It covers such things as spacing and density based on different types of roadway classifications. The rules also include information on variances and appeals.”
- UT: “Both”
- VA: “Permitting portion is based upon statutes and regulations, construction portion is based upon updating design standards and administrative rules.”
- VA: “The Virginia General Assembly gave the Virginia Department of Transportation the authority to promulgate Access Management Regulations. You can find out more information about this recently effective program at <http://www.virginiadot.org/PROJECTS/accessmgt/default.asp>”
- VT: “Vermont Statutes Annotated, Title 19, Section 1111, requires that permits be obtained to use any part of the highway right-of-way. Section 1111 further states that the agency within our jurisdiction, may make rules to carry out the provisions of this section. The agency has not gone through formal administrative rule making, therefore, our Access Management Program has been developed as a guideline.”
- WA: “We have state leg. RCWs and WACs”
- WV: “WV code requires approval of DOT for new access or modification of existing access to any state highway.”
- WY: “It is based upon administrative rules, but there is a bit of language in state statutes relating to accesses.”

**6. Which of the following mechanisms ARE CURRENTLY BEING USED by your agency in implementing access management? (Please check all that apply and provide web-link(s) if possible.)**

- |                                      |                |
|--------------------------------------|----------------|
| • General departmental policies (42) | No Answer (16) |
| • Access code (18)                   | No Answer (40) |
| • Standards (34)                     | No Answer (24) |
| • Guidelines (39)                    | No Answer (19) |
| • Driveway permit manual (39)        | No Answer (19) |
| • Roadway design manual (37)         | No Answer (21) |
| • Other (please explain) (7)         | No Answer (51) |

**7. Which of the following mechanisms ARE BEING DEVELOPED by your agency to enhance access management implementation? (Please check all that apply.)**

- |                                      |                |
|--------------------------------------|----------------|
| • General departmental policies (16) | No Answer (42) |
| • Access code (10)                   | No Answer (48) |
| • Standards (15)                     | No Answer (43) |
| • Guidelines (21)                    | No Answer (37) |
| • Driveway permit manual (16)        | No Answer (42) |
| • Roadway design manual (7)          | No Answer (51) |
| • Other (12)                         | No Answer (46) |
| • No changes planned (11)            | No Answer (47) |

**Comments:**

- AZ: “We are finalizing our Access Management program”
- CA: “It is my understanding that the Department is taking part in the development of some access management guidelines that are at the national level.”
- CO: “Several Access Control Plans and Corridor Management Plans are in works statewide and will continue encouraging local governments to establish more.”
- CT: “We have adopted context sensitive solutions philosophy”
- DE: “We just finished our complete re-write of our access manual.”
- FL: “The Department refines the current policies and procedures as needed to improve the process.”
- GA: “Driveway Manual is scheduled to be re-developed - coordination with ITE and ARC/GRTA Access Management Initiative
- HI: “We are currently in the process of developing a formal access management program.”
- IA: “We are currently reviewing the access policy put in place in 2005. Iowa generally reviews and updates the policy every five years.”
- ID: “Transportation Access Plan (Access Management Plan) legislation will be introduced in the upcoming legislative session. This legislation would allow agreements between land use planning agencies and the Idaho Transportation Department to establish access management criteria for highway segments that may be different than the criteria specified in Administrative Rule. If passed, guidelines will be developed to help implementation.”
- KS: “All policies, manuals, and guidelines we have for access and corridor management are constantly being reviewed and enhanced to provide better guidance.”
- MD: “Our Office of Planning is in the early stages of developing a policy for the identification / development of statewide corridor studies. It is envisioned that access management strategies will be a major component of these corridor studies on noninterstate major arterials as the supporting roadway network, local circulation and connectivity, in addition to the arterial spine will all be considered. We will be working closely with local jurisdictions in this process. The resulting recommendations from each of these studies which should ultimately provide improvement recommendations along an interconnected system of primary highways will be the basis for our adding projects to our long range needs list.”
- MN: “Guidelines for the following are under development: Interchange Area Management Plans Access Management as part of Construction Projects Access Control”
- MS: “We are in the final stages of completing an access guide for adoption.”
- NC: “I am not aware of any specific changes or additions. However, I am not involved in the day-to-day operations/approvals of access permits.”

- NC: "The ongoing focused efforts to help deliver NCDOT's Mission: "Connecting People and Places in North Carolina - safely and efficiently, with accountability and environmental sensitivity" have allowed NCDOT to continue important developmental work (research, justification, draft policy, draft legislation) in the program area of access management. As NC continues to strive to deliver our key GOALS of 1) making our transportation network safer, 2) making our transportation network move people and goods more efficiently and 3) making our infrastructure last longer (getting longer life out of our roads with a higher level of service and improved safety) our efforts to mature and implement a formal Access Management Program will be paramount for successful execution."
- ND: "We have drafted an RFP for the development of an Access Management Program. We anticipate advertising the RFP in early 2009 and the process of developing an Access Management Program to take approximately 18 months."
- NJ: "Revisions to these documents are being worked on."
- NM: "The NMDOT is in the process of updating our Access Control Manual"
- NY: "Outreach and training materials, hands on training courses applied specifically in the context of individual communities."
- OR: "Work is ongoing in all areas to some degree. Priorities and focus vary from year to year, depending on need and resources."
- SC: "WE recently completed an update to our guidelines. WE are studying our permitting process currently."
- SD: "We currently are reviewing information within our Administrative Rules. It will be some time before any changes are made. Changes will also likely trickle down to the chapter on Access Management within the Road Design Manual and the actual access permit document."
- TN: "Memorandum of Understanding with local government for access management in larger vicinity of interchange."
- UT: "We are working on bring our rules and standards up to date."
- VA: "Items checked above are being updated to better (or more completely) incorporate access management."
- VA: "We are updating those portions of the program, including regulations, policies, standards, etc, that apply to collector and local roads."
- VT: "No substantial revisions to policies, standards, or guidelines is underway at the moment. Although, we are proposing a revision to Section 1111 to encompass change-of-use."
- WA: "unknown"

**8. What division(s) or group(s) in your agency is/are currently INVOLVED in managing access to public streets and highways? (Please check all that apply.)**

- |  |                |
|--|----------------|
| • Traffic Engineering (45)             | No Answer (13) |
| • Planning (36)                        | No Answer (22) |
| • Design (41)                          | No Answer (17) |
| • Permitting / Development Review (45) | No Answer (13) |
| • Operations / Maintenance (41)        | No Answer (17) |
| • Right-of-Way (32)                    | No Answer (26) |
| • Other (4)                            | No Answer (53) |

**Comments:**

- GA: "Local Maintenance Areas are responsible for single residential driveway access (up to 4 dwellings)."
- HI: "Everyone has a vested interest so everyone has a role in some shape or form"

- ID: "Access management (permitting) in the field is administered by each district office, and they determine where the function is located within their district organization. This varies from district to district. At the Headquarters level, policy and procedure is developed and administered primarily through the Traffic Services unit, which is a part of Highway Operations and Safety. Planning is involved via long-range plans, corridor plans and development agreements."
- KY: "Driveways and signals regulated by Permits and Traffic Operations."
- MN: "Central Office Planning develops the guidelines and policies District Planning reviews plats and provides comments back to local agencies District Operations/Maintenance oversees the driveway permitting process"
- NC: "While all of these agency partners are to varying degrees "INVOLVED" in the research, planning, negotiation, design, and approvals of "DRIVEWAY PERMITS" and "STREET CONNECTION" the effort has not been under the umbrella of a structured and coordinated ACCESS MANAGEMENT PROGRAM but rather under various elements of existing driveway approval and plan preparation review efforts. While a formal Statewide NC Access Management Program has not yet materialized and been empowered - many of our ongoing agency efforts have benefited from the improved knowledge, tools, and guidance that have evolved from National and other State's and Municipality's Progressive Access Management efforts. Please Refer to Overview Presentation: [http://www.accessmanagement.info/AM06pdf/AM0622a\\_Cove.pdf](http://www.accessmanagement.info/AM06pdf/AM0622a_Cove.pdf)"
- ND: "Access management is currently being handled on a local basis by the district engineer in each of our eight district offices."
- NM: "The NMDOT Access Control Committee is the governing body for any changes to access control on state managed roadways. The committee consists of voting members from the following internal groups: Right of Way Bureau, Traffic Technical Support Bureau, Preliminary Design Bureau, Operations Division (Deputy Cabinet Secretary), District Engineer, District Traffic Engineer. The committee also consists of the following non-voting, advisory members: Traffic Services Section, Preliminary Design Bureau, Statewide Planning Bureau, Drainage Section, Surveying and Lands Engineering Section, FHWA, Office of General Counsel."
- UT: "We have weekly regional access management meetings with a rep from each division to provide input on each new application."
- VA: "Operations/Maint is in charge of Permitting rules; TE and Design are in charge of review rules; Planning head of each district is in charge of actual development review and permit issuance in districts. R/W is in charge of process for allowing limited access breaks."
- VA: Field offices have land development review and driveway permit review sections.
- VT: "The Utilities and Permits Unit issues developer permits and comments on transportation-related agency projects on access management issues."
- WI: "BUREAU OF TECHNICAL SERVICES - REAL ESTATE / ACCESS"
- WV: "'Major' access issues are coordinated by the Commissioner's Office of Economic Development."

**9. What division(s) or group(s) in your agency is/are currently responsible for LEADING the efforts involved in managing access to public streets and highways? (Please check one.)**

- Traffic Engineering (11)
- Planning (9)
- Design (8)
- Permitting / Development Review (11)

- Operations / Maintenance (4)
- Right-of-Way (2)
- There is no single division or group that has the lead. (4)
- Other (Please specify below.) (5)
- No Answer (4)

Comments:

- CA: "Design may compete for the lead, since they control the highway design manual. Planning is coordinating the local development review, so I will vote Planning as the lead."
- CO: "Since all regional access units work under direct supervision of regional Traffic Sections, it would be reasonable to say Traffic Engineers who head these sections are most responsible parties (groups)"
- DE: "The Development Coordination section is an engineering unit in the Division of Planning responsible for coordinating and approving all access to our system."
- FL: "Driveway access permits are almost all issued by our permit managers that are stationed in our area maintenance offices"
- GA: "State projects are designed using Driveway Manual, ADA, Pedestrian Facilities Guidelines, AASHTO Green Book, as well as Roadway Design Manual."
- HI: "Because it is not a formal policy, it is a bit confusing at this time which is why we are pursuing an Access Management Study to formalize the process and develop guidance standards"
- IA: "Most proposed accesses are review by design for geometrics, traffic engineering for operational efficiency and managed by myself for compliance to existing standards."
- ID: "The Highway Operations and Safety group, which includes Traffic Services, Mobility Services, Maintenance Services and Highway Safety leads the access management efforts."
- Indiana: "Planning at both the central office plus the planning function located in INDOT's six district offices"
- KS: "Access management is lead by the Corridor Management Section of the Bureau of Transportation Planning."
- KY: "Planning is leading the development of access management program. Implementation is by other divisions."
- MD: "The State Highway Administration (SHA) Engineering Access Permitting Division has the lead role in distributing development proposals throughout the organization for review and comment, coordinating with the local jurisdictions on development review and ultimately issuing access permits. The SHA Office of Planning and Preliminary Engineering has the lead role in the development of Access Management Plans, coordinating with the locals in that process, and ensuring that access management elements and practices are introduced into the planning phase of major capital projects where feasible."
- MD: "Our Access Permitting Division has the lead role in distributing development proposals throughout the State Highway Administration for review and comment, coordinating with the local jurisdiction on development review and ultimately issuing access permits. Our Office of Planning has the lead role in the development of Access Management Plans, coordinating with the locals in that process, and ensuring that access management elements and practices are introduced into the planning phase of major capital projects where feasible."



- MN: “Central Office planning develops the guidelines and policies, but Mn/DOT is very decentralized so the districts are responsible for reviewing and providing permits.”
- NC: “At the Present Time North Carolina's recently established Mobility and Safety Division - in Close Collaboration/Partnership with the Transportation Planning Division and Division of Highways Operations groups would form the triangle of LEADERSHIP for NC's Access Management Efforts.”
- NM: “All efforts to establish, modify or eliminate access control start with the District Traffic Engineer in the affected district.”
- OR: “Statewide access management unit is responsible for overall policy development, rules, standards, and procedures. Unit works with all staff in all major business lines including planning, design, operations/maintenance, and construction.”
- Texas: “Right of way is also heavily involved.”
- VA: “We have an Access Management section in one of our central office divisions. This section also provides leadership for field land development review practices and policies.”
- WA: “unknown”

**10. Does your agency have staff dedicated exclusively to Access Management?**

- Yes (Please proceed to Question 11.) (21)
- No (Please skip to Question 12.) (35)
- No Answer (2)

**11. Please indicate how many staff members are dedicated to Access Management in the following positions:**

- Traffic Engineers ( 1 - 3 ) (6)
- Traffic Engineers ( 4 - 6 ) (5)
- Traffic Engineers ( 7 - 9 ) (1)
- Traffic Engineers ( > 9 ) (2)
- None Dedicated (3)
- No Answer (41)
- Planners ( 1 - 3 ) (3)
- Planners ( 4 - 6 ) (2)
- Planners ( 7 - 9 ) (1)
- Planners ( > 9 ) (1)
- None Dedicated (4)
- No Answer (47)

**Comments:**

- CO: “25 (Statewide Manager and all regional access managers + assistant managers and access permit inspectors)”
- GA: “1 Supervisor, 2 Engineers”
- GA: “Statewide 2, Districts - 7 supervisors, 18 permit engineers”
- KS: “1 - Engineering Technician Specialist”
- MN: “16 permit techs (80% of time on AM)”
- MO: “20-25”
- MT: “2- (Access Management Supervisor & ROW Specialist)”
- NC: “No Staff are exclusively dedicated to ACCESS MANAGEMENT”

- NH: "1 staff per 6 district offices"
- NJ: "2 managers, 3 supervising engineers, 5 project engineers, 13 senior/principal engineers, 1 supervising Transportation Analyst, 3 technicians"
- NY: "0 applied specifically to AM, perhaps 30-40 involved"
- OR: "10 Permit Specialists"
- SD: "2-Access Management Engineers"
- VA: "1 Programs manager"
- WA: "Design Office, Access and Hearings Unit: please contact Mr. Leroy Patterson <mailto:Patterl@wsdot.wa.gov>"
- WA: "Access spec. 3"
- WI: "STATEWIDE ACCESS ENG – 1"

**12. Access management at your agency is applied at the: (Please check all that apply and explain.)**

- |                                       |                |
|---------------------------------------|----------------|
| • Statewide level (36)                | No Answer (22) |
| • Corridor level (34)                 | No Answer (24) |
| • Project level (38)                  | No Answer (20) |
| • Access / driveway permit level (48) | No Answer (10) |

**Comments:**

- AR: "Corridor: Significant hwy corridors may be built as an "expressway"/non-interstate facility and this subject to our partial control standards for divided facilities. Project: It may be deduced, on a case-by-case basis, for a hwy improvement project to include access management via an inter-party agreement Access/Driveway permit: only if there is an access management plan"
- CA: "It all depends on who you ask. The policy is not consistent enough."
- GA: "Roadway project designers use the Driveway Manual to manage access to new and redevelopment of roadways. Statewide level oversees Districts and handles limited access roadways, access breaks, median openings, Driveway Manual development and application, and governing policies."
- HI: "We are currently in the process of developing a formal access management program. Hopefully this will result in access management being expanded to earlier in the process"
- IA: "At the Iowa DOT, we manage access along state and federal routes."
- ID: "Access classifications are based on route functional classifications with commensurate standards. Corridor plans include access management considerations such as frontage/backage roads, medians, etc. Access control is often purchased as a part of right-of-way acquisition on individual projects. Safety and operations are primary considerations for granting/denying access at the driveway permit level."
- Indiana: "Corridor level access management under development"
- KY: "Draft regs/guidelines are statewide."
- MD: "While the primary focus of access management occurs at the corridor level through Regional Planners in the Office of Planning and Preliminary Engineering (OPPE), the Engineering Access Permit Division (EAPD) oversees access along all state owned roadways through the local development review processes and through the access permit process required under state regulations. The OPPE Regional Planners take the lead in the development of access management plans within their respective regions. The planners coordinate the implementation of access management plans with the EAPD Area Engineers and local government agencies. At the project level, Project Engineers seek opportunities to apply access management techniques in a manner consistent with the project scope and/or objectives using the SHA policies, practices, and procedures. Regional Planners and

Area Engineers are members of project teams and they act as the access management champions bringing knowledge of the access management plans and appropriate/applicable roadway standards along with local concerns during the life cycle of a project.”

- MD: “Corridor level - Regional planners in our Office of Planning take the lead in development of access management plans within their respective planning regions. They coordinate the implementation with the permitting officers from our access permits division (and local jurisdictions). Project level - Project managers seek opportunities apply access management opportunities commensurate with the project scope. Regional planners, as part of the project team, are often the access management "champions" and can bring knowledge of the access management plans, if applicable, and local concerns and needs to the table.”
- MN: “Statewide = Policies and guidelines have been developed for statewide consistency Corridor = Intersection spacing and driveway allowance guidelines used in corridor plans Project Level = Intersection spacing and driveway allowance guidelines reviewed during project scoping Access Level = Guidelines and policy guide review and approval process”
- NC: “Again to varying degrees and in some cases inconsistently applied depending on location & circumstances - currently at the Statewide Level the Strategic Corridors and the Vision for North Carolina's 3 Tiered Road System would be the basis for STATEWIDE AM application. At the Corridor Level North Carolina has identified and has been studying "specific" routes and as part of many of these corridor studies access management countermeasures and techniques are being considered and in some case implemented (See Links for US 64 and US 70 corridors) US 64: <http://www.ncdot.org/doh/PRECONSTRUCT/tpb/shc/studies/US64-NC49/> US 70: <http://www.ncdot.org/doh/preconstruct/tpb/shc/studies/US70/> At the Project Levels efforts with Highway Design, R-O-W, and improved integration of AM into earlier project phases, project criteria/objectives, and eventually designs, and plan reviews are intended to reduce the number of instances where poor access management compromised the safety and operational performance of a new highway project or development. At the Driveway permit level our efforts are often necessarily limited to the property seeking access, however advances have been made in improved coordination of development along North Carolina's primary routes but much additional work is needed before we could claim to have an Access Management Program and even more investment will be necessary before we could establish and sustain an access management program with rigor.”
- ND: “Currently, access management is limited to reviewing individual requests for access to state highways. Our district engineers grant or deny permits based on traffic and safety conditions.”
- OH: “Statewide level establishes the policies and maintains the Manual. Also, variances and appeals are handled at the Central Office. Projects may contain access management as the primary or secondary purpose and need. Generally, access management is carried out by permit at the ODOT District level when modifications or new access is requested.”
- OR: “Driveway permit application procedures, approval criteria, standards, and appeals process are specified in administrative rules. Rules also have provisions for project delivery and planning.”
- TN: “Statewide level are the necessary permits to grade on the right-of-way and utility permits for utility installations.”
- VA: “Statewide level: access policies/standards Corridor level: corridor access management plans (developed with localities) Project level: designers incorporate AM measures in projects Access/permit level: implement above policies/standards/requirements”

- VA: “It depends on the situation, and the extent to which there are funded corridor studies, but typically the Access Management program elements are applied at the land development review or permit review level.”
- West Virginia: “Determination for number/location of access points made during corridor development/design process. Individual permits issued at the district (local) level for property access.”

**13. What elements of Access Management does your agency’s program address? (Please check all that apply.)**

• Installation of medians (49)	No Answer (9)
• Spacing for median openings/breaks (50)	No Answer (8)
• Spacing for unsignalized public street intersections (45)	No Answer (13)
• Spacing for unsignalized private driveways (48)	No Answer (10)
• Spacing for traffic signals (47)	No Answer (11)
• Prohibition of certain turning movements (45)	No Answer (13)
• Corner clearance (48)	No Answer (10)
• Spacing for cross-streets in the vicinity of interchanges (47)	No Answer (11)
• Intersection sight distance and setbacks (49)	No Answer (9)
• Geometric design standards for driveways (49)	No Answer (9)
• Provisions for right-turn and left-turn lanes (51)	No Answer (7)
• Purchase of access rights (38)	No Answer (20)
• Internal connection of parking lots between adjacent parcels (24)	No Answer (34)
• Subdivision restrictions for large parcels (15)	No Answer (43)
• Requirements for Traffic Impact Studies (49)	No Answer (9)
• Requirements for Traffic Impact Fees (10)	No Answer (48)
• Other (Please explain below.) (5)	No Answer (53)

**Comment:**

- CA: “In CA, we work off primarily the Highway Design Manual. We also have some guidelines on local development review, detailing the spacing and ROW needs of driveways and intersections. Local development review is a Planning program; while has to be assisted by Traffic Operations technically. I gave you Terri Pencovic’s contact, so make sure you send her a questionnaire. Environmental concerns, such as storm waters. Construction impacts. Bridge safety impacts. Etc. Nature of development. Construction of local circulation systems.”
- FL: “we work in cooperation with local governments on subdivision and other local regulations impacting access”
- IA: “We try to promote better site plan approvals that create a more efficient functional hierarchy, but do not have zoning or site plan authority.”
- KY: “Most checked are part of the draft AM program. Many of the practices have been used but inconsistently.”
- MS: “All of these are done as a part of our Traffic Engineering and Roadway Design procedures, but they are not done uniformly accross the state and are all set by AASHTO minimum standards. Our new guide will try and fix these issues.”
- NC: “Provisions/Guidelines for installing Superstreets or other alternate intersection designs on Strategic Highway Corridors”
- NC: “Our current driveway policy process attempts to addresses many of the above areas - however the strength and enforceability of many of the "guidelines" has been suspect especially when faced with political, local, and legal opposition or challenge.”

- ND:“We do not have a formal access management program. We do however control access to our state highways through use of purchased right-of-way and follow a general policy to limit accesses to no more than five points per mile in rural areas. We also work with cities to encourage and achieve access control on projects that receive state funding.”
- NY:“Please note that the engineering or design elements are specifically applied via findings of a traffic impact or similar study and do not extend to the development of regulations or standards to be applied at a Statewide level. At the same time, we have been and continue to be involved in the development of standards applied as part of local zoning and subdivision ordinances.”
- VA:“The installation of medians would be done either as part of a road improvement project or as a condition imposed on the driveway permits for a large land development project.”
- WA:“For follow-up you may want to contact Mr. Leroy Patterson, mailto:Patterl@wsdot.wa.gov Mr. Patterson will be a good contact for engineering-related questions.”

**14. Does your agency have an Access Classification System (different from the Functional Classification System) that is used for determining the level and type of access management that applies to different roadways?**

- No, we do not use an Access Classification System (Please skip to Question 16.) (10)  
No Answer (48)
- No, we rely on the Functional Classification System for access management purposes (Please skip to Question 16.) (13)  
No Answer (45)
- Yes (Please proceed to Question 15.) (33) No Answer (25)

**15. What are the considerations in your agency's Access Classification System? (Please check all that apply.)**

- Functional classification (29) No Answer (29)
- Posted speed (22) No Answer (36)
- Urban / Rural (28) No Answer (30)
- Roadway cross-section / number of lanes (15) No Answer (57)
- Divided / Undivided (16) No Answer (42)
- Traffic volume (19) No Answer (39)
- Other (Please specify below.) (9) No Answer (49)

**Comments:**

- AZ:“Local land use plans.”
- CA: “In CA, freeway access is fully controlled. The issue is conventional highways. So the answer to Question 14 may be yes, or no. Certainly for conventional highways, the State does not further classify them. The local governments may have something. Our Fresno office developed their own guidelines on this, for ROW preservation purpose. Based on different classifications, they came up with standard drawings showing the ROW needs, and hence inform the developers. No such system. A project is underway trying to develop the Caltrans AM Guide. It might talk about this classification system. The contractor is Dye Management from Seattle. David Rose is the lead. You can contact Marc\_Birnbaum@dot.ca.gov for more about this project. I am out of that program now.”

- Arkansas: “State Highway Access Code, August 31, 1998 Page 33 of 62 SECTION THREE ACCESS CATEGORY STANDARDS 3.1 Purpose and Use (1) This section provides a system of eight highway categories for access control purposes. The number, spacing, type, and location of access and traffic signals have a direct and often significant effect on the capacity, speed, and safety of the highway and are limited in a hierarchical method by this category system. The location, operation and design standards within each category are necessary to ensure that the highway will continue to function at the level (category) assigned. Each state highway segment is assigned a category as provided in subsection 2.2 of the Code. These assignments are listed in the State Highway Access Category Assignment Schedule, 2 CCR 601-1A, which can be obtained from the issuing authority. (2) The standards in this section have been written so that the safety and operations of the complete general street system will be considered, when determining access to the state highway. (3) The “Functional Characteristics and Category Assignment Criteria”, subsection of each category is intended to describe the existing or future function of roadways for which that category is most appropriate. The existing design of the highway is not required to meet the design standards of the assigned category at the time it is assigned. All new access permitting and other access design decisions shall meet the design standards in this section for the assigned category for the highway or segment of highway. A proposed access that may be allowed under Code Section Three criteria, but fails to meet the design or safety criteria of Code Section Four, should be denied unless a design waiver can be approved. (4) Traffic signals and their installation are also regulated by the Federal Manual on Uniform Traffic Control Devices, (M.U.T.C.D.) and the Colorado Supplement under section 42-4-104, C.R.S., as amended. Nothing in the Code is intended or shall be interpreted as requiring the Department to authorize a traffic signal or left turn movement at any location. No traffic signal shall be authorized without the completion of an analysis of traffic signal system operation, construction feasibility, and safety as well as meeting M.U.T.C.D. signal warrants. When a traffic signal or operations study is required, the study shall include the information, data and analysis requirements of section 2.3(5) to the extent requested by the Department and issuing authority and be sealed by a Colorado registered professional engineer. The Department may at its discretion in consideration of granting an access permit, require design and operational modifications as it considers necessary, restrict one or more turning movements, or deny the access so long as such discretion does not violate law. Table 3.1: Overview of the Access Category Classification Hierarchy Table of access categories, with approximate descriptions F-W Interstate System, Freeway Facilities E-X Expressway, Major Bypass Rural Non-Rural R-A Regional Highway NR-A Regional Highway R-B Rural Highway NR-B Arterial NR-C Arterial F-R Frontage Roads (both urban and rural)”
- KS: “We have a Route Classification System from Class A-E that considers the items listed in #15. We also have an Access Type System (not called an Access Classification) from Type 1-6.”
- KY: “Classification system is developed and mapped but not yet used.”
- NV: “We are updating our access guidelines. One consideration in the update is to move from the access classification system to the functional classification system that is used by our Roadway Systems Division.”
- OH: “Besides functional class, roadways are evaluated by their character and current and future function. For example, a limited access multi-lane roadway with grandfathered driveways with little development pressure may be ranked lower than one with no driveways and increasing development, even though both may be the same functional class.”

- OR: “Designated highway segments, primarily in urban areas, where access to adjacent land generally takes priority over mobility.”
- Texas: “Divided into freeway mainlanes, frontage roads and other state highways.”
- VA: “AM Classification is generally based on federal functional classification, except that some minor arterials are bumped up into principal arterial for emergency evacuation and continuity purposes.”
- WA: “Limited access controls, Full, Partial, and Modified Managed access Control, class 1-5”
- WI: “STATUTORILY ACCESS CONTROLLED”
- WY: “Access Classification which is based upon the development type.”

**16. What variables are part of your agency’s criteria for driveway location and design? (Please check all that apply.)**

- |   |                |
|---|----------------|
| • Roadway classification( 42)                                     | No Answer (16) |
| • Posted speed along the roadway (43)                             | No Answer (15) |
| • Development type (i.e. commercial, residential, etc.) (49)      | No Answer( 9)  |
| • Development size or intensity of use (i.e. trip generation)(48) | No Answer (10) |
| • Development location (e.g. urban vs. rural areas)(46)           | No Answer (12) |
| • Others (Please explain below.) (9)                              | No Answer (49) |
| • Geometric design standards for driveways are not addressed.(2)  | No Answer(56)  |

**Comment:**

- CA: “We also look at the location of adjacent driveways and the location of a driveway from an intersection.”
- CA: “The criteria are more like guidelines for roadways other than freeways. For freeways, there are well-documented rules regarding access.”
- GA: “Existing conditions sometimes limit variables, particularly in dense urban areas. Use ADT on roadway along with speed limit to set thresholds.
- Indiana: “Access management classification system under development”
- MD: “The ability to provide access using the lowest level roadway is desirable in granting access to state roadways. Whenever practical, the SHA requires access from side streets, adjacent parcels and or other local roadways. Accident experience, traffic operations, traffic impacts and roadway level of service (LOS) are also factor considered in granting access for properties regardless of whether an access management plan exists along a corridor.”
- MN: “We include: Number of Driveways; Sight Distance; Spacing between Driveway; Corner Clearance; Offset Driveways; Restricted Movements; Shared Driveways; Interim Access; and turn lanes”
- MO: “Sight distance Driveway spacing”
- NC: “Unfortunately the type and number of access points granted to others historically along a corridor (or similar corridors) have often influenced the ultimate driveway locations and designs - whether they were good or not - so "Precedence" has continued to influence these decisions even though improved guidance has been available.”
- NY: “Also "development environment" (urban, suburban, rural, rural village, etc); conditions at abutting and opposing sites; roadway design and particularly whether there is a restrictive median or not; and the like.”
- OR: “Design vehicle, primarily related to trucks.”
- SC: “site specific conditions (ie. existing access locations)”
- SD: “The Administrative Rules outline spacing and density based on the roadway classification.”

- WY: “Consideration also given to whether new access to controlled access facility, which requires approval for break in CA r/w.”

**17. What variables are part of your agency’s criteria for traffic signal spacing? (Please check all that apply.)**

- |                                     |                |
|-------------------------------------|----------------|
| • Cycle length(24)                  | No Answer(34)  |
| • Speed (28)                        | No Answer(30)  |
| • Bandwidth(12)                     | No Answer (46) |
| • Allowable movements(18)           | No Answer (40) |
| • Other (Please explain below.)(20) | No Answer (38) |

**Comments:**

- Arkansas: “The only criteria considered for signal spacing is adequate stacking distance”
- AZ: “Roadway classification”
- CA: “Caltrans District 6 tries to achieve even spacing of signalized intersections at 1/2 mile spacing. This enables traffic flow at a wide range of speeds, with cycle lengths ranging from 60 to 120 seconds. This spacing also enables the implementation of timing plans that will result in appropriate off-peak progression speeds at cycle lengths that are also appropriate for use with off-peak volumes.”
- CA: “I think Caltrans follows HCM suggestions and engineering judgement. For item 18, follow HCM guidance, too.”
- CO: “the roadway Access Cat. will define the criteria for traffic signals for each Category. This is defined within the Chapter 3 of the State Highway Access Code.”
- FL: “Operational safety can play into spacing decisions. Sometimes the alternative solution to a safety problem would be worse than a traffic signal. For example, an angle crash problem near an interchange would normally have us looking to modify the median opening to prevent side street left turns. In one case, there was signal level traffic and one side was a busy truck stop with no options for alternate access. Creating a directional median opening full for a steady stream of truck u-turns would not have worked, so we allowed significant reduction in desired signal spacing.”
- GA: “We have a spacing for an urban section and a rural section.”
- GA: “Set spacing minimums based on urban or rural roadway/speed limit, as well as sight distance and warrant analysis.”
- IA: “Traffic Engineering reviews these measures. Generally, local jurisdictions manage signal cycles.
- KS: “Ideally, we prefer to space signals 1 mile apart if possible along corridors; however, we have allowed spacing as small as 1/4 mile.”
- KY: “No criteria”
- Louisiana: “Simple 1/2 mile minimum spacing.”
- MD: “Roadway classification, traffic volumes, systemization, and other traffic engineering principles are followed in evaluations.”
- MN: “Traffic signal spacing is based the access management category of the highway and the adjacent land use. Please see Access Operations Study: Analysis of Traffic Signal Spacing for Four Lane Arterials at the following web site: <http://www.oim.dot.state.mn.us/access/research.html#other>”
- MO: “In general, Urban: 1/2 mile to 1 mile for major, non-freeway 1/4 mile to 1/2 mile for minor roads Rural: Greater than or equal to 1 mile spacing”



- MT: "Varies on a case by case basis."
- NC: "Please refer to Driveway Manual Page 16 & 17 under section D - Traffic Signal Study also reference "Traffic Signal Review and Approval Process for Private Developments"  
[http://www.ncdot.org/doh/preconstruct/traffic/teppl/Topics/T-28/T-28\\_g.pdf](http://www.ncdot.org/doh/preconstruct/traffic/teppl/Topics/T-28/T-28_g.pdf)  
(warning this link may be outdated / newer version may be available) ITS & Signals Link: <http://www.ncdot.org/doh/preconstruct/traffic/ITSS/>"
- NV: "We try to maintain 1/2 mile spacing for signals."
- NY: "intersection/ driveway spacing and volumes, accident rates at unsignalized locations, traffic volumes at unsignalized locations."
- Columbus: "Preferred signal spacing is established by roadway access classification and access type. Typically it's 1/4 mi, 1/2 mi, or 1 mi."
- SC: "Standardized spacing based on Functional Classification of the roadway."
- SD: "I am not involved with the traffic signals. The traffic engineers in Pierre handle all issues relating to traffic signal design and layout."
- TN: "Use of traffic studies."
- TX: "Not directly associated with access management."
- VA: "allow spacing closer than that set out in standards with submission of TE study documenting no or extremely minor impact."
- VA: "The signal cycle lengths in the standards vary from 60s to 120s, but some district / regional traffic engineers prefer longer cycle lengths on high volume, wide urban arterial. This comment relates to question 18, below."
- WA: "For follow-up you may want to contact Mr. Leroy Patterson, <mailto:Patterl@wsdot.wa.gov> Mr. Patterson will be a good contact for engineering-related questions."
- WY: "Speed."

**18. Please indicate the range of traffic signal cycle lengths that are typically implemented by your agency:**

- Min. Cycle Length (30-50)(7)
- Min. Cycle Length (60-80)(20)
- Min. Cycle Length (90-120)(4)
- No Answer(26)
- Max. Cycle Length (80-120)(11)
- Max. Cycle Length (130-170)(9)
- Max. Cycle Length (180-220)(7)
- Max. Cycle Length (>=230)(5)
- No Answer (26)

**19. Do you have provisions for when the spacing criteria or geometric design standards cannot be met?**

- Yes (Please explain below, and proceed to Question 20.)(31)
- No (Please skip to Question 21.)(17)
- No Answer(10)

Comment:

- AR: "We have a waiver process"

- AZ: “We have provisions that are applied to parcels and there isn't an other option for access.”
- CA: “We try to achieve the recommended standards; however, it is understood that geometric constraints often limit what can be achieved. We then rely on the best judgement of our engineering staff to achieve the best outcome for all interests.”
- CA: “Caltrans has its own Guidelines for TIA preparation, which is available online. The central theme is that Consult! Consult! And Consult! Meaning the developers have to talk with us to avoid any last minute difficulty. I have a CDROM paper describing the challenges CT is faced with at the 2006 TRB Annual Meeting. The provisions are many, for example, by improving public transit service, or condition the development density if the spacing criteria are compromised. Need specific review, and impact mitigation. It is case-by-case.”
- CO: “4.12 Design Waiver Procedures (1) If an applicant wishes to seek a waiver from the design standards of the Code, a request must be submitted as an attachment or addendum to a permit application form or provided with the request for the Notice to Proceed. Department Form No. 112 shall be used. The request for waiver shall state specific reasons why a waiver is necessary and appropriate and include documentation to support such reasons. The request shall address the waiver criteria of this subsection. Waivers cannot be issued for procedural requirements. Separate waiver requests may be necessary where several waivers are necessary and where the waivers may be approved in whole or in part. (2) The applicant may supplement an application with a waiver request if the issuing authority determines that sufficient time remains in the review period to consider the waiver. If the issuing authority determines that it is in the public interest to do so, the issuing authority may supplement a permit application with a waiver. (3) In consideration of a waiver request, the issuing authority and Department shall determine if, (a) absent approval of the waiver request, there is exceptional and undue hardship on the applicant, and (b) a waiver would meet acceptable standards of practice for engineering, operation and safety. A waiver may not be contrary to the public interest, shall consider the orderly development plan of the local government, shall consider the function of the highway, shall consider the general design practices of the Department, and is subject to and limited by the purposes of the Code as set forth in subsection 1.2. (4) When a waiver is approved, the reasons for granting the waiver and references to the specific standards of practice shall be clearly stated in writing and included in the Department permit. Restrictions on the use of the permit should be imposed as necessary to keep potential safety problems to a minimum. By the terms and conditions of the permit, the permittee may be required to improve, modify, eliminate, or correct the condition giving rise to the waiver when it becomes evident that the reason for the waiver no longer exists. If the waiver is approved and the remainder of the application is in order, meets remaining Code criteria, a permit shall be approved and the subsequent Notice to Proceed may be approved. (5) If a waiver is granted to allow direct highway access where the access proposal cannot meet regular access Code standards, or when the property would be without reasonable access absent the waiver, the access permit may contain specific terms and conditions providing for its expiration at such time as the necessity for the waiver no longer exists. (6) If the waiver request is denied, the issuing authority shall continue to process the permit application in a standard manner and may issue a permit if it can be approved without a waiver.”
- CT: “Prohibition of certain movements”

- FL: “We will give access but try to restrict movements and have a provision in the permit to share access with neighbor when available”
- FL: “We evaluate case by case with signal spacing. If a signal will improve overall safety and efficiency for the situation, then we will allow reduced spacing. For median openings, we have a formal process in evaluating requests for reduced spacing.”
- GA: “We work with field conditions to meet safest and efficient standards possible.”
- GA: “These decisions are made by higher authorities within the DOT.”
- GA: “District Level and Statewide Level have authority to waive certain requirements given acceptable safety considerations.”
- IA: “We have a formal Waiver process.”
- ID: “Variance procedure and appeal procedure.”
- KS: “We have a variance process.”
- Louisiana: “We use design exceptions.”
- MD: “On a case-by-case basis, engineering judgment is used to review all factors to establish the best overall design that results in a safe and efficient highway system. Restricted movements, increased roadway improvement, alternate access opportunities, mitigation of impacts, and other elements are examples of solutions explored.”
- MN: “A driveway is permitted (regardless of spacing criteria or standards) if two conditions are met: 1. The property retains a right of access, 2. No reasonable or suitable alternative access exists. If these two conditions are met, then we work with the property owner to get the safety access possible. Alternatively, if we really think the access is too unsafe we could condemn it and buy the property (but we don't ever do that).”
- MO: “No formal provisions, but guidance is usually sought from Central Office Traffic Division, if spacing criteria or geometric design standards cannot be met.”
- NC: “Historically there has not been reluctance to place signals within adjacent intersection's areas of influence. Hence the “we can make it work” tactic has been employed to justify extremely close spaced signalized intersections.”
- NJ: “Waivers are permitted if justified.”
- NM: “Any requests for exceptions to the spacing criteria must go before the access control committee.”
- NV: “The provisions are somewhat loose. We ask for a traffic analysis that shows the impacts to the corridor with the addition of a new signal with the intent that if the corridor is operationally degraded then the signal may not be an option.”
- NY: “Requirement for written justification.”
- OH: “ODOT has established a variance and appeals process.”
- SC: “We have a waiver policy as well as a design exception policy.”
- SD: “The Administrative Rules provide a definition for the use of a variance.”
- VA: “Allow right-in/right-out connection or something different with TE study showing minimal impact.”
- VA: “There does exist an appeals process, which ultimately goes to the Chief Engineer.”
- VT: “Determination on a case by case basis.”
- WA: “For follow-up you may want to contact Mr. Leroy Patterson, <mailto:Patterl@wsdot.wa.gov> Mr. Patterson will be a good contact for engineering-related questions.
- WA: “Deviations”

- WI: "WE HAVE A CHAPTER IN OUR FACILITY DEVELOPMENTAL MANUAL"
- WY: "We have an access review committee who can grant variances."

**20. Who makes the decision with respect to the allowable flexibility? (Please explain.)**

- AK: "Reg pre-constr engineers"
- AZ: "The final authority now is the state engineer. If and when the hiring freeze is lifted an engineering position will be created to run the access management program, he or she will make the decision"
- CA: "We rely on the staff engineer assigned to review that particular situation. That judgement is usually followed as long as the staff engineer can reasonably justify his or her conclusions and recommendations to the Senior."
- CA: "We have Geometric Reviewer and Traffic Reviewer positions. As supervisory level engineers, they represent HQ authority in dealing with all design exception approvals."
- CO: "Region Traffic Engineer with the approval of the Region Transportation Director"
- CT: "Scoping committee"
- DE: "Subdivision Engineer who approves the plans"
- FL: "For driveways local staff can decide most of the time. For median openings, the District Traffic Engineers"
- FL: "For traffic signals and most median opening decisions, it is our lead traffic operations engineer for the district. For escalated median issues, decisions are made at the district level by an Access Management Review Committee."
- GA: "Our Chief Engineer."
- GA: "The District Traffic Engineer/ State Traffic Engineer"
- GA: "Chief Engineer of the Department"
- GA: "District Level: minor violations may be waived by Traffic Operations Engineer, more severe violations may be waived by District Engineer, more critical violations and policy violations may be waived by State Traffic Engineer, Director of Operations, Chief Engineer, Deputy Commissioner, or Commissioner."
- IA: "District Engineer or Director of the DOT."
- ID: "Variance decision is made at the district level"
- IN: ""
- KS: "The District Engineer on behalf of the Secretary of Transportation approves or denies Variance Reports. Staff members that are dedicated to access and corridor management make recommendations to the District Engineer on what to allow or not, but it is the District Engineer's decision."
- KY: ""
- LA: "The Chief Engineer makes his decision based on recommendations."

- MD: "Depending upon the specific element of design that does not meet acceptable standards, policy, and/or practices, the Chief of SHA Engineering Access Permit Division may approve deviations from the acceptable criteria. In cases involving design exceptions to AASHTO, the Director for SHA's Office of Highway Development is the approving authority. The Director for SHA's Office of Traffic and Safety is the approving authority in cases involving traffic signals, signalized intersection spacing, functional operations, signing, marking, and lighting. The SHA Administrator is the approval authority for cases involving median crossover spacing, breaks in right of way line of through highway controls and other policy criteria."
- MN: "District staff makes the decision, and may ask for input from Central Office."
- MO: "Central Office Traffic Division will give recommendation."
- NC: "Field Unit"
- NC: "The Reviewing Engineer (often District Engineer, occasionally Division Traffic Engineer or Congestion Management Engineer)"
- NM: "The State Access Control Committee"
- NV: "There are not black and white guidelines in place, but the decision rises to the Front Office where the Director makes the final decision."
- NY: "Regional Traffic Engineer"
- OH: "Variances are generally decided by ODOT's Roadway Engineering Office who maintains the Access Manual. Appeals (for variance denials) are decided by a three person committee, one of which represents the ODOT Director. The appellant is given a chance to address the committee before a decision is rendered."
- OR: "Region access management engineers may approve spacing deviations and geometric design standards of driveways. Region managers may also approve under special circumstances."
- SC: "The waiver policy is typically handle at the District Engineering level, but can be escalated to the State Highway Engineer level if needed. The design exception is handle by Roadway Design Engineers."
- SD: "Typically, the Area Engineer is the person granting the flexibility. Our State is divided into 4 Regions, run by 4 Region Engineers. Each Region is broken down into 3 Areas, run by 3 Area Engineers."
- VA: "District Admin designee (at district and residency level)"
- VA: "This depends on the functional classification of the road and the extent to which sight distance is an issue, also a recalcitrant applicant file an appeal to the Central Office level even if it is unlikely to succeed. Some decisions regarding flexibility can be dealt with at the district level."
- VT: "Chief of Utilities and Permits."
- WA: "For follow-up you may want to contact Mr. Leroy Patterson, mailto:Patterl@wsdot.wa.gov Mr. Patterson will be a good contact for engineering-related questions."
- WA: "unknown"
- WA: "Asst. State Design Engineer"
- WI: "WE HAVE A TEAM IN THAT REVIEWS ALL OF THESE STATEWIDE THAT IS TO BE CONSISTANT AS POSSIBLE WHILE REVIEWING ALL STATEWIDE CASES."
- WY: "The access review committee."

**21. Does the permit application process also apply to changes in existing development that will result in a significant increase in driveway volumes?**

- Yes (Please proceed to Question 22.) (52)
- No (Please skip to Question 24.) (0)
- No Answer (5)

**22. Does the permit application process also apply to changes in existing development that will result in a significant increase in driveway volumes?**

- Yes (Please explain below, and identify what represents a "significant increase" in driveway volume.) (44)
- No (7)
- No Answer (7)

Comments:

- AK: "tia"
- AR: "The changes, considered as exceptions at the determination of the District Engineer, may include driveway general improvements, additional turn lanes, or channelization. Our driveway permit manual does not define what constitutes a "significant increase"."
- AZ: "A cotton farm turning into a housing development or mall."
- CA: "There is no set number for what defines a significant increase. We rely on the judgement of the staff engineer to make that determination."
- CA: "The permit process is the downstream of the LD-IGR process. There are some glitches that need to be ironed out to make the connection seamless. For example, some application should be processed at the IGR stage, while the citizens sent apps directly to the permit office."
- CO: "20% Volume increase and /or over 100 ADT"
- CT: "If development exceeds 200 parking spaces or 100,000sf of buildable area, and is issued a permit, the Department can require improvement to existing development if parking increases by more than 50 spaces."
- DE: "If there is a change in use they need a new permit which would trigger a review of the plan and existing entrances."
- FL: "25% increase in traffic AND over 100 trips per day higher"
- FL: "This is spelled out in our Florida Administrative Code. While it may include a change in type of traffic, "significant increase" is generally taken to mean an increase of 25% in generated volumes for which the driveway was originally permitted."
- GA: "Yes, If land use has changed we can ask the developer to make changes"
- GA: "This would apply if modifications are to be made to existing driveways to allow for heavier volumes."
- GA: "Existing locations that redevelop or undergo change of use are considered under the same rules and regulation as new developments. Any owner/developer requesting approval to work on GDOT RW must obtain a "Driveway Permit" and bring the conditions of the frontage up to current standards when ever possible. Local Governments will typically require improvements to the access and frontage, thus requiring a GDOT permit"
- HI: "Only if there is a need for work within the state highway right-of-way, otherwise there is no trigger"
- IA: "We require a traffic study when a development is identified as having a significant impact on our system."
- ID: "Examples are a change from farm use to residential use or from single-family

- residential to multi-family residential use or from residential use to commercial use."
- KS: "KDOT is to review all "change in site use or driveway operation" to determine if a new permit is needed or not. Our access types are based on land use and trip generation. For example, commercial or industrial accesses: Type 4 includes 0-49 trips per day, Type 5 includes 50-499 trips day, and Type 6 includes 500 or more trips per day. A change in trips over one of those thresholds will require a permit. Also, an increase in turning volumes may require adding turn lanes. We consider turn lanes at 40 or more turning vehicles/peak hour turning from a single direction. We do not use the term "significant increase"."
- KY: "Applied occasionally."
- MD: "The Code of Maryland Regulations (COMAR) includes language that states who is responsible for obtaining a permit for access including new or existing accesses. The enforcement of the regulations in redevelopment situations generally occurs in conjunction with the local development review process and SHA's role as a commenting agency in that process. Frequently, SHA recommends additional improvements and that a permit is required as a condition of the approvals. Redevelopment or changes in tenants is a more difficult area for enforcement and oversight and future efforts may review how to efficiently and reasonable interpret and enforce that portion of the regulations."
- ME: "We divide our process into two categories: Driveways - under 50 trips per day Entrances - 50 trips and over per day When a driveway turns to an entrance the applicant needs to apply for a change of use permit"
- MN: "We do not have a set threshold for what is a "change of use". Generally it is about a 10% increase in the size or number of parking spaces or number of campsites etc."
- MO: "With the exceptions that the development is requesting an entrance shift, an entrance widening, an entrance shift & widening, or a new entrance."
- MS: "We try to have the developer design for the ultimate build-out"
- MT: "A change in land use and/or an increase of traffic volume of 20% or more."
- NC: "Not sure of specific elements. See <http://www.ncdot.org/doh/preconstruct/altern//value/manuals/pos.pdf>"
- NC: "The policy attempts to trigger the requirement for a "new" / "updated" driveway permit by indicated that: "The PERMIT must be secured prior to the change or alteration of existing or proposed property use." Although this language is in place - to date it has been up to the discretion of the District Engineer to determine if the magnitude of change warranted a new permit. Reality is that many of the site revisions that take place do so without any access modification or improvement requirements."
- NE: "If the developer has to request permission to modify an access that is on State highway Right-of-way we will request a traffic Impact study that details the expansion, the impact to the state highway and any recommended mitigation measures."
- NJ: "Significant increase is defined as 100 additional trips in any peak hour and 10 % of the daily trips."
- OH: "Change in use includes but is not limited to the following: The use of the access increases in actual vehicular volume by 20 percent or more or an actual increase of 10 or more trip ends in the peak hour; The traffic volume of a particular directional characteristic (such as left turns) increases by 20 percent or more or an actual increase of 5 or more trip ends in the peak hour; The use of the access by vehicles exceeding 30,000 pounds gross vehicle weight increases by 20 percent or more or an actual increase of 10 or more trip ends in the peak hour; The use of the access increases in actual vehicular volume from a level not exceeding Manual warrants and standards for design elements, to a level exceeding Manual design warrants and standards by 20 percent or more; The historical use of the access was less than daily use, and the new use would be for daily use of the access; The free flow of vehicles entering the property is restricted or such that vehicles queue on the highway, creating a highway hazard."
- NY: "Usually not, but where a site is not fully developed, or future increases in traffic

volumes might be large, or the development itself is large and there is significant variation in traffic at similar facilities we can and often do incorporate provisions for changes to access in the Highway Work Permit."

- RI: "A permit is required when there is a change in use. In example, a change in use from a 10,000 SF Retail to 10,000 Coffee Shop with Drive Thru would require a new driveway permit application use."
- SC: "If the site is redeveloped and changes the development type or density, we have review the access plan."
- SD: "If there is a 10% change/increase in the level of traffic using the driveway, the landowner should apply for a new permit."
- TX: "Permit may be conditioned on driveway volume. Significant increases may require a new driveway permit application."
- UT: "Any change in use (increase or decrease) is to be reviewed by the department."
- VA: "change in land use allows VDOT to require changes to entrance to deal with new traffic."
- VA: "This depends largely on the judgment of the reviewing personnel, and the extent to which the existing entrance can accommodate the change in traffic volume or fleet mix."
- VT: "Not unless statewide development ACT 250 and/or local municipality asks the agency."
- WA: "For follow-up you may want to contact Mr. Leroy Patterson, <mailto:Patterl@wsdot.wa.gov> Mr. Patterson will be a good contact for engineering-related questions."
- WA: "unknown"
- WA: "# of house holds 10 or more trigger traffic study,"
- WI: "ANY PERMIT THAT IS GRANTED CAN BE REVOKED BY THE STATE AT ANYTIME DEEMED NECESSARY. IF ANY CHANGE IN USE IS TO HAPPEN, THE PERMIT MUST BE RE-VISITED BY INSPECTION OF STATE."
- WV: "Any change in the nature of an existing permitted access requires new permit and significant increase in trip generation (total trips greater than 50/hr) can result in need for additional highway modifications."
- WY: "Sort of. A change in land use allows us to review the access."

### **23. Are all driveway permit applications reviewed at the regional/district level?**

- Yes (40)
- No (13)
- No Answer (5)

#### **Comments:**

- CA: "Actually, all driveway applications are first reviewed at the district level; however, in those rare instances where a development is adamant about placing a driveway where the state has established access control, then such a request must get approval from the California Transportation Commission. Such a request is rarely granted because there is usually a very good reason for the state to have access control at specific locations. It is also a very lengthy and costly process."
- CA: "HQ provides guidance, training functions. That is the way of Caltrans setup. For very complicated and litigation-prone type of development, HQ may involve from the very beginning."
- CO: "All permit applications and access permits are sent to the HQ for random review and processing consistency control. However applications that are denied or terms and conditions that are disputed by permit applicants are sent to my office (HQ Access Unit) for review."
- Permits for work within the State Highway right-of-way are handled at the regional/district



level. Granting of access to state highway right-of-way is reviewed by one statewide right-of-way branch office as we are a small island state and do not have the resources to have right-of-way expertise in each district office.

- IN: "District will send requests that require a break in limited access of highways to the chief engineer in the central office"
- KS: "All access permits originate at the lowest Area level and then forwarded to the District Engineer for approval/denial. If it is for a commercial or industrial access, the District will request us at headquarters for review and recommendations before making a final decision."
- MD: "Permit applications are reviewed and approved depending on the type and size of development. The seven (7) SHA District offices are responsible for review and approval of permits for residential access consisting of 5 lots or less along with all utility, grading, and other miscellaneous improvements. The Engineering Access Permits Division is the approval authority for all residential subdivisions greater than 5 lots along with all commercial/industrial access, which includes off-site roadway mitigation improvements."
- MN: "Each of the eight districts are responsible for their own access permits. Central Office has the ability to audit the on-line permits."
- MO: "They are all initially reviewed at the District level, but applications are sent to Central Office Traffic Division if: - Does not meet the Commission's Policy for Changes in Limited Access Right of Way (MoDOT Engineering Policy Guide - Article 941.9) - There are any unusual modifications to the standard format of an agreement - There is an appeal made for the access denial"
- NC: "Approval lies within each district, however large developments may be sent to headquarters for recommendations, which are generally incorporated."
- NC: "Clarification - For Proposed Access onto State System Routes the actual PERMIT is submitted and reviewed by the District Engineer (for all cases) -so above answer would be YES with a caveat or asterisk that being that the District Engineer can request the assistance or review by NCDOT's Congestion Management group on a case by case as needed basis (primarily for very large potentially controversial and complex development scenarios)."
- NJ: "Major permits are reviewed at the central office. Major is defined as any use generating 500 or more daily trips."
- NV: "Typically they are reviewed at the District level, but if the development's driveway has significant impacts to our roadway then the Maintenance and Operations Division gets involved where a more detailed traffic analysis can be performed."
- OH: "Access permits involving Limited Access highways are submitted to Central Office."
- RI: "Rhode Island does not have district offices. All permits are reviewed by headquarters."
- SD: "The permits may be reviewed at the Region level, but most are not. The Areas typically handle all review necessary for access application. If there are questions, the Access Management Engineer (myself) and the Region Engineer typically get involved."
- UT: "Limited Access and No Access requests are prepared at the regional level and final approval is done at the statewide level along with FHWA approval."
- VA: "But limited access break requests ALSO reviewed at central office."
- VA: "At this time, some permits are reviewed beneath the regional / district level in some of our districts, but we are moving toward having all the permits initially reviewed at the district level. However, the appeals process goes through the Central Office and thus it is possible that the Chief Engineer would become involved on a contentious permit."
- VT: "Single-family residential and temporary accesses at local level with commercial drives and subdivisions done at headquarters."
- WA: "The Regions are the primary point of review for access permitting, but the Region may not review all permit requests: many are too small to be worthwhile to commit limited staff time to; in other cases, at Region staff discretion, a decision may be made not to review an application if there is a belief or prior experience that mitigating an impact to the system is unlikely to be obtained."

- WA: "unknown"

**24. Under what circumstances is a Traffic Impact Study required as part of the driveway permit application? (Please explain.)**

- AK: "volume of peak hour , safety concerns"
- AR: "If developer requests a traffic signal"
- AZ: "A change in development that would generate an increase of traffic on the state system."
- CA: "A traffic study might be required if it is discovered that a proposed development did not first go through the Intergovernmental Review process. It is usually in this IGR process that the need for a study is first determined. We will usually ask for a study if we do not already have a relatively recent study on file with the data and information that we need. The staff engineer uses their judgement to determine if the proposed development will have a significant enough impact to justify studying the potential need for improvements to the state's facilities. We might already have most of what we need and so we might merely ask for a trip generation and distribution. We often merely ask for a simple left-turn determination."
- CA: "See our TIA preparation guide. It depends on size of development, and trips generated, plus the adjacent roadway traffic conditions. We use absolute numbers instead of ratios as our thresholds to request a TIA. See our TIS guide for TIS warrants."
- CO: "any access application that is for more than 100ADT can be checked to require a TIS, however the region Managers also have the discretion to require a TIA if they feel it is necessary for the proper evaluation of the impact."
- CT: "Certainly if threshold numbers mentioned in item no. is exceeded and if smaller development is to be located in congested area."
- DE: "If a site generates more than 400 adt or 50 vph in the peak hour."
- FL: "All over 4,000 trips per day Some from 1,200 - 4,000 but only if our staff determines it is necessary"
- FL: "Typically the study is required for higher volume driveway applications. We also require them anytime median access changes are proposed."
- GA: "If the volume of traffic is being significantly impacted or a traffic signal is requested. Our driveway manual has a determining factor which states when a traffic impact study is required."
- GA: "If turn lanes are required"
- GA: "Large developments and when traffic signals are requested."
- GA: "Whenever the trip volume is 2000 vpd or greater, a median opening is requested, or a traffic signal is requested."
- IA: "Based on the type of usage proposed, the district will require a study to determine what type of turning warrant are met which require modifications to the system to address the new use."
- HI: "When there are significant traffic impacts, unusually geometric conditions, or other unique considerations as to the location. Size of the development and number of vehicles projected to be generated by development, and volume of traffic on adjoining street."

- ID: "A "full" TIS shall be required for developments that will generate 100 or more new trips during the highway's peak hour, or the total added volume will equal or exceed 1000 vehicles per day. A sample "full" TIS outline is shown in Appendix B in the "Requirements for Transportation Impact Studies." In some cases as determined by ITD personnel, lesser traffic volumes may warrant a "full" TIS when roadway sections are already at or near capacity. A "minor" TIS shall be required for developments that will generate between 25 and 99 new trips during the highway's peak hour, or the total added volume will be from 250 to 999 vehicles per day. A TIS shall not be required for developments that will generate less than 25 added (new) trips during the highway's peak hour, or the total added volume will be less than 250 vehicles per day."
- IN: "If the development meets certain trip generation thresholds (150 DUs, 15,000 sq ft retail, 35,000 sq ft office, etc.)"
- KS: "Any permit application for Type 6 accesses (over 500 trips/day or 50/peak hour); any development in which a prior TIS is more than 2 years old where increased land use intensity will result in an increase in traffic generation onto the surrounding transportation system by more than 10 percent; any development in which at least 5 land uses (per ITE trip generation) are planned; and any other circumstances deemed appropriate by a local unit of government, the District Engineer, or the Corridor Management Section."
- KY: "TIS requirements underway. Basic threshold of 100 peak vehicle trips."
- LA: "For developments within 1/4 mile of the state system that generate more than 100 peak hour trips."
- MD: "A traffic impact study (TIS) is required for all situations with greater than 50 peak hour trips and in those situations where the development is anticipated to potentially impact traffic operations and/or flow. Each local jurisdiction has differing requirements for traffic impact studies and the SHA struggles to require a TIS if the development sizes falls below the local criteria. If the development will require access to a state roadway, the SHA uses its regulatory approval authority as needed to require a traffic impact study and potential roadway access and mitigation improvements."
- ME: "Engineer's discretion"
- MN: "Mn/DOT does not have the authority to require a TIS. We work with the local land use authorities to have them require TISs. Mn/DOT's threshold is about 2400 new trips per day. See Chapter 5 of the Mn/DOT Access Management Manual for details."
- MO: "- For larger developments (usually developments that generate > 100 peak hr. trips or > 1000 additional vehicles/day) where the access point requested will meet the guidelines for spacing - For any development with access that would qualify as a Hazard Elimination Program location"
- MS: "Any development that generates 100 peak hour directional trips"
- MT: "[http://www.mdt.mt.gov/publications/docs/brochures/siap\\_guide.pdf](http://www.mdt.mt.gov/publications/docs/brochures/siap_guide.pdf) Page 11 of 29 or if it is printed out it is page 9"
- NC: "not sure"
- NC: "Under Current NC Driveway policy a TIA/TIS "may be required for developments with an estimated trip generation of 3000 vehicles per day or greater during an average weekday based on a five day national average as defined in the Institute of Transportation Engineers (ITE) Trip Generation Manual.""
- ND: "When additional turn lanes are being considered"
- NE: "<http://www.nebraskatransportation.org/roway/pdfs/accesshwy.pdf> See page B1"
- NH: "For Major Driveways"

- NJ: "Whenever a major with planning review permit is applied for, a major with planning review permit is required when the use will generate at least 500 trips daily and 200 new peak hour trips in any peak hour."
- NM: "A traffic engineering evaluation is required for all new or modified driveway requests. The level of the evaluation is based on a preliminary scoping meeting between the applicant (or the applicant's agent) and the District Traffic Engineer."
- NV: "100 vehicles per hour"
- NY: "Generally where trip generation exceeds 100 vehicles in the peak hour."
- OH: "5.1.3. A Traffic Impact Study shall be required for any proposed access to development or land use which will generate or has the potential to generate traffic volumes equal to or exceeding 100 vehicle trip ends (total of entering and exiting vehicles for the proposed development at full 20-year build out and occupancy) during the highest peak hour of the development. A turn-lane warrant analysis may be required by a development generating less than 100 vehicle trip ends in the peak hour. For developments that generate their peak hours predominantly on week-ends, a week-end analysis may be required. 5.1.4. A Traffic Impact Study shall be required for any proposed access within a location identified by ODOT's Highway Safety Program as a safety problem area or accident location or any location identified by ODOT as a congested traffic area."
- OK: "Section 3.1.2 of Driveway Regulations: 1. any development which can be expected to generate more traffic than some specific threshold (i.e., 100 vehicles in the peak hour of the adjacent street or generator) or for a lesser volume when review of the site plan indicates that such additional data is desirable. 2. Cases in which the original TIA is more than two (2) years old or where increased land use intensity will result in an increase in the traffic generation by more than 15% or a directional distribution in the site traffic by more than 20%."
- OR: "1. Development that generates traffic volumes equal or greater than 600 daily or 100 hourly trips. 2. Proposed zoning or comprehensive plan changes. 3. Onsite review indicates operational or safety problems exist or are anticipated."
- RI: "Traffic impact studies, prepared by a Rhode Island Registered Professional Engineer, must be submitted when a proposed development or redevelopment will generate 100 or more added (new) vehicle trips per hour during the adjacent roadway's peak hour. Or: 1) When changes are proposed in an area already suffering congestion. 2) At the judgment or discretion of the Department. 3) When a traffic signal warrant is met due to the additional trips generated."
- SC: "Based on the projected traffic generated from the site, we denote typical development types that would require the TIS."
- SD: "If it is anticipated that the development will generate 100 peak hour trips or more."
- TN: "They are usually done on larger developments and are usually required by the local agency before we require them."
- TX: "Where significant traffic volumes and/or turning movements are expected or can change the operations of the roadway."
- UT: "We currently require it for all access applications unless waived by the traffic engineer. Generally any proposed development under 100 trips a day is not required to submit a TIS."
- VA: "Any time varying from standards, or anytime triggers in TIA regulations are met (see <http://www.virginiadot.org/projects/chapter527/default.asp>)"
- VA: "TIAs are now required by Virginia law for all development that substantially effect state roadways. You can find out more at <http://www.virginiadot.org/projects/chapter527/default.asp>"
- VT: "Greater than 75 peak hour trips"

- WA: "Relatively large-scale developments creating a relatively high level of impact to the transportation system."
- WA: "unknown"
- WA: "If no. of proposed trips triggers a study then we do one"
- WI: "THIS IS REQUIRED WHEN BIG DEVELOPMENTS ARE GOING IN OR ANYTIME THE TRAFFIC GENERATED WILL BE GREATLY INCREASED."
- WV: "Development generating at least 100 trips /hr or within area DOH feels warrants a TIS to address operation/safety issues. This is on a project by project basis."
- WY: "The decision for a TIS is made at the District level based upon their assesment of the need for one."

**25. Does the Traffic Impact Study identify improvements to mitigate impacts?**

- Yes (Please proceed to Question 26.) (51)
- No (Please explain below, and skip to Question 27.) (1)
- No Answer (6)

Comments:

- GA: "Yes, the TE Study is required to provide conclusions and recommendations for upgrades to the roadway, existing conditions, and adjacent intersections. Department is not obligated to allow or approve these recommedations when study is provided by a private developer."
- IA: "Development of turning lanes, storage of vehicles, vehicle types of proposed entrance and geometrics on a case by case basis."
- MD: "A traffic impact study (TIS) is required for all situations with greater than 50 peak hour trips and in those situations where the development is anticipated to potentially impact traffic operations and/or flow. Each local jurisdiction has differing requirements for traffic impact studies and mitigation requirements. The SHA struggles to require traffic mitigation when the local jurisdiction does not require mitigation under their adequate public facilities ordinances (APFO). Thirteen (13) of the state's twenty-three (23) counties have APFO as an approval criteria. If the development will require access to a state roadway, the SHA uses it regulatory approval authority as needed to require roadway improvements to mitigate the development-generated traffic impacts at a minimum."
- MN: "Improvements are identified, but are not necessarily required. Once the mitigation is identified, who is responsible for it and cost sharing becomes a negotiation issue, unless the local land use authority requires it as part of a developers agreement."
- MO: "A summary of recommendations is part of any traffic study. Developers are responsible for mitigating any unacceptable impacts to the roadway system by the construction of any needed roadway improvements."
- VA: "TIA preparers (engaged by applicants) identify mitigation improvements, and VDOT approves the extent to which these improvements would actually mitigate the problem."
- WA: "Often the impact study will identify and recommend improvements to mitigate impacts."
- WA: "Yes, some do."

**26. Please answer the following questions:**

Who pays for the identified ON-SITE (e.g. access driveway) improvements?

- Developer /Applicant / LandOwner/ Permittee (46)
- DOT/State (0)

- Local / Municipality / Town / City (1)
- Combination (3)
- No Answer (8)

Who pays for the identified OFF-SITE improvements?

- Developer /Applicant / LandOwner/ Permittee(42)
- DOT/State (1)
- Local / Municipality / Town / City (1)
- Combination (7)
- No Answer (7)

## 27. Is a Traffic Impact Fee collected?

- Yes (Please proceed to Question 28.) (11)
- No (Please skip to Question 29.) (41)
- No Answer (6)

## 28. On what basis is the Traffic Impact Fee determined?

- |  |                |
|--|----------------|
| • Based on the projected traffic impacts. (10)   | No Answer (48) |
| • Based on the size and type of development. (5) | No Answer (53) |
| • Other (Please explain below.) (9)              | No Answer (49) |

### Comments:

- CA: "A traffic impact fee is not always collected. It is based on if there are known needs for future improvements, or identified needs for opening-day or future improvements."
- CA: "See the TIS guide. It is basically based on Nolan and Dollan and other case laws. Nexus and Proportionality are the two criteria."
- CO: "Impact fees are NOT collected by CDOT but may be assessed by other local governments"
- FL: "We only collect an application fee based on driveway category, which is determined by projected trips."
- MD: "The SHA is reviewing this issue and would be interested in receiving information collected in this survey for reference purposes. Please forward information to Steven Foster, Chief, Engineering Access Permits Division, Maryland State Highway Administration, 707 N. Calvert Street, Baltimore, MD 21202 or by email at sfoster1@sha.state.md.us."
- ME: "Sometimes a fee can be collected in lieu of improvements, usually when the Department has a project going through the area."
- NC: "NC Does not currently collect a Traffic Impact Fee - however some municipalities in North Carolina do. North Carolina recently passed legislation that establishes an EXPRESS PERMIT PROCESS - there will be fees associated with this program - however the program is still under development so fee schedules and other particulars are still "under review/construction" and subject to change. See Senate Bill 2313 as ratified August 4 2008 : <http://www.ncga.state.nc.us/Sessions/2007/Bills/House/HTML/H2313v5.html>"
- NJ: "We do not use traffic impact fee."
- NV: "The traffic impact fees are collected by the local MPOs. Most counties have impact fee processes in place, but some do not."
- SC: "We do not have the authority to collect traffic impact fees."
- VA: "VDOT is not authorized to collect a traffic impact fee, but Virginia localities are authorized to develop traffic impact fee ordinances."

**29. What resources (if any) do you use or consult when addressing access-related issues in your daily work? (Please check all that apply.)**

- |   |                |
|---|----------------|
| • Reference documents developed by your agency (Please cite below, and provide a web-link or paper copy if available.) (42) | No Answer (16) |
| • Access Management Manual (TRB) (30)   | No Answer (28) |
| • A Policy on Geometric Design of Highways and Streets (AASHTO "Green Book") (43)   | No Answer (15) |
| • Highway Capacity Manual (TRB) (32)  | No Answer (26) |
| • NCHRP reports (Please specify below.) (14)  | No Answer (44) |
| • ITE reports or Journal articles (Please specify below.) (14)  | No Answer (44) |
| • Research papers (Please specify below.) (6)   | No Answer (52) |
| • Other publications (Please specify below.) (11)   | No Answer (47) |
| • I don't use or consult any resources. (1)   | No Answer (57) |

**Comments:**

AR: "Agency document: Access control and median opening criteria, deopted by Arkansas Highway Commission, Minute Order, February 18, 1998. NCHRP Reports: NCHRP Synthesis 289; NCHRP Report 348, NCHRP Synthesis 332 Research Papers: Rural highway median treatments, TRC01-03, Dr. J.L. Gattis, for AHTD & FHWA, Jan '03 Other: www.accessmanagement.info"

AZ: "The state access management manual will be the referral documnet. It is due to be finalized in March of this year."

CA: "Caltrans Highway Design Manual. ITE Traffic Engineering Handbook 5th Edition. Caltrans Permits Manual."

CA: "At HQ level, I think we use all the above references. But the ITE trip generation, the Caltrans guide on preparation of TIA, and also some internal documents (unpublished draft TIA review guidelines. I drafted it based on some Fresno experience, and we are continuously improving on it) are the major ones. TIS guidelines"

CO: "Most simple driveway permits are reviewed referencing State Highway Access Code, however complex access permit applications are reviewed by other CDOT specialty groups such as Material and Hydraulics, or Traffic. Some time they are even referred to outside engineering consultants who employee all checked reference along with any other generally acceptable engineering standards to arrive at their decision."

FL: "See: <http://www.dot.state.fl.us/planning/systems/sm/accman/>"

FL: "Florida Plans Preparation Manual; Florida Driveway Handbook; Florida Administrative Codes 14-96 & 14-97; Florida Design Standards; MUTCD; sometimes NCHRP 457 for turn lane warrants. All are available online."

GA: "MUTCD"

GA: "ITE Trip Gen. is used to identify future site volumes, usually provided by deveopers consultant or civil engineer."

HI: "Left-turn lane installation guidelines NCHRP 279 Intersection Channelization Design Guide"

IA: "Other staff may use additional reference materials."

ID: "NCHRP Report 395 NCHRP Report 420 NCHRP Report 548 NCHRP Report 582"

NCHRP Synthesis 304 NCHRP Synthesis 351 Various other states' access management statutes, rules, policies and procedures"

KS: "KDOT Corridor Management Policy at <http://www.ksdot.org/BurTrafficEng/cmpworking/cmpindex.asp>. I refer to some of the other resources listed occasionally, but not daily."

KY: "Permits Manual Design Manual NCHRP 500 auxiliary lanes"

LA: "ITE Trip Generation Manual."

MD: "Various SHA policies and procedures along with the SHA Access Permit Manual. Publications from other states is often reviewed for ideas on methods used by our states."

ME: "<http://www.state.me.us/mdot/planning-process-programs/access-mngmnt.php>"

MN: "As indicated early we use the Mn/DOT Access Management Manual and Mn/DOT Road Design Manual."

MO: "- [http://epg.modot.org/index.php?title=Main\\_Page](http://epg.modot.org/index.php?title=Main_Page) - Various NCHRP and ITE reports and research papers, as needed."

NC: "Policy on Street and Driveway Access to North Carolina Highways NC Median Crossover Guidelines ITE Trip Generation Manual (8th edition) Microtrans Trip Generation Software (companion tool to Trip Generation Manual) ITE Transportation & Land Development [www.accessmanagement.info](http://www.accessmanagement.info) <http://www.accessmanagement.info/resources.html#Handbooks>

NCDOT Congestion Management Tools : <http://ncdot.gov/doh/preconstruct/traffic/congestion/CM/> NCDOT Access Management Switchboard Links (under Access Management Header): <http://www.ncdot.org/doh/preconstruct/traffic/safety/Resources/> NCDOT Access Management Policy Statement from Board of Transportation (2003) <http://www.ncdot.org/doh/preconstruct/traffic/tepl/Topics/A-21/report.pdf>

NE: "reports specific to need"

NH: "NHDOT has a Driveway Access Policy"

NJ: "NJDOT Highway Design Manual ITE Trip Generation Manual New Jersey State Highway Access Management Code"

NV: "[http://www.nevadadot.com/business/forms/pdfs/TrafEng\\_AccesMgtSysStandards.pdf](http://www.nevadadot.com/business/forms/pdfs/TrafEng_AccesMgtSysStandards.pdf)"

OH: "ODOT Access Management Manual (previously linked)."

OK: "ODOT's Roadside Design Manual ODOT's Policy on Driveway Regulations for Oklahoma Highways"

OR: "Access management rules: <http://www.oregon.gov/ODOT/HWY/ACCESSMGT/technicalbulletins.shtml> Highway Design Manual:

[http://www.oregon.gov/ODOT/HWY/ENGSERVICES/hwy\\_manuals.shtml#2003\\_English\\_Manual](http://www.oregon.gov/ODOT/HWY/ENGSERVICES/hwy_manuals.shtml#2003_English_Manual) Project Delivery Operational Notices and Guidelines:

<http://www.oregon.gov/ODOT/HWY/ACCESSMGT/projectdelivery.shtml> Access Management Manual: <http://www.oregon.gov/ODOT/HWY/ACCESSMGT/accessmanagementmanual.shtml>

Development Review manual: [http://www.oregon.gov/ODOT/TD/TP/DRG.shtml#DRG\\_Guidelines](http://www.oregon.gov/ODOT/TD/TP/DRG.shtml#DRG_Guidelines) List of other documents and resources used (less frequently):

<http://www.oregon.gov/ODOT/HWY/ACCESSMGT/links.shtml>

[http://www.oregon.gov/ODOT/HWY/ACCESSMGT/Planning\\_Links.shtml](http://www.oregon.gov/ODOT/HWY/ACCESSMGT/Planning_Links.shtml)"

SD: "Can't provide a link. Document is currently not on our website."

TN: "Driveway Policies and Procedures"

TX: "TxDOT Access Management Manual <http://txdot-emanuals1.dot.state.tx.us/txdotmanuals/acm/index.htm>"

UT: "<http://www.udot.utah.gov/main/uconowner.gf?n=200402231315131>"

VA: "<http://www.virginiadot.org/PROJECTS/accessmgt/default.asp> <http://www.virginiadot.org/projects/chapter527/default.asp>"

VT: "Agency permitting database"

WA: "My position does not conduct day-to-day access permitting."



WA: "I refer the acces-related issues to a WSDOT Region office."

WA: "WSDOT Design Manual"

WV: "DOH driveway manual, DOH design directives, DOH traffic Eng. directives. ITE Trip Generation Guide. AASHTO Roadside Design Guide."

WY: "WYDOT Access Manual"

**30. How is access management at your agency enforced? (Please check all that apply.)**

- |   |                |
|---|----------------|
| • Access permits are required. (51)                               | No Answer (7)  |
| • Other types of permits are required (Please specify below.)(11) | No Answer (47) |
| • Negotiations among parties involved. (23)                       | No Answer (35) |
| • Legal action is taken. (21)                                     | No Answer (37) |
| • Other (Please specify below.) (2)                               | No Answer (56) |
| • The policies are not enforced. (0)                              | No Answer (58) |

**Comments:**

- CA: "We sued several local agencies, but stopped due to the negative images of governments before the public. Design manual is the biggest help."
- CO: "State Highway Access Code and the state Access Law, CRS 43-2-147. We also require other ROW related permits such as: Landscaping permits, License to cross access control lines permit, Special Use permits, Utility permits, Outdoor advertising permits and TODDS and LOGOS permits."
- IA: "We do not have enforcement authority at DOT."
- IN: "Drive permits and traffic impact studies, access management guide under development"
- LA: "Driveway permits and traffic signal permits are not issued."
- MN: "Access permits are required. all other things tend to be worked out between Mn/DOT, the land use authority and the permit applicant."
- NE: "NDOR will remove or blockade illegal driveways."
- NY: "Interaction with local permitting agencies."
- OH: "Negotiations are sometimes used to obtain cross-access agreements. They can also be used with local planning officials to guide new development access strategies. Legal action may be taken for illegal access or failure to follow access and/or permit requirements."
- RI: "Driveway Permits"
- TN: "Permits are required for utility installation and grading in the right-of-way."
- VT: "Violation notices filed with local land records."
- WV: "Agreement executed for "large" developments."

**31. Please indicate if there is coordination between your agency and the local land use agency on the following items: (Please check all that apply.)**

- |                                     |                |
|-------------------------------------|----------------|
| • Zoning / rezoning (31)            | No Answer (27) |
| • Corridor overlay zones (21)       | No Answer (37) |
| • Site plan review (41)             | No Answer (17) |
| • Subdivision review (31)           | No Answer (27) |
| • Building permit approvals (11)    | No Answer (47) |
| • Other (Please specify below.) (9) | No Answer (49) |

**Comments:**

- AZ: "We try and do all of the above, the amount of coordination varies among

agencies."

- CA: "The California Environmental Quality Act requires that Caltrans be allowed to review those proposed developments that could potentially impact state facilities. Local agencies are usually pretty good about routing such proposed developments to us for our review. In the past this was not always the case."
- CA: "Terri may shed more light on this. But my answer will be yes on all of them. Basically all land use change need Caltrans involvement, unless it is too far away from our roads to help deteriorate road traffic conditions."
- CO: "The level and extent of coordination can vary from one agency to another however there is a general consensus to promote such coordination every chance possible."
- FL: "Our driveway permits are generally offered to local govts. for review. Local govts. typically require our driveway permit to be issued before they approve the site for occupancy."
- GA: "Local Government's development reviews identify locations on State Highways and refer applicants or require GDOT permits for final plan approval. Some counties will require a GDOT permit or review comments prior to issuance of an LDP."
- IA: "I am trying to gain more coordination in this function."
- ID: "Limited, and not consistent in all areas of the state"
- IN: "Cooperative review process exists in several but not all districts, access management guide under development will provide for uniform process"
- KY: "Practices vary across the state. Also, P&Z only exists in some counties."
- LA: "None"
- MN: "Local agencies are required to solicit Mn/DOT's comments (but don't have to act upon them) for all Plat Reviews adjacent to state highways. All other land use reviews are complimentary."
- MS: "None that I'm aware of"
- NC: "Coordination between the Department and local land use agencies is not consistent across the state"
- ND: "In the urban areas the local government are responsible for access control"
- NE: "We receive, under provision of law, notice of developments in areas we have file Corridor Protection."
- NJ: "Our Access Code requires local zoning to be in conformance with the Access Code. We also require that copies of all access applications and associated documents be sent to the municipal clerk and the clerk of the County Planning Board with a request for comments and a requirement for proof of receipt. Subdivisions for lots fronting on a state highway require an access permit."
- NV: "I am not too involved with this process, so I am not 100% sure on the answer."
- NY: "There can be substantial interaction and coordination on individual (local) developments or on our capital projects, but it often a testy process and it always depends on quality of the relationships between community staff and our planning and permitting staff. We also support from 5-15 local planning and zoning projects each year, in which we work directly with the community to help them develop plans and zoning which is transportation sensitive."
- OH: "Most coordination is not required by law. However we encourage our District coordinators to work with local agencies when they affect ODOT's highway system. Locals may develop corridor plans that ODOT participates in

- and may adopt."
- OK: "Driveway permits require signature of City/Town authority where applicable."
  - OR: "The extent of cooperation can vary considerably between District/Region offices and local governments and sometimes is affected by changes in elected officials and staff turnover."
  - SC: "limited to no coordination depending on the local agency."
  - TN: "driveway permits"
  - TX: "This coordination is not universal within the state. It depends on the ordinances and regulations among individual cities or counties."
  - UT: "NA"
  - VA: "Amount of coordination varies statewide, depending upon local VDOT office and locality staff. Statewide, coordination is required by law for all projects that have a "significant impact" on state highways (section 15.2-2222.1 of state code) for zoning, site plan, and subdiv stages. corridor overlay and building permit stages highly dependant upon locality, varying from no coordination to very good coordination."
  - WA: "the depth of involvement is dependant on available staff to coordinate with the local agency"
  - WA: "No very little unless it has triggered an IJR interchange Justification Report, then we will form a team and study the all aspects of the project"

**32. How are transportation and land use decisions, as related to access management, typically coordinated among two or more agencies (e.g. State, county, municipality)?**

- The agency that has jurisdiction over the subject roadway typically governs. (23)
- The agency that has jurisdiction over the land use typically governs. (4)
- Coordination meetings occur among the involved agencies. (10)
- An Access Management Plan is prepared. (0)
- Transportation and land use decisions are made separately and not coordinated. (8)
- Other (Please explain below.) (8)
- No Answer (5)

**Comments:**

- CA: "The local agency makes the ultimate decisions regarding land uses; however, if there will ultimately be a need for a permit for access to a state highway, then our opinion carries a significant amount of weight."
- CA: "Strong efforts are out there trying to integrate land use and transportation. This is not my area, so I have to defer it to Terri and others."
- CO: "An Access Management plan can also be part of negotiation discussions. The state Highway Access Code gives ultimate decision making power to CDOT for access management of all State Highways however agencies that have state highways within their jurisdictional boundaries are entitled to accept and initiate access permit application and processes for those state highways within their boundaries."
- DE: "it is a collaborative effort. DelDOT has the jurisdiction over access for our roads but we work with the local land use agency in developing our requirements."
- FL: "The local government makes the decisions on land use; the Department makes the decisions on what it would take to make the access work safely. Also, frequently the parcel of land is limited in size, which limits options in providing reasonable access."

- GA: "State does not have jurisdiction over land use. Local Governments apply their access management guidelines prior to State Highway permit reviews. Example: interparcel access or joint use may be required on the development plan before the agency with jurisdiction over the roadway has reviewed plans."
- HI: "Cooperative relationship as DOT has jurisdiction of state roadways but County agencies have authority to make conditions of land use including requirement that developments mitigate project generated impacts."
- ID: "We are attempting to address this through proposed Transportation Access Plan (Access Management Plan) legislation."
- KY: "with some exceptions."
- MD: "All of these elements are part of the normal coordination process between the SHA and local agencies."
- MN: "Access permits are the responsibility of the road authority. Mn/DOT works with the land use authority to coordinate land use requires and access permit conditions."
- MT: "A combination of # 1,3,&4 above."
- NC: "Generally Speaking there is not good coordination - however there are some ongoing efforts to improve coordination of these fundamental decisions."
- NY: "It varies depending on the project, the region and the individuals involved. We always retain the right to make the final decision regarding access and mitigation for connections to our roads and the community has the final say over site plan / subdivision approval. There are attempts at coordination on medium sized and larger projects. Sometimes successful, sometimes not. If there is a real conflict, too often politics rules."
- OR: "See development review guidelines. Link provided in question 29."
- SC: "The most restrictive policies governs."
- TX: "In Texas, land use planning is done at the local, not state, level."
- VA: "Depends upon which element of AM is considered. Spacing is controlled by land use agency (based upon parcel boundaries); entrance type and design by roadway agency. In many localities, coordination meetings are held."
- VA: "Coordination meetings do occur, and the requisite TIA is part of those meetings, along with site plan or subdivision review. In the end however, VDOT with its jurisdiction over nearly all roadways in the state, makes the final decision about entrance location --unless a particularly crafty lawyer or politician exercises pressure on the agencies executives."

**33. If access-related conflicts arise between your agency and other agencies, how are these conflicts resolved?**

- The more restrictive regulations among the involved agencies apply. (9)
- The less restrictive regulations among the involved agencies apply. (1)
- Coordination meetings occur among the involved agencies. (35)
- Other (Please explain below.) (7)
- No Answer (6)

**Comments:**

- CA: "Coordination. But the CEQA law can be a big help."
- CO: "However agencies are unable to finalize their decision and intent without CDOT's final approval. This is in accordance with the State Highway

Access Code."

- IA: "We try to resolve issues, but, the local jurisdiction has final zoning authority. The DOT can restrict access to a state route."
- MD: "All of these answers are appropriate and decisions are based on engineering judgment that results in the best overall transportation solution. In the case of conflicting answers, the agency with approval authority of the issue is typically the determining factor."
- MT: "Combination of 1&3 above."
- NC: "While from a Policy perspective the driveway manual indicates that the more restrictive condition should control - the reality is that often in areas of conflict a case by case negotiated outcome is eventually reached."
- NY: "In general the Department defines minimal access and mitigation requirements necessary to meet our operational and safety objectives, and we stick to them. We might also identify access and mitigation alternatives that will substantially enhance traffic benefits and suggest them to the communities involved. If they agree we support them as "joint" requirements through both our and the communities' permitting powers."
- OH: "The agency with the jurisdiction over the roadway determines the resolution."
- OR: "See development review guidelines. Link provided in question 29."
- TX: "On state roadways, the city may request and be granted access permitting authority for all driveway requests going forward. Otherwise, the decision rests with the state DOT. On any access request where the state has authority, the state DOT is certainly open to and receives input from the city or county on some access requests."
- VA: "See above response (question 32) but for entrance type and design, more restrictive requirement applies."
- VA: "Coordination meetings also occur, but if a locality as a more restrict driveway spacing policy, their policy will govern, over VDOT's."

### **34. Does your agency have an appeals process?**

- Yes (Please proceed to Question 35.) (38)
- No (Please skip to Question 38.) (13)
- No Answer (7)

#### **Comments:**

- AK: "driveway denials,"
- AZ: "Currently all decisions all access decisions can be appealed"
- CA: "All decisions from staff engineers can be appealed on up the chain of command to higher officials."
- CO: "Should the permittee or applicant object to the denial of a permit application by the Department or object to any of the terms or conditions of a permit placed there by the Department, the applicant and permittee (appellant) have a right to appeal the decision to the Commission."
- FL:   
"<http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/625010021.pdf>"
- FL: "Spelled out in Florida Statutes and Florida Administrative Code. The appeal process for a denied permit is spelled out in the Department's Notice of Intent to Deny form."
- GA: "Any decisions made can be appealed."
- GA: "Turn lanes, driveway location"

- GA: "Any decision related to access management can be appealed."
- GA: "Decisions regarding roadway improvements (auxilliary lanes), spacing, turn movement restrictions, almost anything can be appealed. Typically the appeal will move up through the Department if driven by the applicant, up to the Chief Engineer or Commissioner."
- IA: "Any decision may be appealed."
- KY: "driveway location, access denial, other access requirements"
- LA: "Traffic Impact Study disputes can be appealed."
- MD: "Appeals of approval decisions are generally to the next higher level of manangement within the organization. In some instances, parties chose to appeal to local elected officials, the Secreatry Maryland Department of Transporation (MDOT) and others. These appeals continue to involve the SHA offices in briefing and advising higher level MDOT and SHA management on decision and recommendations."
- ME: "denials conditions placed on the applicant."
- MO: "If guidance from EPG 941.19 "Sight Distance for Driveways" has been followed and the request was denied by the Permit Staff and the District Engineer, the decision can be appealed. (Appeals Process EPG 941.18)"
- MS: "Any"
- MT: "Denial of Access, mitigation requirements, classification of approach(residential/farm field)."
- NC: "Not sure of specifics"
- NC: "Page 23 NCDOT Driveway Manual 1) When an applicant objects to DENIAL of a Permit or 2) Objects to any of the terms or conditions placed on the PERMIT"
- NH: "driveway approved or denied may be appealed"
- NJ: "Denial of permits and unreasonable conditions of approved permits can be appealed. Modifications and revocations of permits by the NJDOT can be appealed."
- NM: "All appeals are first reviewed by the Access Control Committee, the sent to the Cabinet Secretary."
- OH: "Variance denials."
- OR: "1. Denial of approach 2. Mitigation measures 3. Closure/removal of approach 4. Denial of deviation request 5. Decision to modify requirement of construction permit"
- RI: "As a result of the review, the application will be either approved as submitted within standard conditions, approved with additional conditions, or denied as submitted. The applicant will be notified by mail of the decision."
- SD: "An appeal process has been developed for all access applications that have been denied."
- TX: "All."
- UT: "Any denial or condition of a permit can be appealed."
- VA: "Any."
- VA: "many, even including (I am ashamed to admit) sight distance."
- VT: "All Section 1111 decisions can be appealed; first for an agency administrative hearing, second to the State Transportation Board and third to Superior Court (ultimately State Supreme Court)."
- WA: "see Deisgn Office-Access and Hearings Unit website <http://www.wsdot.wa.gov/Design/accessandhearings/>"
- WA: "Input for this should come from WSDOT Region Offices"
- WA: "Any access issue can be appealed"

- WI: "IF A DRIVEWAY PERMIT APPLICATION IS SENT IN AND DENIED - IT CAN BE APPEALED BY THE PROPERTY OWNER OR THE PERSON APPLYING FOR THE PERMIT."
- WV: "Any decision of the Commissioner of Highways adversely affecting a legally protected property interest may be appealed in accordance with the procedures established by Legislative Rule in 157 WV CSR 1.3. Decision may also be appealed to Circuit Court. Decisions granting, denying or restricting commercial or residential subdivision access are governed by the procedural requirements of WV code Chap. 17, Article 4, Sections 47-53."
- WY: "Any access denial can be appealed."

### **35. What decisions can be appealed? (Please explain.)**

- AK: "driveway denials,"
- AZ: "Currently all decisions all access decisions can be appealed"
- CA: "All decisions from staff engineers can be appealed on up the chain of command to higher officials."
- CO: "Should the permittee or applicant object to the denial of a permit application by the Department or object to any of the terms or conditions of a permit placed there by the Department, the applicant and permittee (appellant) have a right to appeal the decision to the Commission."
- FL:   
"<http://www2.dot.state.fl.us/proceduraldocuments/procedures/bin/625010021.pdf>"
- FL: "Spelled out in Florida Statutes and Florida Administrative Code. The appeal process for a denied permit is spelled out in the Department's Notice of Intent to Deny form."
- GA: "Any decisions made can be appealed."
- GA: "Turn lanes, driveway location"
- GA: "Any decision related to access management can be appealed."
- GA: "Decisions regarding roadway improvements (auxilliary lanes), spacing, turn movement restrictions, almost anything can be appealed. Typically the appeal will move up through the Department if driven by the applicant, up to the Chief Engineer or Commissioner."
- IA: "Any decision may be appealed."
- ID: "All"
- KY: "driveway location, access denial, other access requirements"
- LA: "Traffic Impact Study disputes can be appealed."
- MD: "Appeals of approval decisions are generally to the next higher level of managemnt within the organization. In some instances, parties chose to appeal to local elected officials, the Secreatry Maryland Department of Transporation (MDOT) and others. These appeals continue to involve the SHA offices in briefing and advising higher level MDOT and SHA management on decision and recommendations."
- ME: "denials conditions placed on the applicant."
- MO: "If guidance from EPG 941.19 "Sight Distance for Driveways" has been followed and the request was denied by the Permit Staff and the District Engineer, the decision can be appealed. (Appeals Process EPG 941.18)"
- MS: "Any"
- MT: "Denial of Access, mitigation requirements, classification of approach(residential/farm field)."
- NC: "Not sure of specifics"

- NC: "Page 23 NCDOT Driveway Manual 1) When an applicant objects to DENIAL of a Permit or 2) Objects to any of the terms or conditions placed on the PERMIT"
- NH: "driveway approved or denied may be appealed"
- NJ: "Denial of permits and unreasonable conditions of approved permits can be appealed. Modifications and revocations of permits by the NJDOT can be appealed."
- NM: "All appeals are first reviewed by the Access Control Committee, then sent to the Cabinet Secretary."
- OH: "Variance denials."
- OR: "1. Denial of approach 2. Mitigation measures 3. Closure/removal of approach 4. Denial of deviation request 5. Decision to modify requirement of construction permit"
- RI: "As a result of the review, the application will be either approved as submitted within standard conditions, approved with additional conditions, or denied as submitted. The applicant will be notified by mail of the decision."
- SD: "An appeal process has been developed for all access applications that have been denied."
- TX: "All."
- UT: "Any denial or condition of a permit can be appealed."
- VA: "Any."
- VA: "many, even including (I am ashamed to admit) sight distance."
- VT: "All Section 1111 decisions can be appealed; first for an agency administrative hearing, second to the State Transportation Board and third to Superior Court (ultimately State Supreme Court)."
- WA: "see Design Office-Access and Hearings Unit website <http://www.wsdot.wa.gov/Design/accessandhearings/>"
- WA: "Input for this should come from WSDOT Region Offices"
- WA: "Any access issue can be appealed"
- WI: "IF A DRIVEWAY PERMIT APPLICATION IS SENT IN AND DENIED - IT CAN BE APPEALED BY THE PROPERTY OWNER OR THE PERSON APPLYING FOR THE PERMIT."
- WV: "Any decision of the Commissioner of Highways adversely affecting a legally protected property interest may be appealed in accordance with the procedures established by Legislative Rule in 157 WV CSR 1.3. Decision may also be appealed to Circuit Court. Decisions granting, denying or restricting commercial or residential subdivision access are governed by the procedural requirements of WV code Chap. 17, Article 4, Sections 47-53."
- WY: "Any access denial can be appealed."

### **36. What is the basis for the appeals process? (Please explain.)**

- AK: "initial review by region, denial then formal appeal to headquarters, hearing by hq chief engineer."
- AZ: "Land ownership. owner not in agreement with access decision"
- CA: "There is a wide variety of reasons for appealing the conclusions and recommendations from a staff engineer. They usually don't challenge the engineering reasoning. Most challenges have to do with economic hardship or benefits to the community outweighing the need for strict adherence to standards. The developer, usually with some local official championing their plight, will then fish for someone at a higher level that is agreeable to their cause."
- CO: "Any party who has received an adverse decision by the department of



transportation may request and shall receive a hearing before the transportation commission or before an administrative law judge from the department of personnel, at the discretion of the transportation commission."

- FL: "see 35"
- FL: "Varies case by case."
- GA: "They feel that what they are requesting can be installed or go in their favor."
- GA: "Written letter explaining why they cannot meet the criteria asked for."
- GA: "Usually it is the cost involved in making the required road improvements."
- GA: "The appeal process is based on the need as presented by the developing party. Some situations involve unique or extenuating circumstances that may be considered if basic safety guidelines are met. The appeal must be very specific, provide supporting data, presented in writing, and be addressed to the next higher level each time if denial is received."
- IA: "Undue hardship if the policy is enforced."
- ID: "Described in administrative rule"
- KY: "Administrative Regs"
- LA: "Administrative Code"
- MD: "The basis for an appeal has been a wide range of reasons. These include situations from the party disagreeing with the SHA decisions to appealing on the basis of conflicting criteria, interpretation of applicable standards/criteria and other reasons. In many cases, parties simply pursue a reversal of decisions because they believe they are not required to comply with the decision or it is considered unreasonable."
- ME: "Must be the applicant need to state the reason you are aggrieved and the relief you are looking for"
- MO: "To allow the property owner another chance to prove that: - the denial will result in a situation where there is not reasonable access to properties or businesses that are affected, - the denial of an access permit or other feature will impose an undue financial hardship on the applicant and, - the applicant's proposal for access will result in conditions safe for the motoring public"
- MS: "If a developer cannot meet the standards"
- MT: "To be responsive to land owners needs and concerns"
- NC: "The basis for the process is that in a State with 78,000 miles of state maintained roads, 100 counties, and 14 Highway Divisions and 40 district Engineers authorizing driveway permits - there is recognition that consistency across the state can be an issue and that given the complexity of many of the negotiated access plans there is the potential for fairness arguments and escalation of access issues."
- NH: "appeals may be base on any issue identified in policy"
- NJ: "Non compliance with the regulations contained in the Access Code."
- NM: "The request must first be presented to the Access Control Committee, then appealed directly to the Cabinet Secretary."
- OH: "When an applicant objects to the denial of a variance request the applicant may file an appeal in writing with the Office of the Director, Ohio Department of Transportation, or with his designee within thirty days of the notice of denial of the variance. The written appeal shall include reasons for the appeal and may include changes, revisions, or conditions that would be acceptable to the applicant."
- OR: "1. Incorrect application of rules 2. Differing interpretation of rules 3. Decisions by staff not authorized by rules 4."
- RI: "An applicant dissatisfied with the decision of the Department may appeal to the Director. The appeal must be in writing, and submitted to the Director within ten (10) days of the receipt of the decision. The appeal must include a copy of the decision."
- SD: "The landowner must apply in writing for an appeal within 20 days of receiving the denial."

- TX: "The requestor can simply ask for an appeal if they question the initial decision."
- UT: "Utah State Law requires any denial or condition of the DOT may be appealed."
- VA: "Regulation sets out the process."
- VA: "Applicant disagrees with the VDOT decisions and has the resources the fight it."
- VT: "Applicant feels aggrieved by agency decision."
- WA: "see Deisgn Office-Access and Hearings Unit website <http://www.wsdot.wa.gov/Design/accessandhearings/>"
- WA: "unknown"
- WI: "THIS IS TO REVIEW AT THE STATEWIDE LEVEL BY THE STATEWIDE TEAM AND THEY ARE TO MAINTAIN CONCISTANCY IN DECISION MAKING."
- WV: "Both of the aforecited appeals processes are authorized and established by legislative enactment."
- WY: "Just a request from an individual who has ahd their request for a permit denied."

**37. Who has the authority to decide an appeal? (Please explain.)**

- AK: "Chief Engineer, HQ"
- AZ: "Final authority are the courts"
- CA: "Just about anyone at a higher level than the staff engineer. This is why it is important for the staff engineer to be able to reasonably justify their conclusions and recommendations."
- CO: "Any party who has received an adverse decision by the department of transportation may request and shall receive a hearing before the transportation commission or before an administrative law judge from the department of personnel, at the discretion of the transportation commission."
- FL: "see 35"
- FL: "We try to work with the permittee in developing alternatives to address concerns. Otherwise, there is an administrative process in which our legal folks handle the appeal. I believe our Central Office legal unit has the authority to decide the appeal."
- GA: "Our State Office or Chief Engineer."
- GA: "The District Engineer"
- GA: "Distict Traffic Engineer, District Engineer and other higher authorities."
- GA: "District level- Traffic Engineer, District Engineer State leve- State Traffic Engineer, Director of Operations, Chief Engineer"
- IA: "District Engineer then Director of the DOT."
- ID: "Director of Idaho Transportation Department"
- KY: "State Highway Engineer (head of Highway Department)"
- LA: "The Deputy Secretary of the Department."
- MD: "The authority to decide an appeal ranges from the Governor to the SHA office involved in the particular decision. It is the SHA practice to resolve appeals at the lowest practical level. In many cases, the parties are asked to work directly with the Chief for SHA Engineering Access Permits Division to review the details, and explore opportunities to resolve the issue in a manner acceptable to SHA that maintains the safety and integrity of the roadway network. This process may include Senior Management level participation in the review process of specific areas of expertise."
- ME: "Commissione of Transportation"

- MO: "Step 1 - State Traffic Engineer Step 2 - Director of Operations Applications may seek legal remedies after the appeals process is exhausted."
- MS: "Access Management Review Committee appointed by Chief Engineer"
- MT: "Upper administration"
- NC: "The Driveway Permit Appeals Committee and the Chief Engineer (for concurrence) (see page 24 & 25 of NC Driveway Manual) Policy on Street and Driveway Access to North Carolina Highways"
- NH: "NHDOT Appeals Board"
- NJ: "For denial of permit or unreasonable conditions of an approved permit the first level of appeal is at the manager level. Final agency decision rests with the Division Director if a second appeal occurs. For modification of an access permit the appeal process is the same as above for denials. For revocation of an access permit, the first level of appeal is at the manager level but the final agency decision rests with the Commissioner of Transportation after a formal hearing at the Office of Administrative Law."
- NM: "The applicant"
- OH: "The Access Management Appeals Committee consisting of two selected ODOT officials and a representative of the Director."
- OK: ""
- OR: "Appeals for Region Review are decided by Region Manager. See administrative rules 0345. Appeals for Contest Case Hearing are decided by Administrative Law Judge. See administrative rules 0355."
- RI: "The DOT Director."
- SD: "The Department Secretary."
- TX: "State DOT Deputy Executive Director."
- UT: "We have two appeals. The first is a 3 person regional committee made up of maintenance, operations and traffic engineers. They hear the appeal and make a recommendation to the statewide level. If the recommendation is denied at the statewide level the applicant may appeal to the region director. The region director's decision is the department's final decision and this may be appealed judiciously."
- VA: "Depends upon item being appeals, but generally starts at District Administrator level (sight distance items can only be appealed to Chief Engineer, however)."
- VA: "Ultimately, the Chief Engineer or Commissioner, but certain decisions can be made by the relevant (one of nine) District Administrators."
- VT: "Hearing Office, Transportation Board or courts."
- WA: "see Design Office-Access and Hearings Unit website <http://www.wsdot.wa.gov/Design/accessandhearings/>"
- WA: "unknown"
- WI: "THE PERSON APPLYING FOR THE PERMIT."
- WV: "The Commissioner of Highways is authorized to make determinations respecting access or other issues appealed pursuant to 157 WV CSR 1.3. Appeal of decisions by the Commissioner may be appealed to Circuit Court and, in turn, to the WV Supreme Court."
- WY: "Access Review Committee."

**38. As part of your program, are there provisions for the preparation of Access Management Plans or Corridor Management Plans?**

- Yes (Please proceed to Question 39.) (29)
- No (Please skip to Question 46.) (25)
- No Answer (4)

**39. Who is involved in preparation of the Plan? (Please explain.)**

- AR: "Planning staff and appropriate stakeholders such as cities and MPO"
- AZ: "The local jurisdiction, land owners and the state"
- CA: "It is my understanding that this is being worked on at HQ; however, I do not know who is involved."
- CO: "Either the Department or the appropriate local authority may, at its discretion, develop an access control plan for a designated portion of state highway. The plan must receive the approval of both the Department and the appropriate local authority to become effective. This approval shall be in the form of a formal written agreement signed by the local authority and the Chief Engineer of the Department."
- DE: "Planning section is involved. We have a person that is involved in Corridor management for 3 or our selected roads."
- FL: "Local Governments, residents, businesses, FDOT"
- FL: "The Department's Planning and Traffic Operations units are the primary participants internally. Any access plan is coordinated with local governments and any final plans would be presented to the public in public information meetings."
- GA: "Access Management engineer and Supervisor, District Traffic Engineer and higher authorities"
- GA: "Usually the plan is initiated by the local government and coordinated with GDOT. These are triggered by changing land use plan or rezoning beginning in a developing area. Smaller sections are handled at a district level, larger sections and corridors by State Traffic Operations Office, Access Management Supervisor and Traffic Engineer. When State planning office identifies a corridor, the access management plan is incorporated in the planning and design process; combining drives, secondary access roads, purchase of access rights."
- HI: "We are currently in the process of developing an Access Management program which may result in Access Management Plans and/or Corridor Management Plans"
- IN: "Access Management Plans and Corridor Plan process under development"
- KS: "KDOT, local partners (city and county), consultants"
- KY: "Planning - lead Multidisciplinary team Sometimes local advisory team"
- MD: "Primary involvement includes regional planners, traffic operations, local jurisdiction planning and public works staff. There is coordination with engineering access permit, right of way and various design staff as necessary."
- MD: "Primary involvement includes regional planners, traffic operations, local jurisdiction planning and public works staff. There is coordination with access permitting, right-of-way and design staff as necessary."
- MT: "When a highway or portion thereof is identified as having access issues the District office nominates a project to study the problem and possibly implement access control and an access management plan. Usually a consultant is hired to go through the process. The final approval lies solely upon the Montana Transportation Commission."
- NC: "NCDOT, MPOs, RPOs, Local Govts, and other land controlling jurisdictions (such as the Corps. of Engineers)."
- NC: "Transportation Planning Division & Mobility & Safety Division & Host Division Operations Staff"
- NJ: "The planning area of the NJDOT, the municipality and the county."
- NM: "The applicant, the applicant's agent and the affected District"
- NY: "Such plans are generally prepared by a consultant as directed by a working group comprised of NYSDOT, local government staff and officials, businesses, and special interest representatives. Technical management is generally provided by NYSDOT and 1 or more local planners."

- OH: "Locals with oversight by ODOT."
- OR: "Local governments, identified stakeholders, citizens, property owners."
- SD: "Access Management Engineer and Planning & Engineering Department personell"
- TX: "Local agencies and the State DOT."
- UT: "DOT, local cities, counites and municipalities."
- VA: "Trqansportatin and Mobility Planning Division of VDOT, Planning Dsistrict Commissions, and the local government."
- WA: "Access Management Plans: typically the Access Unit in each Region Corridor Plans: typically the Planning Office in each Region, with involvement from related Region office and external local stakeholders"
- WA: "It may be the WSDOT Region or a Metropolitan Planning Organization"
- WV: "If plan is developed, Engineering, Traffic Engineering, Right of Way and Planning Division."

#### **40. Why would a Plan be developed? (Please explain.)**

- AR: "If determined and agreed upon by agencies (state, MPO, and city) that the need to preserve a developing highway corridor wehre a divided median facility is to be constructed as part of a widening/improvement project is justified and warranted. Also, an agreed upon Access Management Plan and agreement by multiple government agencies is seen as beneficial to all parties to help withstand any potential pressure from property owners or developers requesting exemptions (e.g., for a median break)."
- AZ: "In the case of a road reconstruction and future large developments"
- CA: "Consistency among the 12 Caltrans Districts."
- CO: "An access control plan provides the appropriate local authority and the Department with a comprehensive roadway access design plan for a designated portion of state highway for the purpose of bringing that portion of highway into conformance with its access category and its functional needs to the extent feasible given existing conditions. The plan should achieve the optimum balance between state and local transportation planning objectives, and preserve and support the current and future functional integrity of the highway."
- DE: "preserve capacity on 3 critical roads in the state."
- FL: "When a local government or FDOT thinks that using the existing standards would not be specific enough"
- FL: "Developing an proper access plan primarily helps safety and efficiency of a corridor. When done with local government approval, having the plan helps tremendously in deciding access issues where developers feel entitled to median openings. With an access plan in place, we can incrementally implement the plan when developers make changes on the roadway related to their project traffic."
- GA: "To develop a plan for future access to undeveloped property."
- GA: "If a roadway is improved, widened, it is expected that the improvement in mobility will attract development. If properties along a roadway are under rezoning, the local gov. will revise land use plan."
- To provide greater consistency, transparency to land owners, coordination and planning with other agencies, etc
- KS: "If it is a high growth corridor or a corridor with potential for development, KDOT may decide to put a corridor plan in place."
- KY: "Improve AM, traffic flow, safety Upon request & support by local government"
- MD: "In the past it's typically been an attempt to get plans in place along major arterials in suburban and rural areas where we do not have a lot of existing access controls before large scale strip development occurs. As part of routine coordiantion

with local jurisdictions Regional Planners may suggest or recommend candidate corridors for development of plans. We would seek support from the local jurisdiction before proceeding."

- MD: "In the past it's typically been an attempt to get plans in place along major arterials in suburban and rural areas where we do not have a lot of existing controls - before large scale strip development occurs. As part of routine coordination with local jurisdictions Regional Planners may suggest or recommend candidate corridors for development of plans. We would seek support from the local jurisdiction before proceeding."
- MT: "A highway of portion of highway is identified as having access issues."
- NC: "Due to high growth along a corridor in order to protect the integrity and function of the roadway (to guide development and improvements in the corridor)"
- NC: "To emphasize the strategic functional nature of the corridor and to provide the justification for the more assertive/protective strategies that will need to be applied."
- NJ: "To provide an operating plan with regard to access based on a vision of development to occur in a section of state highway."
- NM: "To establish or modify access control on a new or existing facility."
- NY: "In advance of a project, as an MPO or NYSDOT requirement to advance a project to the TIP, or at the behest of a locality which is specifically interested in reducing the traffic impacts of development."
- OH: "To establish access locations and allowable movements in a developing corridor so that locals can coordinate separate developments over time in a consistent and planned way."
- OR: "Required by administrative rules. See rules 0155 (Access Management Plans and Interchange Area Management Plans) and 0285 (Project Delivery). Link provided in question #29."
- SD: "If an area is developing rapidly and we want to have a stronghold on the access, a plan will be developed."
- TX: "Projected development."
- VA: "For specific problem corridors or to address particular local needs."
- WA: "To help explore existing and forecasted future conditions, identify needed improvements/changes in the corridor For Access Management Plans, please contact Mr. Leroy Patterson"
- WA: "Could be for traffic impact or to initiate mitigation"
- WV: "Required by Fed. Govt. as part of project approval process."

#### **41. What is included in the Plan? (Please explain.)**

- AR: "1. An agreement stating: a. the parties involved b. description /bounds of corridor c. statement of purpose and authority d. administration of plan, such as permit application process, and a process for exceptions and amendments. 2. The Plan itself: a. outline of concept and elements, such as median break spacing and driveway spacing b. identification of all median breaks and all driveways and intersecting streets c. description of rationale for each median break and any conditions"
- AZ: "depends on the type of roadway development land uses etc. they are developed for specific areas and would be hard to name everything included."
- CA: "I do not know."
- CO: "The access control plan shall indicate existing and future access locations and all access related roadway access design elements, including traffic signals, that are to be modified and reconstructed, relocated, removed, added, or remain. The plan shall not preclude the current or future accommodation of other transportation modes of

bicycles, pedestrian and transit. All traffic control devices or modifications shall meet the requirements of the M.U.T.C.D. as required by state and federal statutes. To the extent practical the plan shall meet the functional characteristics and design standards of the assigned category and conform to all standards and specifications in the Code. To determine the sufficiency and ensure that the plan will be successful, a study will be completed incorporating the appropriate elements of Code section 2.3 and included as supporting information for Department review. At least one advertized public meeting shall be held during the development phase of the plan. All property owners of record abutting the state highway within the plan limits shall be notified by the Department or the appropriate local authority of the proposed plan and afforded the opportunity to submit any information, data and agreements regarding the proposed plan."

- CT: ""
- DE: "developed concept plans for the corridor."
- FL: "Varies"
- FL: "For a median access plan, we have all existing median openings and signals, along with spacing inventoried. For the proposed plan, we show existing, proposed, and spacing & type of planned openings."
- GA: "Driveway locations, proposed median breaks, signals, etc."
- GA: "Full corridor study, site plans of all properties with existing and proposed developments, existing conditions, utilities, existing access, proposed access for existing and future development."
- KS: "Traffic analysis, traffic projections, access management plan, current and future land use analysis, legal and regulatory analysis, environmental constraints evaluated, public input, and recommended improvements to the highway and surrounding street network."
- KY: "Map Access restrictions Sometimes AM improvements Access Standards"
- LA: ""
- MD: "Location of existing and proposed entrances, driveways; closure of existing and proposed entrances; closure of median openings or modifying the locations median crossing; cross-parcel property connections, service roads, consolidated entrances, recommended access control and/or parcel purchases."
- MD: "Location of entrances / driveways; driveway / entrance closings; median opening locations or recommended median closings; cross parcel connections, service roads, consolidated entrances, recommended access control / parcel purchases."
- MT: "Inventory of existing approaches and lane configuration, analysis of what is causing the problem, and recommendations of the modification the should be implemented."
- NC: "long-term plan/design short-term plan/design public involvement implementation plan land use element (if applicable) environmental analysis"
- NC: "This would be case dependent - but the report would provide the basis for the effort - including operational and safety profiles and recommendations. The report would be utilized to support future efforts and to serve as a record of the needed improvements along the corridor and the "why" for the many challenges as to why the agency was handling access differently along the involved corridor. Please Refer to: <http://www.ncdot.org/doh/preconstruct/tpb/SHC/implementation/Systems/Studies/Optional/>"
- NJ: "A report and plan sheets are included. Details can be found in subchapter 6 of the Access Code which is on the NJDOT website."
- NM: "The level of access control (full, limited or managed), full intersection spacing, median opening spacing (limited intersections), and procedures for request for modification of access control, if allowed."

- NY: "Basically resembles a TIS with the following additions: embraces a much wider area, looks at a range of alternatives that are generally not considered in a typical TIS/corridor plan, more complete integration of local, non-traffic, objectives, and extends these to the selection of preferred alternatives. Finally, the recommendations almost often included changes in zoning as a priority."
- OH: "Generally access locations, traffic controls, and service roads for the plan area."
- OR: "See admin. rules 0155. Link in question #29."
- SD: "Access spacing and density requirements."
- TX: "May include access spacing, median types, openings, turn lanes, etc."
- UT: "Corridor access spacing requirements and signalized intersection requirements"
- VA: "Anything necessary--from spacing to service roads to entrance design."
- WA: "Plans are at the WSDOT Region offices"
- WV: "Identify preferred access locations and type (at-grade vs. grade separated)."

#### 42. Who pays for the Plan? (Please explain.)

- Combination of state and local government(s) (9)
- State (6)
- Varies depending on agency involvement (5)
- Local government(s) (1)
- Others (1)
- Unknown (2)
- No Answer (34)

##### Comments:

- AR: "AHTD and/or local MPO"
- AZ: "That also depends on who is involved and what agreements are made."
- CA: "I do not know."
- CO: "There are no formal designation for the sharing of the cost. It is normally handled by the cooperation among all stake holders."
- DE: "DelDOT"
- FL: "cooperative FDOT and local governments"
- FL: "So far, our plans on state roads has been paid for by the Department."
- GA: "No cost"
- GA: "If the need is driven by development, the developer will need to provide study and submit proposed access plan to agency. If agency identifies need, they will provide study or partner with local govt."
- KS: "Shared between KDOT and local partners."
- KY: "Typically KY Transport Cabinet"
- LA: ""
- MD: "The State Highway Administration (DOT)."
- MD: "The State Highway Administration (DOT)"
- MT: "Montana Department of Transportation(MDT), usually."
- NC: "Depends on the study, but recently it's been a combination of NCDOT, MPOs, and local govts"
- NC: "Varies However the partnering Agencies and involved Planning Organizations and/or Municipalities would likely participate financially as well."
- NJ: "It is usually split among the parties involved."
- NM: "The responsible agency (state or local)"
- NY: "It varies. we pay for some, the communities pay for some, other



- agencies may pay for them and we ride along."
- OH: "Generally the local agency."
- OR: "Depends on who initiates, but so far we have paid for most of them."
- SD: "SDDOT"
- TX: "The entities involved contribute their time."
- UT: "The plan is done administratively between the city, county or municipality and each entity pays their own cost for participation."
- VA: "Varies, state planning funds can be used."
- WA: "May be WSDOT or a combination of WSDOT and jurisdictions"
- WV: "DOH and/or FHWA"

#### **43. How is the Plan implemented? (Please explain.)**

- AR: "Through the driveway permit process and highway widening and improvement projects"
- AZ: "As land is developed and the highway is improved."
- CA: "I do not know."
- CO: "The plan must receive the approval of both the Department and the appropriate local authority to become effective. This approval shall be in the form of a formal written agreement signed by the local authority and the Chief Engineer of the Department. After an access control plan is in effect, modifications to the plan must receive the approval of the local authority and the Department. Where an access control plan is in effect, all action taken in regard to access shall be in conformance with the plan and current Code design standards unless both the Department and the local authority approve a geometric design waiver under the waiver subsection of the Code."
- DE: "As development occurs or as pieces of the plan are funded."
- FL: "meetings, plans, adoption by local government and FDOT District"
- FL: "Median corridor plans are sometimes implemented by segment through widening or safety projects. Other times it is done incrementally when impacted by connection permits or by a small improvement project when there is spot safety issue."
- GA: "An outline of the plan is retained and consulted when a new access point is proposed in the area."
- GA: "Either the agency has a planned project, or the property owners are required to build connecting elements as their land is developed."
- KS: "At the completion of the plan, it is adopted by the local partners by resolution and they sign an interlocal cooperation agreement which states they will work together to implement the plan. By signing the agreement the local partners become eligible for State corridor funding to construct the recommended improvements."
- KY: "Joint effort between KYTC and local planning/govt"
- MD: "Through development review process, incorporation into future capital program projects and utilization of access control funding to purchase recommended control/parcel purchases from willing sellers (if not part of a capital project)."
- MD: "Through development review process, incorporation into future capital program projects and utilization of access control funding to purchase recommended control / parcel purchases from willing sellers (if not part of a capital project)"
- MT: "Plan is adopted by MDT on some projects, an access control resolution is executed by the Montana Transportation Commission."
- NC: "By NCDOT and the local govts using incorporating the plan's recommendations into their decision-making along the corridor"
- NC: "In some cases the Plan may be implemented through the Transportation Improvement Program (TIP) process as one or more freestanding projects. In most cases the corridor will be treated more incrementally with multiple projects for multiple

locations and improvements - often taking advantage of opportunities to modify/improve the corridor with modified or closed crossovers, grade separations, restricted movements on cross roads, etc."

- NJ: "Access permit applications are reviewed for conformance to the access management plan and not just the access code."
- NM: "Through adoption by the local governing body (city or county commissions usually) or by the State Highway Commission for state managed routes."
- NY: "The most successful plans have been implemented via shared responsibilities: they rezone we do capital projects. But there are outstanding examples of communities that have made major gains just through rezoning, and where we have made similar gains through capital projects."
- OH: "It is kept on record and referred to as developments come on-line."
- OR: "See admin. rules 0155(2). Plans are adopted by the commission. State statute requires local plans to be consistent with state plans and vice versa. Local governments are expected to modify plans, codes, and ordinances as needed to be consistent with state plans."
- SD: "Through coordination between the State and the local agency."
- TX: "Implemented in future construction projects and permit reviews."
- UT: "An agreement"
- VA: "Depends upon locality, but at a minimum, can be implemented through land development process (as land develops or re-develops)"
- WA: "unknown"
- WV: "Design coordinated with provisions and recommendations of plan."

#### **44. How frequently have such Plans be developed? (Please explain.)**

- AR: "Every few years or so as opportunities arise, though more frequent in recent years as the AHTD, MPOs, cities and the public achieve a higher level of comfort"
- AZ: "We currently have five in various parts of the state."
- CA: "I do not know."
- CO: "about 2 or 3 per year within the last 3 years."
- DE: "10 years ago?"
- FL: "don't know"
- FL: "It varies by corridor. It is as often as we evaluate corridors for widening alternatives. Also, when we identify a pattern of median related crashes, we will conduct a corridor safety study that often ends up recommending a segment of access management."
- GA: "Frequently, but less now than in the past."
- GA: "State roadway and improvement projects incorporate access management in the planning, acquisition, and design phases. Local govt.s when land use plans change and rezoning is requested along roadways. State and local planning on corridors which have been over developed or new development is expected based on projected growth and development patterns."
- KS: "Initiated approximately 2 per year for the past 3-4 years."
- KY: "Less than 10 over the last decade"
- LA: ""
- MD: "We first developed most of SHA's access management plans back in the late 1980s and early 1990s. We have developed a few new ones in the last few years. We recently updated most of the older plans as well and digitized them for future use."
- MD: "We first developed most of our access management plans back in the late 1980s and early 1990s. We have developed a few new one just in the last few years. We recently updated most of the older plans as well - and digitized them as well."

- MT: "About 2-3 a year."
- NC: "The plans have been developed as the need exists and funding is available. Six major studies have been undertaken in the last six years."
- NC: "There are probably less than 10 of these active in the entire State."
- NJ: "Rarely, only 2 have been approved and at least one more is under development."
- NM: "as needed, usually driven by development."
- NY: "All I have here is a WAG, 2-4 times a year."
- OH: "Infrequently. They typically are only done where obvious significant development pressure is anticipated, or in a retrofit situation to clean up the mess."
- OR: "Since 2000, the commission has adopted approximately 13 access management plans and 26 interchange area management plans."
- SD: "Only a few times. We are a rural State, our development patterns don't necessitate this activity on a very regular basis."
- TX: "Not frequently. Used more in major urban areas or rapidly developing areas."
- UT: "Depends on the municipalities willingness to co-operate. We review every five years."
- VA: "Occasionally--several major studies completed (Rte 13 and Rte 29 for example), others being planned."
- WA: "unknown"
- WV: "Once. Corridor L."

#### **45. How successful have these Plans been? (Please explain.)**

- Successful (13)
- Mixed (6)
- Unknown (5)
- No Answer (34)

##### **Comments:**

- AR: "So far, in general, the plans have been successful in that they were all done with local support, there have been few contests or exceptions, and have been received in a generally positive light by the media and locals."
- AZ: "So far they are working well"
- CA: "I do not know."
- CO: "they are fairly successful. Obviously anytime there are conflict of interest among agencies with regard to land use decisions and development objectives, the plan becomes disputable among the involved agencies. However in general they are beneficial and effective. It is of importance to mention that these plans do not impose any financial burden on any of the agencies involved and are rarely litigated."
- DE: "Ran out of money a few years ago, so now we only have the ability to do improvements when developments occur."
- FL: "don't know"
- FL: "Fairly successful and very helpful procedurally."
- GA: "moderate success"
- GA: "Some have been very successful, usually if incorporated early enough. Retro fits of over developed corridors have been successful if methods are forceful enough; medians and intersection improvements. Small measures get small results."
- KS: "Mixed results depending on the cooperation of the local partners."
- KY: "Still too new to evaluate."

- MD: "The access control purchase element was very successful throughout the mid late 1990's. However, in the 2000's the pool of willing sellers along the dedicated access control corridors has for the most part appeared to have dried up. Furthermore, funding has been reduced considerably in recent years. We have been very successful in our coordination with local jurisdictions and our access permitting staff in coordinating elements of the respective plans via the developer review and mitigation process. We have also been successful in coordinating plan concepts into local master plan updates (goes both ways - sometimes it's the identification of AM strategies in a local plan that gets the ball rolling)."
- MD: "The access control purchase element was very successful throughout the mid -late 1990's. However, in the 2000s the pool of willing sellers along the dedicated access control corridors has for the most part appeared to have dried up. Furthermore, funding has been reduced considerably in recent years. We have been very successful in our coordination with local jurisdictions and our access permitting staff in coordinating elements of the respective plans via the developer review and mitigation process. We have also been successful in coordinating plan concepts into local master plan updates (goes both ways - sometimes it's the identification of AM strategies in a local plan that gets the ball rolling)."
- MT: "Varies project to project"
- NC: "The plans with a short-term component have seen more success than those with just long-term plans"
- NC: "To date the Plans have not been formally evaluated. Effectiveness TBD."
- NJ: "Limited success because of the process to modify them after approval. They appear to be more trouble than the value they provide."
- NM: "mostly successful, but their success depends on the willingness of the responsible agency. For state managed routes the success is greater due to the involvement of the Access Control Committee."
- NY: "What's your measure? By NYSDOT measures, very successful if too infrequent. By community measures, moderately to very successful if evaluated on their follow-through and local gains."
- OH: "Generally successful. The plan is valuable so that developers can see what's expected before they lay out a lot of time and money with an unacceptable plan."
- OR: "Somewhat successful. We are learning new tools and techniques with experience. We are getting better at coordinating review and input of various interests, including internal coordination among staff in various disciplines (i.e. roadway design, operations/maintenance, access management, traffic, etc). It is too early to judge long term effectiveness of most plans."
- SD: "I have only been involved with one plan to date. So far, this plan has been well received and implemented."
- TX: "Plans have been successful where local entities and state work together going forward."
- UT: "Very"
- VA: "Varies--Rte 13 plan reasonably successful due to buy-in from local governments."
- WA: "unknown"
- WV: "One constructed as indicated in plan."

**46. Is driveway reduction or consolidation considered in highway reconstruction projects?**

- Yes (Please explain below.) (51)
- No (2)
- No Answer (5)

Comments:

- AK: "reduction of driveways, consolidation of driveways, removal of driveways"
- AR: "In a conservative manner, if safety is an issue or as geometric design dictates, but not as part of any access management effort"
- CA: "Standards for the placement of driveways were very different in the past. Reconstruction projects pose an opportunity to bring things up to current standards."
- CA: "No real life experience."
- CO: "Joint and Cross access situations are encouraged when CDOT or local agencies are conducting highway improvement projects. Also an attempt will be made to bring existing accesses into conformance with the functional classification of the said state highway."
- CT: "Designers work with municipalities and property owners"
- DE: "not consistently though. I would like to see this on more projects."
- FL: "Where we can easy agreement with property owners, or if truly a safety hazard."
- FL: "When done properly, our reconstruction projects involve coordination with property owners to bring driveways into conformance with today's standards, as well as consolidating unnecessary driveways."
- GA: "When we have highway construction projects, access points are looked at and evaluated based on safety."
- GA: "Unneeded or poorly located driveways may be moved or combined."
- GA: "Whenever possible. State agency has more resources to purchase properties or RW, or restrict movements."
- HI: "Developers have asked for multiple driveway connections to our facility to serve individual parcels. We have required that these be consolidated into shared driveways as well as required internal roadways with single connection to control access"
- IA: "We always review and address access management on new highway projects."
- ID: "We encourage joint-use approaches and inter-parcel (cross access agreement) approaches."
- IN: "Depends on engineering analysis of roadway deficiencies"
- KS: "Highway reconstruction projects are reviewed through the field check process and agency plan review to determine if driveway closures and/or consolidation is feasible."
- MD: "During the project planning and final engineering phases of major capital projects, these measures will be considered. These projects go through a public review process; we will coordinate and work with property owners. Residential property owners seem to be much more receptive to such strategies than commercial property owners."
- MD: "During the project planning phase of major capital projects - these measures will be considered. Such projects go through a public review process; we will coordinate and work with property owners. Residential property owners seem to be much more receptive to such strategies than commercial property owners."

- ME: "We will remove or narrow driveways to meet our standards"
- MN: "During the scoping process, project managers review the Access Management guidelines and look for opportunities to redirect access to the local street system."
- MO: "Driveways are evaluated for safety, sight distance, and spacing, on a case-by-case basis, and if something can be done to help or remedy the situation, the solution is carried out, within financial capabilities and using good engineering judgement."
- MS: "project by project basis"
- MT: "We try to minimize access points when-ever and where-ever we can."
- NC: "Driveway access is usually considered in reconstruction projects, particularly with projects on Strategic Highway Corridors"
- NC: "To a limited degree - historically what was existing is typically what is reconstructed. There have been some projects where improved internal connectivity have allowed consolidation and/or relocation of problematic driveways."
- ND: "If we reconstruct a section we will consider consolidation of accesses to achieve improved safety and traffic flows."
- NE: "Consolidation of drives to obtain optimum management is the goal on projects where we are buying right-of-way or access rights."
- NJ: "the access code provides guidance on number of driveways for lots and construction projects are also required to comply with the Access Code as reasonably possible."
- NV: "We are always looking for opportunities to reduce conflict points and consolidate driveways."
- NY: "Almost always if new ROW is required; usually to mostly where driveway densities and operations have a demonstrable affect on traffic operations and safety. The caveat is we rarely make access changes absent the agreement of the property owners involved."
- OH: "Usually depends on purpose and need of the project."
- OR: "See admin. rule 0285(1): "Access Management Plans and Access Management Strategies developed during project delivery must improve access management conditions to the extent reasonable within the limitation, scope, and purpose of the project and consistent with design parameters and available funds.""
- RI: "Driveways within a single develop are sometimes consolidated."
- SC: "Current access standards are applied as part of any reconstruction project."
- SD: "Our Administrative Rules are applied to each new reconstruction project. It often comes down to the negotiation with the landowner if we can actually "made" the project align with our internal rules."
- TN: "Use of frontage roads and possible reduction in the number driveways by consolidating two driveways for two different tracts into one driveway for those same two tracts or reducing the number of driveways for a single tract."
- UT: "We try to encourage shared accesses when we can."
- VA: "It is considered in the design process."
- VT: "Access control through agency projects is done by recommendations of the Utilities and Permits Unit. The final say is generally the decision of the Project Manager."
- WA: "I don't know"
- WA: "always look at reducing access points"
- WV: "Where possible, number of existing accesses is reduced."

- WY: "Wherever possible, accesses are reduced."

**47. Have any independent access management-related studies or research been undertaken at, or for, your agency?**

- Yes (Please cite below, and provide a web-link or paper copy if available.) (21)
- No (30)
- No Answer (7)

Comments:

- AK: "Parks Highway corridor planning study-Central Region"
- AR: "Several by Dr. J. L. Gattis with the University of Arkansas for the AHTD"
- CA: "I am not aware of any."
- CA: "See answer above for the current one. A new one has just been proposed in the LDR area to tracking the funding structures"
- CO: "IN 1984 a comprehensive study supported by FHWA was conducted on Arapahoe road. A copy of the study is available via FTP site, or hard copy. Let me know if you would like a copy. We have also conducted other studies in cooperation with local governments as part of corridor management plans"
- CT: "Typically included in corridor studies"
- FL: "They are all on accessmanagement.info"
- FL: "Our Traffic Engineering office in Tallahassee has completed research studies. Some of these are available online and the proper contact person should be noted on the same webpage."
- IA: "Available at the CTRE (Center for Transportation Research and Education) at Iowa State University. <http://www.ctre.iastate.edu/>"
- HI: "We are currently in the process of developing an Access Management program"
- IN: "<http://www.in.gov/indot/5614.htm>"
- KS: "I don't know of any. Please contact Richard McReynolds, Research Engineer at KDOT for more information on any independent research projects."
- KY: "Developing an AM Program Auxiliary Lane Guidelines TIS Guidelines Quantification of Benefits of Statewide Program All done by KY Transportation Center at UK"
- MN: "See the following: <http://www.oim.dot.state.mn.us/access/research.html#other>"
- MT: "99 Dye Management Group Report (No links or copies as this is very outdated)"
- NC: "Two are currently underway: Benefits and Capacity of Superstreets Economic effects of Access Management in North Carolina"
- NC: "NCDOT Research Efforts (ongoing) Economic Impacts of Access Management Operational & Safety Impacts of Access Management FY 2009 NCDOT Research Program RESEARCH PROPOSAL Project # 2009-09 Project Title Traffic Operational and Safety Evaluation of Access Management Case Sites Period of Performance August 16, 2008 – December 31, 2009"
- NE: "UNL Engineering Research has reviewed access"
- NJ: "Main Street designation. Update of statewide access level and classification."

- NV: "Please contact Sandi Stanio regarding the US50 Corridor Study. Her number: 775-888-7122"
- OR: ""Analysis of Traffic Accidents Within the Functional Area of Intersections and Driveways" "Traffic Safety and Parkway Development - Assessment & Evaluation" I will send the two studies above by email. Also Volume 2 of the Access Management Manual (see link in question #29) contains numerous technical papers."
- VA: "Connection spacing adjacent to interchanges study by Virginia Tech (sponsored by Virginia Transportation Research Council) is most recent <http://vtrc.virginia-dot.org/PubDetails.aspx?PubNo=08-CR7> but other research has been conducted by VTRC in the past."
- VA: "I say "no" because as the owner of most of the roads, we are involved in some way or another, even if we are not performing the study."
- WA: "uncertain"
- WA: "unknown"
- WV: "Corridor L in Fayette County."

**48. Have exclusive access management projects targeting the reduction or consolidation of driveways and median openings been attempted by your agency?**

- Yes (24)
- No (26)
- No Answer (57)

**Comments:**

- AZ: "They have been done as part of major reconstruction projects and have been very effective in improving safety and operations"
- CA: "I do not know."
- DE: "don't know the details."
- FL: "Do not understand the question"
- FL: "Yes, we have done quite a few projects to consolidate median openings. Most have been very successful in improving highway operations and safety."
- GA: "The only project of this type that I know of was never done."
- GA: "All have some measure of improvement, some of the urban area projects (SR 140, Jimmy Carter Blvd, DeKalb County, SR 10/US 78, DeKalb & Gwinnett Counties) have had large and sustained safety and mobility improvements."
- IA: "We have had general success in target access management applications. But, we have very significant political pressure when measures are taken."
- IN: "on a very limited basis"
- KS: "Very effective. An example would be the use of reverse frontage roads built to direct traffic to intersections with local roads or streets. Greatly reduces individual access points directly to the highway."
- KY: "Many roadway widening projects target access improvement."
- MD: "Many times reduction or consolidation of driveways is a primary component of the scope of a major capital project. The only example think of as a truly "exclusive" project was a case where we moved an access management component of a bigger future widening project forward as a breakout project. We did not have funding available to move the bigger widening project beyond the planning phase. However, the local jurisdiction and the DOT identified the access management component as a priority. The



SHA programmed that component as a separate line item in our capital program and funded it for design, right of way and construction. This involves the MD 32 Wellworth Way Access in Howard County MD, and details are available at the following website link: <http://www.marylandroads.com/WebProjectLifeCycle/ProjectInformation.asp?projectno=HO7562213>

- MD: "Many times reduction or consolidation of driveways is a primary component of the scope of a major capital project. The only example I can think of as a truly "exclusive" project was a case where we moved an access management component of a bigger future widening project forward as a breakout project. We did not have funding available to move the bigger widening project beyond the planning phase. However, the local jurisdiction and the DOT identified the access management component as a priority and we programmed that component as a separate line item in our capital program and funded it for design, right-of-way and construction. MD 32 / Wellworth Way Access in Howard County MD. <http://www.marylandroads.com/WebProjectLifeCycle/ProjectInformation.asp?projectno=HO7562213>"
- MN: "We have not done before/after studies yet on the projects."
- MO: "I don't know at this time."
- NC: "Projects where a median has been installed or modified have been very successful."
- NC: "US 70 (in progress) US 321 (completed) - Significant Improvement in Corridor Safety and preservation of operational integrity of major thoroughfare. Also See: <http://www.ncdot.org/doh/preconstruct/tpb/SHC/documents/>"
- ND: ""
- NE: "Very limited number of projects. It is too early in the process to determine effect."
- NY: "There have been no after-the-fact evaluations."
- OH: "Unknown. I'm not aware of follow-up studies."
- OR: "These project were part of a bonding program in 2001-02. They have not been evaluated with respect to improving highway operations and safety. No exclusive access management projects have been undertaken since that time."
- SC: "This has been on a case by case basis due to crash frequency at a given access point. We have not conducted a follow-up study of these locations."
- TX: "Project have been successful where state and local agencies undertook significant public involvement efforts preceding the project and local agencies have ordinances and regulations requiring joint and internal access."
- VA: "I do not know, and I am not sure if the project has been studied."
- VT: "Project not yet completed."
- WA: "uncertain"
- WA: "unknown"
- WA: "They have shown that it is difficult and that safety does improve"
- WI: "THEY HAVE WORKED VERY WELL."

**49. Have any education or training opportunities related to Access Management been provided within your agency?**

- Yes (47)
- No (6)

- No Answer (5)

Comments:

- AK: "Access mgmnt class"
- AR: "Several times over many years there have been workshops or conferences that focus on or included access management. More recently, an access management workshop hosted by a local MPO and FHWA with AHTD was held last fall ('08)."
- AZ: "We will be starting internal training when the manual comes out next month and will follow with external and web based training"
- CA: "There have been independent access management training courses offered. Some of our staff have attended some of these training courses."
- CA: "Caltrans provides training on Traffic impact studies not only to its staff, but also external local agencies, or even the consultants. Better coordination is expected when locals or consultants understand where Caltrans stands. Caltrans staff, sometimes together with Consultants and local agencies in one room. I am talking about the TIS guide training."
- CO: "all regional access managers and staff and any other interested local government involved in access management decisions. The response have been fairly good. Our most recent training in November of 2008 involved two day Traffic Impact studies and Access Control Planning which was attended by over 40 individuals from CDOT and other local governments."
- CT: "To traffic engineers and designers and the response has been good"
- DE: "attended an Access management conference and taken the access management course offered by NHI (I think)"
- FL: "All professionals, staff, consultants, and local governments"
- FL: "To Department employees and consulting engineers. I do not know the response level. This question should be directed to our State Access Management Engineer, Gary Sokolow, who oversees this training."
- GA: "We are having a question and answer sessions concerning Access Management in the upcoming weeks."
- GA: "Access Management Engineers and Supervisors- Training was provided in overall traffic engineering and access management principles."
- GA: "All Access Management Permit Engineers have taken NHI Course at least once, and internal Access Management Workshop. State Access Supervisor at TRB National Conference on Access Management. All NHI course responded with positive comments and results, State Supervisor responded very positively and obtained excellent source material and contacts at TRB Conference."
- IA: "I hosted a the NHI class on Access Management, location and design last year."
- ID: "All operations staff involved in access management. Training related to all aspects of access management is requested regularly."
- IN: "As part of our development of an access management guide---- training was well recieved"
- KS: "We provide training on access management and the Corridor Management Policy to District and Area level personnel across the state. They welcome the opportunity to understand access management better."
- KY: "NHI Course"
- LA: "NHS Access Management courses for DOTD staff."
- MD: "We provided an access management workshop to select regional planning and access permitting staff several years ago. Last July, MD SHA

hosted the 8th National Conference on Access Management registering approximately 40 members of SHA staff."

- MD: "We provided an access management workshop to select regional planning and access permitting staff several years ago. Last July, MD SHA hosted the 8th National Conference on Access Management - registering approximately 40 staff persons."
- ME: "We have met with many outside entities for banks, code enforcement officers, real estate agents and surveyors."
- MN: "Mn/DOT provides training to its districts every couple years and through functional group meetings such as the following: Permit Techs Conference, Design Engineers Conference, Traffic Engineers Conference."
- MO: "Anybody within MoDOT, cities, counties Some have been good, but there are always skeptics."
- MS: "We are just getting our first Access Management Guide finalized. We will be training MDOT personnel Staewide on the new manual"
- MT: "Internal/External mixed responses."
- NC: "Multiple presentations on the Strategic Highway Corridors within the Department NHI Access Management Class was offered in 2007 - there is a long-term goal to develop a specific NC AM course, however due to limited resources, this effort has been placed on hold."
- NC: "Training has been provided for District, Division and headquarters staff involved in driveway permit process and impact analysis. Training has also been extended to municipal and local staff and private engineering firm staff. NHI - ITE Transportation and Land Development Driveway Manual Training Access Management Three Day Workshop Pilot"
- ND: "We hosted an NCHRP course on access management approximately three years ago. We have also hosted a meeting with the South Dakota Department of Transportation."
- NE: "FHWA and NHI"
- NH: "staff are trained on policy"
- NJ: "We held an access workshop in 2003."
- NV: "To the traffic operations analysis section, Safety/Traffic and the District Traffic Engineers."
- NY: "planning, permitting, bike & pedestrian staff. generally positive responses greater integration of AM considerations in their activities"
- OH: "Taining has been done both internally and externally throughout ODOT. Turnout has been good and the Districts now are capable of managing access on their own without much guidance from Central Office."
- OK: "Traffic Engineers, Roadway Design Engineers: NHI Course "Access Management, Location and Design" Outcome: Recognized the need for a formal Access Management Policy"
- OR: "We have had several technical courses conduted by Oregon State University covering several topics focusing on engineering and technical considerations of access management. These courses typically include local government participants. The access management unit has made presentations at local government workshops and consultant conference and conducts a 2-day statewide access management workshop for internal staff approximately every 15-18 mos. We are currently considering how to be more proactive in outreach/communication efforts with real estate agents, elected officials, and attorneys. We usually get very positive feedback. We are also looking at ways to engage with economic development agencies."
- RI: "NHI Access Management Courses have been made available."

- SC: "In house training due to the updated guidelines."
- SD: "As the Access Management Engineer, I have gone around to the major communities within my jurisdiction and provided training to DOT and local individuals who have an interest and need to know about Access Management."
- TN: "Course development underway through LTAP and participated in ITE webinars. There have been no responses or outcomes yet."
- TX: "To state and local staffs. The outcome was more consistent application."
- VA: "T2 center has sponsored many NHI classes on Access Management (generally put on by Dane Ismart) available to designers, planners, and permits staff."
- VA: "Dane Ismart through out LTAP program. Anyone can attend these sessions, which I believe were reasonably well attended."
- VT: "No specific training within the past five (5) years."
- WA: "contact Mr. Leroy Patterson"
- WA: "unknown"
- WA: "Local governments, real estate persons, State departments, Design and Construction conf. Our training is very effective in getting the word out."
- WY: "Agency and local jurisdiction officials."

**50. Have any community outreach activities been undertaken by your organization with respect to access management?**

- Yes (31)
- No (20)
- No Answer (7)

**Comments:**

- AZ: "We have met with numerous development groups and major employers statewide, met with local officials and staff, land use agencies i.e., state land department, BLM, Forest service and 22 Indian Nations. Response has been mixed. Developers are wary to upset, Local governments, land agencies and tribes mostly favorable."
- CA: "I do not know."
- CA: "Yes. Caltrans even went out to set up outreach meeting with California Building Industry Association (CBIA), to explain the Caltrans positions on a statewide basis. There are regular interactions between Caltrans Districts and local agencies."
- CO: "At the request of communities and local governments we are willing and ready to provide informative sessions on the benefits of access management. many of such meetings are conducted as part of any access control/access management/corridor management plans. These are normally attended by public including the land holders, neighbors and developers."
- CT: "To municipalities during corridor studies. good response and information has been utilized by zoning officials"
- DE: "not recently."
- FL: "We have an active public outreach program on all corridor improvements."
- FL: "Anytime we modify median or driveway access, we contact the affected property/business owners. Sometimes this is done through public meetings, some by direct contact. We also include the local governments in our outreach for corridor median plans. Outcome varies, as many people are not pleased when their

median access is being restricted."

- HI: "Only in conjunction with specific projects"
- IA: "I have made several access management presentations to local planners and local jurisdiction groups."
- ID: "Local authorities and land use agencies. Better understanding and cooperation in coordination of land use planning and transportation planning and support for Transportation Access Plan (Access Management Plan) legislation."
- IN: "As part of our development of an access management guide---- training was well recieved"
- KS: "We take the opportunity to speak about access management at many local governmental meetings and college classes. The response is good and the outcome usually is favorable in that they are more agreeable to proposed reduction or consolidation of accesses once they understand the reasoning behind access management."
- KY: "On specific highway projects"
- MD: "Limited. At some project public meetings where projects have included extensive access management strategies, we have provided copies of the FHWA produced brochure "Safe Access is Good for Business". We have also made the presentations to local MPO's."
- MD: "Limited At some project public meeting where projects have included extensive access management strategies - we have provided copies of the FHWA produced brochure "Safe Access is Good for Business". Have made presentations to MPOs."
- ME: "municipal staff and those mentioned above"
- MN: "Mn/DOT presents to the League of Cities and County Engineers"
- MO: "There may have been some instances at the District level that I am unaware of."
- NC: "Multiple presentations on the Strategic Highway Corridors to external stakeholders A Highway Access class has been offered to stakeholders <http://www.ncdot.org/doh/preconstruct/traffic/congestion/docs/HAWorkshop.pdf>"
- NC: "For Specific Project Efforts US 70 Corridor - Public Hearings Response Mixed / audience dependent"
- ND: "We made our hosting of the NCHRP Access Management course available to local governmental entities."
- NE: "We invite local agencies to participate in training activities"
- NY: "To perhaps more than 600 community representatives, split roughly 4:1 between annual training programs and community focused presentations in target communities. Our experience suggests that we will be succesful in developing a collaborative project in something more than half of the communities which are the subject of a focused presentation, and that more than half of these communities will substantial revise their comprehensive plans and zoning based on the collaboration."
- OH: "Presentations have been given to several attorney groups with positive results. Some safety studies have generated the need for outreach when access management is needed."
- OR: "This is usually done in the context of project development, interchange area management plans or access management plans. Outcomes are generally positive with exception of people who may not like proposed changes to their access."
- RI: "Joint workshops have been held with the municipalities."
- SD: "See answer to #49."
- TN: "Discussion with local government staff and officials."
- TX: "Initially, several meetings were held with cities, private commercial

developers, and retail associations to explain the concept and need for access management."

- VA: "local governments and development community"
- VA: "Public information meetings, at 3 levels of technical detail for politicians, developers, and consultants. They were relatively well attended."
- VT: "The Policy and Planning Division has provided outreach to local municipalities with help from the regional planning commissions."
- WA: "uncertain"
- WA: "At the WSDOT Region Offices"
- WA: "Cities and towns. access training"

**51. Have your agency's access-related decisions been challenged in the courts?**

- Yes (Please describe below.) (27)
- No (Please describe below.) (19)
- No Answer (11)
- Don't Know (0)

**Comments:**

- AR: "Several instances in the 1960's were "reasonable access" and "direct access" were challenged, and more recently in 1991 relating to a divided median as aprt of a widening project"
- CA: "I do not know."
- CA: "State sued City of Fresno, County of Monterey, and others, esp. during the housing boom. But stopped several years ago."
- CO: "As mentioned previously, any access decision may be appealed by anyone proerty owner whose propety is negatively impacted by those decisions."
- CT: "No challenges that I know of."
- DE: "not sure"
- FL: "In 1995 our Permit rule 14-96 was challenged. We won"
- FL: "I assume so but cannot provide details. The ones I have heard about involve determination of reasonable access."
- GA: "Legal action against the state as a result of reduced or restricted access under state projects, or basis for condemnation actions."
- IA: "None that I am aware."
- ID: "Usually is related to issues of just compensation for "taking" access, but can be related to any of the issues checked in #52."
- IN: "State of Indiana v. Kimco"
- KS: "One example: We are to provide reasonable access to property which may not be direct highway access. The court has had to rule on what is considered "reasonable"."
- KY: "Don't know details."
- MD: "There are some older situations where SHA modified existing access through installation of a median and/or other treatments. The Annotated Code of Maryland includes some references to cases in the late 1950's throguh 1970's."
- MN: "We have been challenged regarding Mn/DOT's ability to close a median crossing without paying compensation (we won); and We have been challenged regarding Mn/DOT's ability to close an access if conditions were not met (we lost)."

- MO: "I don't know."
- MT: "Right-of-Way(ROW) Aquisitions Property Values Property Access"
- NC: "Not sure of outcome, since I'm not directly involved."
- NC: "One Recent Notable Case found for Developer - and against NCDOT. Issue pertained to off site improvements and negotiated traffic improvements for staged / phased multi-use commercial development."
- ND: "Not to any great degree."
- NE: "During condemnation proceedings"
- NJ: "Particularly our requirement that on Access Level 2 highways if a lot has the ability to get alternative access to another street it does not get access to the state highway. Our reegulation has withstood the challenges in the legal system. Revocations are sometimes challenged also, particularly as to loss of property value even though reasonable alternative access has been provided."
- NM: "Not to my knowledge, and not in recent history"
- NV: "I cannot think of one off hand, but I believe that there has been some. We try and take care of things at the staff level before it can get elevated to courts."
- NY: "I have not attempted to find out whether our access management actions have been the subject of court challenges. I do know there have been threats of court action, just not whether they've actually gone to court."
- OK: "Property owner attempted to cross state-owned property to access roadway that had restricted access."
- OR: "A couple of cases are currently in the pipeline. One deals with rights of owners of grandfathered approaches. A second case deals with reasonable access."
- RI: "I am not aware of any court challenges."
- SC: "The restriction of access to a right-in/right-out movements. The ruling was that SCDOT has the right to restrict movements at any access points. This determination was that the restriction was not considered a loss of access."
- SD: "We have had to go to court for different access related decisions. Access being denied has necessitated a trip to court in at least one instance."
- TN: "Land owners have sued us over condemnation issues and loss of access issues."
- UT: "We usually come to a mutually agreeable solution prior"
- VA: ""
- VA: "Not yet. At least not withing the last 20 years."
- VT: "US 7 Shelburne Road was the biggest case whereby the agency decision to divide highway was upheld."
- WA: "uncertain"
- WA: "unknown, the answer is at the WSDOT Region Planning office"
- WY: "There are two levels. We have gone to the first level which is a hearing process in front of a lawyer who acts as a "judge." The decision may be appealed from this process."

**52. On what basis were your agency's access-related decisions challenged in the courts?  
(Please check all that apply.)**

- Rational / essential nexus (Please specify below.) (6)
- No Answer (52)

- |   |                |
|---|----------------|
| • Access would not provide “reasonable access”(Please specify below.) (21)                          | No Answer (37) |
| • Lack of “direct access” (Please specify below.) (20)  | No Answer (38) |
| • Inequity relative to access allowed for other properties in the area (Please specify below.) (13) | No Answer (45) |
| • Reduction in property value (Please specify below.) (15)  | No Answer (43) |
| • Other (Please specify below.) (5)   | No Answer (53) |

Comments:

- AR: "The challenges have related to the definition of reasonable access and what constitutes taking of access without just compensation."
- AZ: "all of the above, too many to comment on"
- CA: "I do not know."
- CA: "It is Caltrans that sues local agencies, because local agencies keep on putting in developments but not allocate \$ for state road upkeep."
- FL: "The lawyers attacked everything in the rule"
- FL: "These are assumed. I have no direct information to provide."
- GA: "I don't have direct knowledge of many since I don't work in the RW office where most of these cases originate. All of these have been brought against the state on numerous occasions over the years, some successfully."
- IN: "Case under appeal State of Indiana v. Kimco"
- KS: "Over many years, we have been challenged on many access decisions. I was not personally involved in those cases, but I believe in most cases KDOT faired favorably on our decisions."
- MD: "The history in the courts is not specifically known without further research. We can state that all of these elements have been the basis for parties to appeal SHA decisions but without resulting in court actions."
- MN: "see above"
- MO: "I don't know"
- NC: "Consistency and Off Site Improvement Requirements"
- NJ: "Revocations often involve reasonable alternative access that is not equal to what existed before. many property owners seek damages for the same. Some existing access points are "grandfathered" while new ones are denied creating the impression of inequity. Denial of direct access even though alternative access is available is appealed because as a business decision they are not equal."
- NV: "not sure"
- OK: "Desire for a driveway to serve commercial extablishment, however, location was in a restricted access area."
- OR: "See questions # 51."
- RI: "No Court Challenges that I am aware of."
- SC: "Please see previous comments."
- SD: "The landowner wanted an access located too closely to other access points and with very poor sight distance. Thus, the access was denied and was instructed to come from another location deemed as not being "direct access"."
- TN: "Use of frontage roads. One property owner getting to keep more drives than another property owner. Installing access control fence or



changing how a property is accessed."

- VA: "The cases were decades ago, and the recently adopted Access Management Program takes them into consideration."
- WA: "unknown"
- WY: "State should pay for all mitigation."

**53. Were the U.S. Supreme Court cases of Nollan vs. California Coastal Commission or Dolan vs. City of Tigard cited in court rulings that affected your access management program?**

- Yes (4)
- No (24)
- No Answer (30)

Comment:

- CA: "I do not know."
- CA: "These two cases provided the basis for the Caltrans practice in terms of mitigating development impacts. As can be read from the guidelines for TIA preparation, nexus and proportionality are the basis."
- CO: "Not as far as I am aware of, I will send an inquiry to our state attorney for more information on this."
- FL: "Don't know."
- GA: "Don't know."
- KS: "We have copies of those court rulings, but I was not personally involved in it's affect on our program."
- MN: "Chapter 5 of the Access Management Manual. Traffic Impact Studies recognize the case with regards to requiring porportional responsibility for mitigation."
- MO: "I don't know."
- NC: "(Not to the best of my recollection - I will try to secure a copy of the ruling and forward it via e-mail)"
- NJ: "Don't know."
- NV: "not sure"
- OR: "The program was developed for the most part after these court decisions so that program has been built within these constraints. The ruling primarily affects the scope of mitigation requirements. See Administrative rule 0145(4)."
- SC: "I am not aware if this court ruling was utilized."
- SD: "I don't know."
- WA: "unknown"

**54. Is there an access management-related practice or procedure applied by your agency that you believe would be of particular value to other transportation agencies?**

- Yes (16)
- No (32)
- No Answer (10)

Comments:

- CA: "However, a consistent and well-supported guideline on AM is the key. So all developers will be treated the same way. The TIS guide and how impact fee is calculated. The fee management practice might also be of interest to our sister agencies."

- CO: "Having a statute to empower the access regulations and Code."
- FL: "concentrate on building medians for all multilane projects"
- FL: "If a state has no formal process, the Florida's framework (previously described) is a good model to consider copying."
- KY: "Classification system is stellar"
- MD: "The SHA would be interested in the results of answers provided by other states. We recently completed a corridor study for US 1 in Howard County MD working closely with the local jurisdiction in this effort to identify the corridor linearly (as the extent of US 1 in the County 11 miles) and the width of the corridor extended to major parallel barriers east and west of US 1: I-95 to the west and the CSX RR tracks to the east. Working closely with Howard County, the study identified a future typical section along US 1 that varied depending on the location and with respect to the County's new overlay zoning; identified locations for future traffic signals at certain public street intersections and at sufficiently spaced intervals; identified needed local street connections such that local land uses could access those future signals through a local network; identified missing pedestrian and bicycle connections as well; as well as recommendations for closure and consolidation of entrances that currently have direct access to US 1. Following the completion of the study SHA and the County executed a Letter of Agreement that outlined our collective commitment to implement recommendations of the corridor study and responsibilities to that end of each party. Furthermore, the County will be updating their US 1 Manual, which is adopted by council, based on the results of the corridor study. This will give the County and SHA more leverage in implementing the recommended access management strategies via the development review process. Go to this link: <http://www.co.ho.md.us/DPZ/Community/communityplanning.htm#route1> Then go to Final Corridor Strategy Report February 2008 (there will be links for each chapter)."
- MD: "We recently completed a corridor study for US 1 in Howard County MD. We worked closely with the local jurisdiction in this effort - identifying the corridor linearly as the extent of US 1 in the County (11 miles) and the width of the corridor extended to major parallel barriers east and west of US 1: I-95 to the west and the CSX RR tracks to the east. Working closely with Howard County, the study identified a future typical section along US 1 that varied depending on the location and with respect to the County's new overlay zoning; identified locations for future traffic signals at certain public street intersections and at sufficiently spaced intervals; identified needed local street connections such that local land uses could access those future signals through a local network; identified missing pedestrian and bicycle connections as well; as well as recommendations for closure and consolidation of entrances that currently have direct access to US 1. Following the completion of the study- SHA and the County executed a Letter of Agreement that outlined our collective commitment to implement recommendations of the corridor study and responsibilities to that end of each party. Furthermore, the County will be updating their US 1 Manual, which is adopted by council, based on the results of the corridor study. This will give the County and SHA more leverage in implementing the recommended access management strategies via the development review process. Go to this link: <http://www.co.ho.md.us/DPZ/Community/communityplanning.htm#route1> Then go to Final Corridor Strategy Report February 2008 (there will be links for each chapter)."
- MN: "Mn/DOT's detailed description of geometric conditions regarding driveways (Chapter 3 of the Mn/DOT Access Management Manual) and Mn/DOT's permitting process (Chapter 4)."
- NC: "Developing a corridor initiative for the major facilities in the state in order to efficiently move people and goods. The NCDOT Strategic Highway Corridors initiative, the MNDOT Interregional Corridors, FDOT Interstate Highway System are good examples."
- NC: "North Carolina's Improved Median CrossOver Guidelines were a good step forward for traffic operations and highway safety: <http://www.ncdot.org/doh/PRECONSTRUCT/traffic/congestion/CM/docs/MCGuidelines.pdf> Some Additional Tools are Available on NCDOT's Congestion Management Web Site (under Tools Header): <http://www.ncdot.org/doh/preconstruct/traffic/congestion/CM/> Also the School Traffic Calculator is a very useful tool for traffic impact and school traffic circulation and traffic

operational analyses:  
[http://www.ncdot.org/doh/preconstruct/traffic/congestion/CM/MSTA/docs/School\\_Calculator.xls](http://www.ncdot.org/doh/preconstruct/traffic/congestion/CM/MSTA/docs/School_Calculator.xls)  
 "

- ND: "Not in particular at this point."
- NJ: "The creation of an Access Code that has the enforceability of regulatory law is important as opposed to just policy."
- NM: "The establishment of the Access Control Manual is beneficial because all the rules and regulations are spelled out up front."
- NY: "We have been most successful in getting communities to adapt sound access management practices when we actively participated in THEIR planning and zoning efforts, rather than pulling them into a collaborative planning effort which is undertaken independent of their planning and zoning activities."
- OR: "Automated permit database that tracks and documents permitting process. Project delivery rules and procedures. See links in question #29."
- VA: "We require that any new signal on a Principal Arterial be complimented with an improved public right of way that provides access to the signal from the parcels adjacent to the parcel for which the development is proposed."
- WA: "unknown"
- WA: "Our access management is very good as a whole and I am out of time, but I think it would be a great example of access management."

**55. Would this practice or procedure make an appropriate case study to consider including in the Synthesis report?**

- Yes (12)
- No (7)
- No Answer (39)

**56. What would an ideal access management policy/document include? (Please check all that apply.)**

- |  |                |
|--|----------------|
| • Authority to manage access. (50)           | No Answer (8)  |
| • Authority to deny access. (49)             | No Answer (9)  |
| • Access spacing standards. (50)             | No Answer (8)  |
| • Geometric design standards. (47)           | No Answer (11) |
| • Traffic impact analysis requirements. (47) | No Answer (11) |
| • Other (Please explain below.) (7)          | No Answer (51) |

**Comments:**

- CA: "The most critical one is still the Authority, or AM Codes. One may argue that the Streets and Highways Code already grants Caltrans the authority to protect its roadway properties, but it is not detailed enough. Also outreach is also the key. The locals have different perspectives, mutual understanding is necessary."
- CO: "all the sections covered by the Colorado State Highway Access Code are essential and beneficial to be included in any comprehensive policy or document governing the management of access."

SECTION ONE  
 INTRODUCTION .....  
 ..... 1 1.1 Authority .....  
 ..... 1 1.2 Purpose .....  
 ..... 1 1.3  
 Organization of Code .....

..... 2	1.4 Implementation .....	2
..... 2	1.5 Definitions and Abbreviations .....	2
..... 2	1.6 Computation of Time .....	8
..... 8	1.7 Incorporation by Reference .....	8
..... 8	SECTION TWO ADMINISTRATION .....	8
..... 9	2.1 Purpose .....	9
..... 9	2.2 Access Category Determinations .....	9
..... 9	(1) The Commission Shall Maintain an Access Category Assignment Schedule .....	9
..... 9	(2) The Initial Assignment Process - Category Determinations .....	9
..... 9	(3) Subsequent Changes in Assigned Categories .....	9
..... 11	2.3 Permit Application Process, Obtaining a Permit .....	11
..... 11	(1) Determining the Issuing Authority .....	11
..... 11	(2) Pre-application Meetings .....	11
..... 11	(3) Preparing an Application .....	12
..... 12	(4) Sources, Data and Information Requirements .....	12
..... 13	(5) Traffic Impact Studies .....	13
..... 14	(6) Submitting an Application When the Department is the Issuing Authority .....	16
..... 16	(7) Processing of an Access Permit Application When the Department is the Issuing Authority .....	16
..... 16	(8) Submitting an Application When the Local Authority is the Issuing Authority .....	17
..... 17	(9) Processing of an Access Permit Application When the Local Authority is the Issuing Authority .....	17
..... 18	(10) Contents of an Access Permit .....	18
..... 19	(11) General Permit Issues .....	19
..... 19	(12) Access Requests by Local Authorities .....	21
..... 21	2.4 Issuing a Notice to Proceed .....	21
..... 22	2.5 Access Construction .....	22
..... 23	2.6 Changes in Land Use and Access Use .....	23
..... 24	2.7 Maintenance & Permit Transfer .....	24
..... 26	2.8 Access Violations .....	26
..... 26	2.9 Appeals .....	26
..... 27	2.10 Internal Administrative Review Committee .....	27
..... 28	2.11 Permit Fees, Forms and Records .....	28
..... 29	2.12 Access Control Plans .....	29
..... 30	2.13 Interchange Management Plans .....	30
..... 30	2.14 Department And Local Government Highway Construction Projects .....	31
..... 31	SECTION THREE ACCESS CATEGORY STANDARDS .....	31
..... 32	3.1 Purpose and Use .....	32
..... 32	Table 3.1: Overview of the Access Category Classification Hierarchy .....	33
..... 33	3.2 Access to Designated Freeways .....	33
..... 33	State Highway Access Code, August 31, 1998 Page ii 3.3 Emergency Access .....	33
..... 33	3.4 Field Approaches .....	33

.....	33	3.5 Auxiliary Turn Lanes .....	
.....	34	3.6 CATEGORY F-W - Interstate System, Freeway Facilities .....	34
.....	34	3.7 CATEGORY E-X - Expressway, Major Bypass .....	
.....	35	3.8 CATEGORY R-A - Regional Highway .....	
.....	37	3.9 CATEGORY R-B - Rural Highway .....	39
.....	39	3.10 CATEGORY NR-A - Non-Rural Principal Highway .....	
.....	40	3.11 CATEGORY NR-B - Non-Rural Arterial .....	
.....	43	3.12 CATEGORY NR-C - Non-Rural Arterial .....	44
.....	44	3.13 CATEGORY F-R - Frontage Road .....	
.....	45	SECTION FOUR DESIGN STANDARDS AND SPECIFICATIONS .....	47
.....	47	4.1 Purpose .....	
.....	47	4.2 Use of Section Four .....	
.....	47	4.3 Sight Distance .....	
.....	48	(2) Sight Distance Along Highway .....	48
.....	48	Table 4 - 1 Sight Distance Along Highway .....	
.....	48	(3) Entering Sight Distance .....	
.....	48	Table 4 - 2: Entering Sight Distance .....	
.....	49	Table 4 - 3: Design Vehicle Selection .....	
.....	50	Table 4 - 4: Stopping and Deceleration Adjustment Factors for Highway Grade . . .	50
.....	50	4.4 Access Spacing .....	
.....	50	4.5 Access Width .....	
.....	50	4.6 Access Radii .....	
.....	51	4.7 Access Surfacing .....	
.....	52	4.8 Speed Change Lanes .....	
.....	53	(1) General Criteria for Speed Change Lanes .....	
.....	53	Figure 4 - 1: Information Guide to Basic Auxiliary Lane Elements .....	54
.....	54	(2) Necessary Components Determining Speed Change Lane Length .....	54
.....	54	Table 4 - 5: Components of Speed Change Lane Length .....	54
.....	54	Table 4 - 6: Design Criteria for Acceleration and Deceleration Lanes .....	55
.....	55	Table 4 - 7: Grade Adjustment Factors For Acceleration Lanes .....	
.....	55	Table 4 - 8: Storage Lengths .....	
.....	56	(3) Speed Change Lane Width .....	
.....	56	(4) Shoulder Width Along Speed Change Lanes Where Curbs are not Present .....	56
.....	56	(5) Taper Design .....	
.....	56	Table 4 - 9: Redirect Tapers for Through Lanes .....	57
.....	57	(6) Median Design for Turn Lane Installation .....	
.....	57	4.9 Other Design Elements .....	
.....	57	4.10 Emergency access .....	
.....	60	4.11 Drainage .....	
.....	60	4.12 Design Waiver Procedures .....	
.....	61"		

- GA: "All of these elements are essential to an effective AM policy."
- IA: "If use changes, the access to a parcel would be reviewed. I would like

to have greater contribution regarding site plan/zoning approvals and be able to review/re-review access tied to subdivision."

- LA: "Appeal process."
- NC: "Potential Effective Organizational Structure and Staffing Expertise Requirements Fundamental Tools and Technology Required to Conduct Program Evaluation Approach and Metrics"
- NJ: "Ability to limit trip generation tied to land use development."
- NM: ""
- NV: "Involvement in the Land Use/Planning process; Appeal process;"
- NY: "My experience suggests there is no "IDEAL" AM policy / document. Conditions, needs and opportunities are simply too varied for any single policy / document to treat the possible variations."
- OR: "Policy goals, appeals process, planning and project development, local government role."
- WA: "unknown"
- WY: "Signal spacing"

**57. On a scale of 1 to 5 (with 1 being “not considered” and 5 being “very relevant”), to what extent does Access Management at your agency consider the following:**

- Transit-oriented development (TOD)
  - #1 (24)
  - #2 (13)
  - #3 (8)
  - #4 (3)
  - #5 (3)
  - No Answer (7)
- Sustainability
  - #1 (9)
  - #2 (7)
  - #3 (17)
  - #4 (14)
  - #5 (4)
  - No Answer (7)
- Context-sensitive solutions (CSS)
  - #1 (5)
  - #2 (7)
  - #3 (20)
  - #4 (13)
  - #5 (7)
  - No Answer (6)
- Transit provisions
  - #1 (15)
  - #2 (13)
  - #3 (10)
  - #4 (10)
  - #5 (4)
  - No Answer (6)

- Pedestrian provisions
  - #1 (6)
  - #2 (8)
  - #3 (16)
  - #4 (14)
  - #5 (6)
  - No Answer (8)

Comments:

- : "All very hot topics, and Caltrans is working in the direction of multi-modal and TOD."
- : "This is more related to site impact - not access management"
- : "Response is based on AM program for Operations and development permits, not state project development."
- : "Iowa is not the most progressive toward mixed use/transit integration."
- : "The case-by-case situations can make these and other elements more or less relevant. Most of our Access Management Plans (AMP) are along major arterials in rural areas of the state and most of these factors do not apply. At the project level, these factors are considered whether with respect to AMP or otherwise. For development review it's typically on a project-by-project basis consistent with state, local and regional plans (including AMP's) is considered."
- : "Most of our AM plans are along major arterials in rural areas of the state and most of these factors do not apply. At the project level, these factors are considered - whether with respect to AM or otherwise. For development review it's typically on a project by project basis - consistency with state, local and regional plans (including AM plans) is considered."
- : "Transit is not my area of expertise. I suggest contacting NDOT's Intermodal Planning Division. Charlie Ceroke 775-888-7352"
- : "This is another "it depends" question. If a project comes to our unit we consider all of these and more in trying to to develop the best ACCEPTABLE and IMPLEMENTABLE results. If it comes to other units it will depend on the unit's responsibilities and resources ... and as importantly the specific individuals handling it."
- : "The topics listed above would pertain more to the local entity. Our jurisdiction is very limited within city limits. Most of our routes are outside large metropolitan areas that would deal with these details."
- : "Many communities view the provision of a median as aesthetically pleasing."

**58. Please identify any RESOURCES that you would like to see developed to help improve the implementation of access management.**

- AK: "less surveys"
- CA: "A manual of some sort."
- CA: "AASHTO is supporting a study on this."
- CO: "Public and legislator awareness sites that would have presentations available on various access management techniques such as raised median or consolidation of accesses that could be used by agencies when there is need to convince these folks that the project would actually benefit them. Currently there are many presentations from TRB or other

agencies that are scattered in various sites and not all are up to date. If FHWA or TRB would dedicate a web site just to keep these up-to-date in accordance with the latest research outcomes, then they could be very useful for all SDOT and local governments when needed."

- FL: "Anything that would require closer review between site development approving authorities and the transportation officials that have a good understanding of what is feasible operationally."
- IA: "Best practices by other states that can be supported by research. The would be very beneficial when trying to update the administrative rules."
- ID: "The Safe Access Is Good for Business publication is very helpful, and we have passed out dozens of copies of it statewide. We would appreciate other publications like it that address the safety and operational benefits of access management in a manner that can be understood by the typical business owner and politician. Documented case studies are always valuable if they are applicable to our situations."
- KS: "Compilation of success stories."
- KY: "Federal AM regulations"
- MD: "A "best practices" resource would allow states to consider how others are applying standards and criteria. One opportunity would be the inclusion of access management technique criteria within AASHTO and of other similar federal guidelines. Accident statistics relative to the roadway classification, traffic volumes, number of accesses and spacing of access may be a useful resource."
- MO: "More success stories"
- NC: "Catalog of non-traditional intersection designs (detailed benefits and challenges of each)"
- NC: "Cost factors associated with "failed" corridors - lower levels of service for traffic mobility, poorer safety performance, excessive traffic signals, delay and air quality impacts of poorly access managed corridors. The shortened life of traffic carrying infrastructure and the costs associated with replacement "bypasses" of what were also "bypasses.""
- NY: "In today's fiscal environment in NY the major problem is clearly staff and planning funds."
- OK: "Manual"
- OR: "Criteria & parameters for evaluating effect/benefits of access management improvements. Research/study of design, spacing, safety, and other access considerations in rural areas. Methodology and criteria for evaluating relative safety of approaches."
- TN: "Case studies on how to overcome legal challenges especially on retrofits."
- TX: "None."
- UT: "Federal guidelines?????"
- VA: "It would be useful to have more information on the relationship between Access Management Programs administered by DOTs and TOD, Sustainability, CSS, Transit, and Pedestrian Provisions."
- WA: "Toolkits that assist Region/District Administrator-level staff communicate the value of access management and impact of local development permitting decisions on state transportation systems to local officials, so that local officials and the public are more aware of how local decisions could be avoided or else are made with eyes-wide-open about impacts."



**59. Please identify any RESEARCH that you would like to see be performed to help in the implementation of access management.**

- CA: "I think there is already a lot of existing research. It just needs to be identified and brought together."
- CO: "I- Research to evaluate cost/benefit ratios on several locations that have gone to doing a Roundabout vs. signalized intersection- also as a result providing a quick test to determine if one or both options should be explored."
- IA: "How to manage the "fringe areas" between rural and urban settings. Being able to apply access management and show support to economic development."
- KS: "Research on acceleration lanes for at-grade intersections. Need more guidance on when to use them and how long they should be. The AASHTO green book and the TRB access management manual do not give good guidance."
- MD: "Accident statistics relative to the roadway classification, traffic volumes, number of accesses, spacing of access and other relevant elements may be a useful resource."
- MN: "The impact of median openings on rural expressways (especially with volumes under 12,000) Guidance for Interchange Area Management Plans incorporating both transportation and land use elements"
- MO: "Before and after studies An analysis of the various steps/levels of access management and the results that can be expected when implementing each step, etc."
- NC: "Nationwide research on the economic effects of access management"
- NC: "Profiles of Failed Corridors - Bad examples low Percentage utilization of poorly access managed corridors"
- ND: "I believe there is a considerable amount of research already developed on this subject, however there are always new ideas and approaches being tried. Disseminating the results of these is something that would be helpful to states like ours that considering the development of access management programs, and to states that are updating their access management programs."
- NM: "Temporary or seasonal access breaks on interstate highways."
- NY: "I'm not sure that new research is critical, at least for the type of projects I get involved with. But, more documentation and "airtime" needs to be oriented to how access management fits within trendier policy objectives which are drawing increasingly larger chunks of planning funds; such as Smart Growth, Sustainability, Quality Communities, etc."
- OR: "Access considerations related to transit Best practices related to sustainability Asset management issues and practices"
- TN: "Compile materials on benefits of access management across multiple disciplines."
- TX: "None."
- VA: ""state of the art" in terms of rules/standards country-wide and the basis used to decide upon those items."
- VA: "It would be useful to have more information on the relationship between Access Management Programs administered by DOTs and TOD, Sustainability, CSS, Transit, and Pedestrian Provisions."
- WA: "Toolkits that assist Region/District Administrator-level staff communicate the value of access management and impact of local development permitting decisions on state transportation systems to local officials, so that local officials and the public are more aware of how local decisions could be avoided or else are made with eyes-wide-open about impacts."

**60. On a scale of 1 to 5 (with 5 being "very successful" and 1 being "very unsuccessful") how would you rate the success of your agency in managing access?**

- 1 (Please explain below.) (2)
- 2 (Please explain below.) (5)
- 3 (Please explain below.) (23)
- 4 (Please explain below.) (20)
- 5 (Please explain below.) (3)
- No Answer (5)

#### Comments

- : "Where our agency has implemented access management, mostly via access management plans and agreements, we have learned from past challenges and have been rather successful. On the other hand, our agency is somewhat passive regarding access management in that we don't have a formal policy or program per se. Our approach has been on a case-by-case basis where it is justified and has local support. Also, our access spacing standards in general are very minimal."
- : "It depends on the district. That is one reason we are implementing an access management program. We want a standardized set of rules and procedures"
- : "It's hard to say. I don't know about the other districts in Caltrans. In District 6, we seem to have been very successful in recent years; however, there are many sins-of-the-past that we are constantly having to deal with."
- : "I would say partially."
- : "Colorado have for long been a forerunner in access management. We have a successful program due to the availability of the State Highway Access Law and the State Highway Access Code. These allow Colorado to set the rules and be able to enforce them in a uniform way across the state."
- : "It is considered in all our designs"
- : "The overall policies are good. The Department should be much more aggressive in developing and implementing corridor access plans. There would be significant safety benefits."
- : "Our system is pretty good but politics sometimes gets involved."
- : "Successful for the most part when local government participation is present and decisions are based on regulations and good engineering judgement. Other influences should be prevented to eliminate political decisions."
- : "We still have a high degree of political pressure from the agricultural and economic development sectors."
- : "We are currently in the process of developing an Access Management program. Lack of a formal policy and program has lead to confusion and missed opportunities. We need to be more proactive and less reactive in preserving our facilities and avoid political pressure to compromise "
- : "We are pretty successful in managing access in areas where transportation system development has been able to keep up with commercial development. However, in rapidly developing areas of the state we have not been as successful in managing access."
- : "Successful unless it goes political!"
- : "Other than a Traffic Impact Policy requirement, we have no policy."
- : "There is always room to review experience and explore opportunities for improvement in managing access and enforcement. This would include the unauthorized use of the rights of way (illegal access points, parking within controlled access facilities, etc.). The development of statewide corridor studies and strategy/methods for implementation as development occurs or funding is available would assist in future improvement. Part of that process

may look at an access control classification system."

- : "Definitely room for improvement. Hopefully we will improve our program with the development of our Statewide Corridor Studies. As part of that process may look to develop an access control classification system."
- : "The rules have been watered down by our legislature over the years, but we still have made some gains in getting access points where we want them."
- : "Because of public opinion and politics, implementing access management has been difficult. It is hard to convince people and change their beliefs regarding access management. Even some MoDOT employees regard it as only a guide and is subject to interpretation. Tight budgets also play a big part in whether access management principles are able to be implemented."
- : "Ours is still largely a property owner rights State and as such our efforts to manage access - while improving incrementally over the past 10 years - would still have to fall in the unsuccessful to very unsuccessful range."
- : "Unlike many states, North Dakota has not experienced large scale growth urban growth, however that is now changing. The access system we have in placed has worked relatively well in the past because of our slower growth rate but it will not be adequate for the future."
- : "We are successful until the access becomes political in nature which I'm sure is very common throughout the nation."
- : "Our ability to manage access is quite poor, lartgely because our regulatory tools are extremely weak compared to local capabilities and the dominant concerns and objectives of communities have little to do with transportation."
- : "There are still issues with varying interpretations by District offices."
- : "We do pretty good with out permitting process but lack laws that would give broader enforcement to truley implement access management."
- : "We have a good foundation in place in admin. rules, policy and business procedures. Access management rules and procedures are well integrated into major business lines of planning, project delivery and maintenance/operations. Agency commitment at staff level is good but effective implementation is too often undermined by inadequate resources and/or political considerations."
- : "We have become much more successful in implementing access managment since our awareness and the local communities awareness of the potential benefits of it (i.e. safety and mobility) have increased. It is now considered during the design of all new projects and review of driveway permit applications."
- : "The agency has been successful in better managing access."
- : "Some vi ctories and some defeats--really can't tell yet."
- : "It is new and not yet thoroughly implemented, not tested."
- : "I cannot answer this questions because I don't work in an access management office."
- : "Access mitigated to the extent allowable."
- : "We still allow a fair number of accesses that do not meet our policies, but we are making gains in reducing the overall number and improving the spacing between access points."

**61. What are the strengths of your agency's access management program? (Please check all that apply.)**

- |  |                |
|--|----------------|
| • It provides uniformity in controlling access. (28)   | No Answer (30) |
| • It provides flexibility for judgment decisions. (40) | No Answer (18) |

- It represents a defensible administrative rule. (32) No Answer (26)
- It has strong organizational commitment. (23) No Answer (35)
- Other (5) No Answer (53)

Comment:

- : "I do not have a feel for all of Caltrans; however, District 6 strives for uniformity in our district. The staff engineer has a degree of flexibility in their judgment. The main thing is that they be able to defend their conclusions and recommendations."
- : "The Code allows for Design Waivers which provides the design flexibility needed in circumstances where the ultimate design can not fully adhere to the engineering standards."
- : "Uniformity is difficult in a large state with diverse conditions. Extremely dense urban areas and very rural areas require different treatments, which is a problem when trying to develop uniform rules and regs. Flexibility is essential when making judgement decisions, which can sometimes create a problem with consistent application of standards."
- : "Generally speaking, we have reasonable support."
- : "Are rules/regulations are very weak."
- : "Our program is very weak."
- : "Compared to other regulation heavy editions our driveway manual is relatively straightforward and basic."
- : "Our current access management process costs very little to administer, on the other hand it also does not provide many safeguards for our system."
- : "There is much flexibility in our access management guidelines as they are used in small rural towns and major metros like Las Vegas."
- : "It is highly flexible in establishing objectives and selecting tools, and it leaves the application of regulatory tools to local government."
- : "All of the above are taken into consideration, but there is no formal process for access management."
- : "unknown"

**62. What barriers or difficulties have you or your organization encountered in implementing access management? (Please check all that apply and specify.)**

- Technical (11) No Answer (47)
- Political (43) No Answer (15)
- Legal (14) No Answer (44)
- Organizational / Institutional (25) No Answer (33)
- Staffing / resources (30) No Answer (28)
- Other (4) No Answer (54)
- Barriers have not been encountered (4) No Answer (54)

Comment:

- : "Our agency has no centralized staff dedicated to access management. Educating others on access management is also a challenge."
- : "The development community is not in favor of such a program unless they get to write it. The ongoing hiring freeze has hindered our staffing needs."
- : "In District 6 we have not encountered any barriers because we try to be prepared to reasonably justify our conclusions and recommendations."
- : "Our staff can use additional technical training to help them with the review, processing and inspection of the more complex access projects such

as the review of the TIA and TIS. Political situation have and will arise that would influence CDOT's ultimate decision in access management since we are required to achieve a balance between the Land use and growth plans of locals while protecting the integrity and safety of the state highways. Legal issues are also a prevalent part of the program. Staffing issues have been a focus for sometime. We issue about 1200 access permits on average per year and do so with a statewide staffing of about 15 employees. This is sometimes not enough to cover specifically inspection of each and every access."

- : "Political involvement influences the decisions being made. Legal involvement with property owners also influence decisions"
- : "need more people to coordinate with local governments"
- : "We try to work with the governments in balancing safety/access versus local needs but access issues often create local political issues when we do not accommodate the exact wishes of either property owners or local governments. For resources, we do not have the funds and staff to develop and implement corridor plans as aggressively as we should."
- : "Lack of resources with technical understanding results in missed opportunities. Lack of formal policies and guidance leads to greater political influence and inability to successfully defend based on strong technical rational. Lack of formal policy, program, and roles and responsibilities has lead to confusion within the organization"
- : "The political difficulties need no explanation. Staffing has been a problem in the past but not a problem now."
- : "Political influences water down regulations, presented as minimums, which then become givens to developers. Whenever a concession is made to a developer, they, or other private developers, tend to expect the same at other locations, even though different conditions exist. Situation can then set a precedent. Legal issues arise when state projects restrict or limit access at previously developed properties, or when roadway improvements make greater access more desirable, but less available. Costly legal actions will sometimes result in less than desirable conditions."
- : "Our districts are always trying to imply, "what does it hurt" or "where does it say I can't allow an entrance if it meets spacing and sight distance"."
- : "Technical - It is difficult to continually provide adequate training to all appropriate staff. Lack of flexibility in existing policies has also been problematic. Political - The pressure to allow access for developments is often in conflict with the need to move traffic (access vs mobility). There is a continuing need to educate politicians and developers regarding the hierarchy of functional classifications. Staffing - In areas where we are experiencing high levels of development it is difficult to adequately keep up with processing of requests for access."
- : "Political commitments sometimes speak louder than policy. Could be more proactive in promoting good access management if we had more staff. Other - compelling private interests heading in a direction other than DOT's interests."
- : "Political/Institutional beliefs that economic decisions should trump good AM. Staffing levels have been low and have dropped in the last year."
- : "There are varying elements in each of the categories that are barriers and solutions based upon case-by-case situations. Balancing of property owner rights and the need for state's to provide safe and efficient transportation facilities are by their very nature competing elements in access management."
- : "landowner rights are big in this state, sometimes politics plays into

decisions and has been key in changes (weakening) to the rules."

- : "Legal - Mn/DOT lacks legal authority to fully management access. Limited authority limits what improvements can be conditioned to a permit. Organizational - Within Mn/DOT the belief that "no new access" and "no access is the best access" going against the balanced approach of "management" in the policies and guidelines."
- : "- Politics come up in almost all projects where access management principles are trying to be implemented. - Some employees in the organization are hesitant to accept good access management principles - hard to change old habits/beliefs - Financial considerations/tight budgets"
- : "Telling any developer no...."
- : "There is a very distinct reluctance from Department Leadership to pursue Access Management and that is in large part due to the General Assembly's and Industry's perception of heavy handed government regulation, anti-development, concern with proportionality/fairness, and potential negative economic impact on the businesses along these corridors. Courts continue to find on behalf of the land owner and development community and political interests continue to be heavily influenced by well organized and well funded lobbies such as the retail marketing and home building associations. We have never been successful in efforts to secure and dedicate resources solely to Access Management - and it is clearly going to take a High Profile Energized and Empowered Champion (and some serious Legislation) to push this program into the forefront."
- : "We have not tried to implement a statewide access management program in the past, however I'm sure that when we do we experience problems, challenges and opportunities in all of the areas listed above."
- : "Not enough traffic engineering expertise to go around. Lack of a clear vision of what the Department wants the state highway system to look like and operate as."
- : "As with any government agency politics can come into play. Our system attempts to make access control decisions based on an established policy and adjudicated by a committee to lessen the effect of politics. But sometimes the political pressure comes from high up and can make for "interesting" committee meetings. If the politics do get involved it jeopardizes the whole process by eroding the integrity of the process. We have a problem scheduling the committee meeting that have a full quorum due to limited schedule availability and therefore the frequency of the committee meetings is sometimes very long."
- : "Since the access standards are considered "guidelines" they are difficult to enforce for signal spacing requirements in particular."
- : "Political: general lack of support for AM specifically exemplified by political over-ride of AM related decisions for many private developments. Legal: home rule. Organizational: no dominant function has adapted AM as a primary responsibility. Staffing: rather lack of Other: appropriate training internally, flexibility and knowledge of the relationship between zoning and transportation, focus on capital projects not broader objectives and outcomes."
- : "Politically Ohio has been reluctant to give ODOT authority for access management explicitly. However, counties and townships have been given authority for access management. Legal had reservations to a perceived taking of access rights without reimbursement. Those issues have been worked out to satisfy them, and more updates are forthcoming. There was reluctance from some District offices initially who felt the concept of access

management was an infringement on personal rights. Most of those have been resolved. Staffing remains a challenge and there is no longer a Central Office Coordinator whose main responsibility is access management."

- : "1. Adjacent property owner have legal access where those right have not been purchased. 2. Lack of access Management Policies/Guidelines, especially in Urban environment."
- : "Economic interests (especially during current recession) tend to create political pressure to provide direct access to highway because businesses often believe it is vital to their success. Legislative direction to maintain current or reduce agency staffing levels or budget means fewer resources to go around. Technical differences over traffic impact analysis methods/procedures and required mitigation can create customer dissatisfaction and affect relationship with local government. Coordination between land use planning and transportation system planning by local governments needs to be improved. We often find ourselves unable to mitigate development effectively because of inadequate local street system."
- : "With the current economic climate, there is pressure to relax standards to assist investment. Also, we do not have the current staffing needed to properly review and inspect access permits."
- : "South Dakota is a State that favors the landowner. We are tested nearly everyday on the fact of "reasonable and convenient" access. Our legislature wouldn't favor the complete control that would be necessary to fully enforce Access Management. We also struggle with members of our organization. Some individuals don't see the value in Access Management. We also didn't develop our rules until 2001 so there are lots of mistakes out there waiting to be cleaned up. We don't have the staff to "police" access management so we get a lot of "well so and so down the street has 5 access points, why can't I have that many too?!" We try to fix things when we have a reconstruction project or when a new access application has been filed."
- : "Political pressure to open up access and property owners contact their local politician if they have any problems. We have been sued for condemnation. Understaffed as far as utility permitting is concerned."
- : "Politics often trump the rules."
- : "Never enough personnel; political opposition from retailers."
- : "We did not get the authority to promulgate an AM regulation until our current Governor campaigned on land use / transportation coordination and prompted the legislature to grant us the authority."
- : "The biggest hurdles to overcome in access management (and cases of development impacts in other ways) is the political arena: it is very difficult for a local council to say "no" or "you have to pay for your impact" to a developer that will impact the state transportation system. Even when the authority to grant a particular access point onto the state system resides with the Dept. there can be political pressure to subvert traffic safety and flow goals for economic or political ends."
- : "unknown"
- : "I'm out of time"
- : "Difficult to achieve adequate sight distance along rural roadways. Requirements for implementation of highway modifications to mitigate impact sometimes results in officials protesting."
- : "Our Transportation Commission has made political decisions regarding accesses. At times we fight the vision or lack of vision of some staff."

**63. What are your suggestions as to how these barriers can be overcome? (Please explain.)**

- : "funding"
- : "More dedication to access management with money, staff, and resources. As Arkansas continues to transition from a largely rural state to a less rural state, and as local citizens and politicians discover the benefits of access management, the barriers slowly and naturally become less of an issue. Also, as money becomes tighter, it is being recognized that access management as part of an improvement project is a viable alternative to simply building bypasses around communities along major corridors."
- : "Try and educate and involve the development community as much as possible."
- : "Stick to the engineering. Be able to identify the references you used for formulating your conclusions and recommendations."
- : "If Access Program was more integrated with other various regional functions and specialties, such as the involvement of Area and resident engineers in providing the additional available work force necessary to review and inspect access permit projects. Also providing additional funding to provide regular training and support for the access management staff."
- : "The usage of the context sensitive solutions philosophy that the department utilizes is helpful"
- : "It would take an institutional commitment to aggressively pursue development and implementation of corridor plans. Doing so would help change the climate of challenging every single median change that is made."
- : "Establish an independent review panel to make decisions in difficult situations, (example, when appeal is denied and further appeal is made) with final decision authority. The panel would need to consist of an agreed upon group (maybe 3-5), representing state and local offices and an independent (consultant?), who would review and decide. Upper management and state officials would need to agree that the decisions would stand and could not be reversed by them or politics."
- : "We are currently in the process of developing an Access Management program to address these deficiencies"
- : "Policies can't be a "one size fits all" proposition. They need to be flexible to provide a solution that is appropriate to each specific location. We feel strongly that access management plans are a good solution. There also needs to be the ability to update the policies as needed to incorporate current philosophy and knowledge."
- : "Not deviate from our policy because of politics or private interest groups. More money to hire staff."
- : "Need buy in by our top management. Have never had this."
- : "Development and implementation of policies."
- : "Legislative and/or policy action the Maryland Department of Planning is in the process of developing a Statewide Master Plan that may yield some land use control at the State level. The local jurisdiction development review process is varied throughout the many jurisdictions. In some cases, the local agencies provide approvals that contemplate access to the state roadway contrary to the state's recommendations."
- : "Legislative and / or policy action - the Maryland Department of Planning is in the process of developing a Statewide Master Plan that may yield some land use control at the State level."
- : "We continue work with our district staff to get better understanding. The more sources we can cite the better."
- : "Political and public education Proof of the successes of access management"
- : "Eliminate the political influences"
- : "Education and stronger general statutes"
- : "Continued strong PI&O efforts - such as Safe Access is Good for Business Campaign"



Further Identification and Negative Publicity for Grossly Underperforming Corridors that are the Direct Result of Poor Access Management Eventually we may need a Federal Mandate that ties Construction Funding and Safety Program Funds to a State's Commitment and Establishment"

- : "No comment"
- : "Need to hire more traffic engineers and dedicate staff to working on access applications as a priority. Need to review and revise Appendix B of our access code with regard to desirable typical section, access levels, add main street designation as level and develop associated design criteria for this designation."
- : "Try to hold the meetings as issues arise, instead of stacking up the issues thus requiring a 4 to 6 hour committee meeting."
- : "My suggestion is to make the access standards into law or administrative code or something similar to what Colorado has done."
- : "The simplest would be an FHWA / USDOT determination that federal funds cannot be used for capacity projects in communities that fail to demonstrate that they have a transportation sensitive plan and zoning in place and are following the plan and zoning."
- : "The best thing an organization can do is make a statement from the director that access management is a department goal and is the way of doing business. Otherwise, differing agendas and philosophies will create non-uniform application, or worse, neglect, of access management."
- : "Adopt Access Management Manual"
- : "Outreach/education of elected officials of benefits, opportunities and challenges for access management in terms of economic development and community livability. Better analysis tools to assess value of improvements."
- : "I believe we need better enforcement. If you don't believe in the rules, fine, but there should be some kind of consequence for blatantly going against the established rules."
- : "Developing a presentation on safety and congestion benefits of access management will help with the political problems. Address issues initially instead of trying to retrofit after construction."
- : "Eliminate appointed positions at the DOT. Upper management is appointed and therefore I believe the fear factor could be eliminated if these were merit positions."
- : "Discreet, technically sound lobbying of people close to powerful politicians or candidates."
- : "Greater authority over some land use decisions affecting the system the state owns, operates, and manages."
- : "Public meetings to present results of TIS and plan review prior to notification to applicant."

**64. Are changes needed to make your agency's access management program more effective?**

- Yes (Please proceed to Question 65.) (36)
- No (Please skip to Question 66.) (15)
- No Answer (7)

**65. What areas of your agency's access management program need to be improved? (Please check all that apply.)**

- It needs to be reviewed and updated. (23)  
No Answer (35)
- It is regarded as only a guide, and is subject to political influences. (23)  
No Answer (35)

- Is is subject to interpretation and applied inconsistently. (17)  
No Answer (41)
- Other (Please explain below.) (12)  
No Answer (46)

Comment:

- : "We need to get it into Rules and start using it. Training staff"
- : "We need something that can be consistently applied through all the districts."
- : "Assign a lead unit on access management. More coordination between design and operations."
- : "Training and additional staff."
- : "We are de-centralized, thus, are only a source of "guidance" for the districts."
- : "The access management guide under development needs to be approved by the INDOT executive office"
- : "We could use more funding for recommended control / parcel purchases along Access Management (AM) Corridors. Perhaps exclusive AM funding category for capital projects. It would be ideal if federal funds to be available for approved corridor to assist protecting in future project corridors."
- : "Could also use more funding for recommended control / parcel purchases along AM Corridors Perhaps exclusive AM funding category for capital projects"
- : "We need to move beyond our only element of an Access Management Program being the driveway permit process."
- : "First, we need to develop a formal access management program. If this is done appropriately political influences will be minimized and access management will be administered more consistently and equitably across the state from one district to the next."
- : "Need to develop non-lapsing account to deposit and track developer contributions. State legislation required."
- : "It needs to be reviewed and updated."
- : "It's going to have to be adapted within other trendier programs, and most specifically Smart Growth, Sustainable Development and Transit Oriented Development."
- : "Access management policies need to be continuously updated and maintained to reflect improved procedures and lessons learned through it's application."
- : "The guideline have been updated and now we need to update our permitting procedures."
- : ""
- : "Raise internal awareness using more communication throughout the department so people are more aware of what each division does."
- : "None."
- : "Incorporate change-of-use provision."
- : ""
- : "unknown"

**66. Are any changes to your agency's access management program planned or currently being implemented?**

- Yes (Please explain below.) (32)

- No (Please skip to Question 66.) (20)
- No Answer (6)

Comments:

- : "Access management is still evolving in our state."
- : "Developing our new manual"
- : "It is my understanding that this is being worked on in HQ."
- : "No idea. There might be some changes, but not revolutionary."
- : "continuous technical training."
- : "we are updating our access management standards to make them simpler to work with."
- : "Driveway manual is to be updated."
- : "Driveway manual has pending revisions, (waiting for approval). Manual is up for a for full revision, setting up study schedule."
- : "We are updating our policy this year."
- : "We are currently in the process of developing an Access Management program"
- : "We have submitted Transportation Access Plan (Access Management Plan) enabling legislation for the 2009 Idaho legislative session. If the legislation passes then we will follow that up with amended rulemaking for the 2010 legislative session."
- : "The access management guide under development"
- : "We have outlined a new program with classification , standards, and processes."
- : "New driveway rules. Revisions to Traffic Impact Study rule. Possible Impact Fees. New signal spacing and median opening spacing policy."
- : "These will be borne out of the Statewide Corridor Planning effort that is currently underway."
- : "These will be born out of the Statewide Corridor Planning effort that is currently uderway"
- : "We will be adding new chapters to our manual regarding interchanges, construction projects and access control."
- : "We are in the process of finalizing our first Access Management Guide."
- : "Maps showing access control area's are in the works. Creating policies for an access management manual."
- : "Our Driveway Manual is scheduled to be updated. Timeframe is unknown."
- : "There are occasional glimmers of interest in a legitimate Rigorous Access Management Program - but to sdate they have been quickly and quietly extinguished by political interests."
- : "To develop a formal program."
- : "A legislative request has been presented."
- : "Various task forces have been formed and consultants hired to look at main streets, appendix B errors, and a rewrite of the code itself."
- : "A review of the manual and the process are underway"
- : "There has been plans to update the guidelines for a couple of years. The issue is that the the technical staff would like to see something with more teeth, while the staff that deals with the politics like the flexibility of the current document."
- : "see #65"
- : "The most significant change is the establishment of a three person appeals

committee rather than just the Director's representative, and the ability of the appellant to address the committee."

- : "Access Management is to be addressed in the next ODOT Design Manual."
- : "Nothing major at this time, just continuous improvement in several areas mentioned in question # 62."
- : "Our Access Management internal policy was just updated. Our Administrative Rules are in the process of being reviewed for updates."
- : "Developing course for state and local officials and sometime within the next year develop a plan for outreach."
- : "Currently reviewing"
- : "implementing rules for highways below principal arterial classification."
- : "We are currently developing the portions of the program that apply to roads not considered Principal Arterials."
- : "uncertain"
- : "unknown"

**67. Does your organization have performance measures for identifying progress being made in access management?**

- Yes (Please explain below.) (9)
- No (Please skip to Question 66.) (43)
- No Answer (6)

**Comments:**

- : "our measures are tied to the more comprehensive goals of the safety and Traffic Branch which are reduction is the number accidents per miles traveled."
- : "We have a quality assurance program and meetings to compare notes"
- : "Not sure on a statewide level but when we do median projects for safety, we do before/after safety analyses."
- : "There is a performance measure regarding how quickly the Department handles permits."
- : "We are currently in the process of developing an Access Management program"
- : "The data base created to document and track permit applications has communications features, such as automated email notifications. However, all the performance measures refer to how quickly the offices perform reviews and provide responses. The Customer Service expectations identify the speed at which the Department reviews and approves permits, not how detailed or thorough the review, or quality of the product."
- : "Performance measures are new to the department. However measures may be developed in the future specific in regards to access."
- : "Not Specific to Access Management - however initial performance measures pertaining to Department Goals such as Improved Safety, Improved Mobility, and Longer Lasting Better Performing Infrastructure have been established. Dashboard Available at: <http://www.ncdot.gov/programs/dashboard/>"
- : "Not currently. This will addressed as we develop our program."
- : "We have access turn around dash board measurement."
- : "Working on getting some, though."
- : "We are researching this topic."

- : "uncertain"
- : "Probably"

**68. Please identify any MPOs, county, or municipal agencies that have access management programs that you would recommend we invite to participate in this survey.**

- : "I am not aware of any."
- : "Groton, conn."
- : "I will refer you to Kristine Williams to answer this."
- : "MetroPlan Orlando."
- : "ARC - Atlanta Regional Commission GRTA - Georgia Regional Transportation Authority"
- : "Fort Wayne, Indiana"
- : "City of Overland Park, Kansas."
- : "Bowling Green and Owensboro (cities)"
- : "No suggestions at this time."
- : "Dakota County Minnesota Washington County Minnesota St Cloud APO"
- : "Town of Cary ([www.townofcary.org](http://www.townofcary.org))"
- : "Charlotte, NC <http://www.charmeck.org/Departments/Planning/Home.htm>  
<http://www.charmeck.org/Departments/Transportation/Land+Development/home.htm>  
Cary, NC <http://www.townofcary.org/depts/planning/planninghome.htm>"
- : "Not aware of any local governmental access management programs in North Dakota at this time."
- : "None I am aware of"
- : "Clark County Public Works The RTC of Southern Nevada The Washoe County RTC"
- : "Cincinnati - OKI Dayton - MVRPC Columbus - MORPC Newark - LCATS"
- : "The Towns of Bristol RI, Richmond RI, and Portsmouth, RI"
- : "Beaufort County, City of North Augusta both in South Carolina"
- : "City of Sioux Falls"
- : "City of Clarksville, TN Knoxville, TN - Knox County Planning Commission (Corridor Overlays)"
- : "None."
- : "n/a"

**69. If needed, who in your organization could we contact for additional follow-up information?**

- Yes (Please explain below.) (47)
- No (Please skip to Question 66.) (1)
- No Answer (10)

**Comment:**

- : "Alan Meadors 501-569-2103 [alan.meadors@arkansashighways.com](mailto:alan.meadors@arkansashighways.com)"
- : "Gary Sokolow"
- : "Donnie Smith - 502-564-4556 (permits) Jeff Wolfe 502-564-3020 (traffic signals)"
- : "The following SHA people are available for additional questions or follow-up. Steven Foster, Chief of Engineering Access Permits Division, 410-545-5601 Jim Thompson, Assistant Chief of Regional and Intermodal Planning, 410-545-5565 (Jim has a lot of historical knowledge of our Access Management / Control programs) Vaughn Lewis, Regional and Intermodal

Planning, 410-545-5673"

- : "Aside from myself: Steve Foster, Chief of Engineering Access Permits , 410-545-5601 Jim Thompson, Assistant Chief of Regional and Intermodal Planning, 410-545-5565 (Jim has a lot of historical knowledge of our Access Management / Control programs)"
- : "Joe Zody Access Management Supervisor Aquisition Section, Right-of-Way Bureau 2701 Prospect Ave. PO Box 201001 Helena, MT 59620-1001 Office (406)-444-9458 E-mail: jzody@mt.gov"
- : "A D (Tony) Wyatt awyatt@ncdot.gov 919 773 2887 Gary C. Faulkner gfaulkfly@earthlink.net 919 495 3798 (retired from NCDOT- NC's Godfather of Access Management ) David Wasserman dswasserman@ncdot.gov 919 715 1273"
- : "Traffic Branch Manager - Alvin Takeshita Right-of-Way Branch Manager - Dean Yogi Planning Branch Manager - Ken Tatsuguchi Construction and Maintenance Branch Manager - Jamie Ho email: [firstname.lastname@hawaii.gov](mailto:firstname.lastname@hawaii.gov) "
- : "Jim Knott"
- : "Elias Archuleta, P.E. NMDOT State Traffic Engineer (505) 792-2416"
- : "Harold Lasley Harold.Lasley@odot.state.or.us 503-986-4216"
- : "Please also contact Mr. Leroy Patterson for questions related to engineering issues. For policy related issues, please contact me."
- : "Recommend you contact the WSDOT Traffic Office at 360 -705-7280"
- : "I,m sorry for not filling this out with more info I have little time to complete. If you need more from me I will do my best to help."

## SURVEY OF LOCAL TRANSPORTATION AGENCIES

### 2. What type of organization do you represent?

- County (30)
- Municipality (city or town) (10)
- Metropolitan Planning Organization (MPO) (3)
- No Answer (0)

### 3. Which job function within your organization MOST reflects your daily work activities? (Please check one.)

- Permitting / Development Review (6)
- Traffic Engineering (11)
- Operations / Maintenance (9)
- Transportation Planning (5)
- Highway Design (7)
- No Answer (5)

Comments:

#### Counties:

- *AZ, Florence:* "Department Director - deal with all the above."
- *GA, Cumming:* "Assistant Director of Engineering covers Transportation Planning, Traffic Eng, Highway Design, Development Review, Maintenance."
- *IA, Cherokee:* "Responsible for the planning, design, permitting development review, right-of-way and budgeting for all secondary roadway work within the county"
- *IA, Rock Rapids:* "Management/Department Head"
- *IA, Clarion:* "County Engineer is responsible for all construction and maintenance of the secondary road system."
- *NJ, Trenton:* "General Planning including transportation"
- *SC, Beaufort:* "My job function involves both Traffic Engineering and Transportation Planning for the County"

#### Cities:

- *OR, Springfield:* "Transportation Planning, Operations, Traffic Engineering, Development Review in equal measures."

### 4. Does your agency have a formal Access Management Program?

- Yes (Please proceed to Question 5.) (22)
- No, but access is managed as an informal part of our normal operation. (Please skip to Question 6.) (16)
- No, access management is not considered by this agency. (Please skip to Question 6.) (3)
- No Answer (2)

### 5. Does your agency have a formal Access Management Program?

- Yes (Please specify below.) (21)
- No (Please explain below.) (3)
- No Answer (19)

Comments:

#### **Counties:**

- *AZ, Florence:* "Our Board of Supervisors (elected) adopted an Access Management Policy."
- *CO, Fort Collins:* "Its a part of our standards and land use code, and approval given through permitting process."
- *GA, Cumming:* "County Ordinance 101, which is the GDOT Driveway & Encroachment Control Regulations with modified traffic projection criteria. Document is on line at [www.forsythco.com](http://www.forsythco.com), under Department of Engineering, Forms & Documents section."
- *IL, Woodstock:* "We have an Access Control and Right-of-Way Management Ordinance that was recently updated and approved by the County Board that outlines the requirements and regulations regarding access and roadway improvements."
- *IA, Independence:* "through permits"
- *IA, Denison:* "Both of the above and locally applied guidelines"
- *IA, Dubuque:* "Dubuque County has a access management program as part of it Subdivision ordinance"
- *IA, Marion:* "Access to county roads requires permission from the county engineer in Iowa. Linn County has administrative rules as to how access is allowed."
- *IN, Greenfield:* "The County has ordinances pertaining to the installation of driveways and sidewalks within the County right of way."
- *IN, Madison:* "Minimum lot frontage was increased to 300-lf to reduce the "stripping out" of roadways."
- *NJ, Trenton:* "We are in the process of developing a code under the authority of the NJ Access Management Act but right now it is all negotiated"
- *OH, Newark:* "State enabling legislation allowing counties to adopt and administer Access Management regulations and State authority allowing Counties to review and adopt standards for subdivision and developments"
- *OR, HILLSBORO:* "The State gives us the authority to enforce safety mechanisms including those for traffic safety."
- *SC, Beaufort:* "We have access management standards for various corridors that have been adopted by County Council into our ordinances. These corridor access management standards have also been adopted into our comprehensive plan. We also have a general driveway spacing requirement in our zoning ordinance"

#### **Cities:**

- *NC, Cary:* "We have engineering standards that set out driveway spacing, etc."
- *OR, Springfield:* "Springfield Development Code applies to most accesses but most particularly to access associated with a land use decision, building permit, etc."
- *OR, Tigard:* "Tigard Municipal Code Chapter 18"
- *SD, Sioux Falls:* "Our access management standards are in our engineering design standards which are approved by the city council through resolution."

#### **MPOS:**

- *GA, Atlanta:* "ARC does not control access on any roadways. Our program is based on information and TIP policy that has been adopted by the MPO transportation policy committee."

#### **6. Which of the following mechanisms ARE CURRENTLY BEING USED by your agency in implementing access management? (Please check all that apply and provide web-link(s) if possible.)**

- |                                      |                |
|--------------------------------------|----------------|
| • General departmental policies (24) | No Answer (19) |
| • Access code (10)                   | No Answer (33) |
| • Standards (16)                     | No Answer (27) |
| • Guidelines (21)                    | No Answer (22) |
| • Driveway permit manual (19)        | No Answer (24) |
| • Roadway design manual (13)         | No Answer (30) |



- Other (please explain) (4) No Answer (39)
- My agency/organization does not control access to public highways. (3) No Answer (40)

**7. Which of the following mechanisms ARE BEING DEVELOPED by your agency to enhance access management implementation? (Please check all that apply.)**

- General departmental policies (8) No Answer (35)
- Access code (3) No Answer (40)
- Standards (6) No Answer (37)
- Guidelines (5) No Answer (38)
- Driveway permit manual (5) No Answer (38)
- Roadway design manual (0) No Answer (43)
- Other (please explain below) (3) No Answer (40)
- My agency/organization is not in the process of making additions or changes to the mechanism checked in Question 6. (19) No Answer (24)

Comments:

**Counties:**

- *AZ, Florence:* "We are also coordinating this with cities/towns within the county."
- *CO, Fort Collins:* "We just updated everything a couple years ago."
- *IL, Woodstock:* "Already in place."
- *IA, Sigourney:* "Need to update our entrance permit policy (1997)"
- *OR, HILLSBORO:* "The county is faced with relaxing access management regulations because of roadway function and competing land use goals."

**Cities:**

- *MD, Baltimore:* "The Department has development Guidebook which includes curb cut policy and guidelines by which any access to development are reviewed nad approved."
- *OR, Tigard:* "Citywide transportation system plan Site-specific access plans"

**MPOS:**

- *GA, Atlanta:* "ARC is currently in the process, in conjunction with Georgia DOT (GDOT) and the Georgia Regional Transportation Authority (GRTA), of developing a regional policy on access management along with regionally accepted access categories and standards."
- *OH, Cincinnati:* "OKI was instrumental in promoting the enactment of Chapter 5552 of the Ohio Revised Code in 2002 (see Item #6, above). Since then, three of the four Ohio Counties in the OKI Region have enacted access management regulations in accord with ORC 5552."

**8. What division(s) or group(s) in your agency is/are currently INVOLVED in managing access to public streets and highways? (Please check all that apply.)**

- Traffic Engineering (23) No Answer (20)
- Planning (20) No Answer (23)
- Design (12) No Answer (31)
- Permitting / Development Review (30) No Answer (13)
- Operations / Maintenance (16) No Answer (27)
- Right-of-Way (7) No Answer (36)
- Other (Please specify below.) (1) No Answer (42)
- Access Management is not currently implemented in my organization. (2) No Answer (41)

Comments:

**Counties:**

- *AZ, Safford*: "County Highway Department , Planning and Zoning and Engineering"
- *IL, Woodstock*: "Other = Construction Division"
- *IN, Madison*: "We are a rural, low-population county, which means there is no staff for planning."

**Cities:**

- *MD, Baltimore*: "Department of Public works is the city agency that issues curb cut permits and the agencies check above are the reviewers."

**MPOS:**

- *GA, Atlanta*: "Bothe the transportation and land use planning divisions within the organization promote access management policies through a number of planning programs."
- *OH, Cincinnati*: "Promotion of sound access managment principles, and the enactment/administration of local access management legislation and regulations, is an on-going element in our annual Work Program."

**9. What division(s) or group(s) in your agency is/are currently responsible for LEADING the efforts involved in managing access to public streets and highways? (Please check one.)**

- Traffic Engineering (7)
- Planning (10)
- Design (3)
- Permitting / Development Review (9)
- Operations / Maintenance (2)
- Right-of-way (0)
- There is no single division or group that has the lead. (6)
- Other (Please specify below.) (1)
- No Answer (5)

**Comments:**

**Counties:**

- *IN, Madison*: "I, the appointed County Highway Engineer, have access management as a public policy interest. There is is no formal assignment by the public officials that appoint me."

**Cities:**

- *MD, Baltimore*: "Deoartment of public works,"

**MPOS:**

- *GA, Atlanta*: "The transportation planning division."
- *OH, Cincinnati*: "See response to Item #8 above."

**10. Does your agency have staff dedicated exclusively to Access Management?**

- Yes (Please proceed to Question 11.) (4)
- No (Please skip to Question 12.) (35)
- No Answer (4)

**11. Please indicate how many staff members are dedicated to Access Management in the following positions:**

- Traffic Engineers

**Counties:**

- *MD, Bel Air*: "2"

**Cities:**

- *TN, Nashville*: "0.1"

- WA, Federal Way: "0.1"
- Planners
  - Counties:**
    - MN, Jordan: "1"
  - Cities:**
    - TN, Nashville: "0.1"
- Other staff (please indicate number of staff and titles)
  - Counties:**
    - CO, Fort Collins: "1 - access and utility coordinator"
    - IL, Woodstock: "(2) positions. "Permit and Developer" "Projects Manager" and "Permit Technician"
  - Cities:**
    - TN, Nashville: "0.5"

**12. Access management at your agency is applied at the: (Please check all that apply and explain.)**

Statewide level (1)	No Answer (42)
Corridor level (12)	No Answer (31)
Project level (21)	No Answer (22)
Access / driveway permit level (34)	No Answer (9)

Comments:

**Counties:**

- CO, Fort Collins: "Applied at the County level through our access permitting program."

**Cities:**

- OH, Columbus: "During the project scoping and plan review stages, access management is considered and applied where necessary and achievable. Zoning and site plan review address access management concerns by investigating number and design of access points."
- OR, Tigard: "also at the citywide level through the transportation system plan"
- SD, Sioux Falls: "Some of the corridors that are just being developed we are identifying access points before development gets started. Each access is individually considered."

**MPOS:**

- GA, Atlanta: "Our current policies focus on corridors specific to SOV capacity projects."
- MN, Rochester: "Our agency providing staffing for the regional MPO activity as well as serving as the planning department for the central city in the region and the surrounding county. In our MPO role, we conduct corridor management and corridor preservation studies which include development of access management plans for individual corridors. In our role as the city/county planning department, we review development plans from the earliest stages of general concept approval through conditional use permits and plats. In each of the stages our staff is involved in reviewing plans for consistency with the access management regulations found in the city and county access ordinances as well as for consistency with the access management guidelines included in the transportation element of the comprehensive plan."
- OH, Cincinnati: "We provide support and technical assistance to local jurisdictions who are implementing access management within their communities."

**13. What elements of Access Management does your agency's program address? (Please check all that apply.)**

- Installation of medians (16) No Answer (27)

• Installation of medians (16)	No Answer (27)
• Spacing for unsignalized public street intersections (21)	No Answer (22)
• Spacing for unsignalized private driveways (30)	No Answer (13)
• Spacing for traffic signals (19)	No Answer (24)
• Prohibition of certain turning movements (21)	No Answer (22)
• Corner clearance (distance from a public street intersection to the first driveway) (29)	No Answer (14)
• Spacing for cross-streets in the vicinity of interchanges (14)	No Answer (29)
• Intersection sight distance and setbacks (32)	No Answer (11)
• Geometric design standards for driveways (28)	No Answer (15)
• Provisions for right-turn and left-turn lanes (23)	No Answer (20)
• Purchase of access rights (5)	No Answer (38)
• Internal connection of parking lots between adjacent parcels (16)	No Answer (27)
• Subdivision restrictions for large parcels (14)	No Answer (29)
• Requirements for Traffic Impact Studies (25)	No Answer (18)
• Requirements for Traffic Impact Fees (10)	No Answer (33)
• Other (Please explain below.) (4)	No Answer (39)

Comments:

**Counties:**

- *IL, Woodstock:* "Permit fees, pass thru consultant reviews and fees, relocation of utilities, and plan preparation are included."
- *IA, Dubuque:* "Dubuque County reviews all access to public roads, and Subdivision are consider private streets"
- *IN, Madison:* "Minimum frontage distance requirement for the creation of new parcels."

**Cities:**

- *OR, Tigard:* "[http://www.tigard-or.gov/business/municipal\\_code/title-18.asp](http://www.tigard-or.gov/business/municipal_code/title-18.asp)"

**MPOS:**

- *GA, Atlanta:* "We don't specifically focus on any particular element of access management. Our policy leaves that up to the discession of project sponsors when developing their access management plans."
- *OH, Cincinnati:* "As referenced in Item #6 above, OKI was instrumental in securing the enactment at the state level of enabling legislation which gave powers to counties to enact their own AM regulations, in accord with the new state law. The new law is procedural in nature, and spells out the actions to be followed by a county in developing and enacting local AM legislation and regulation, but not the actual content of the regulations. The specifics of the local regulations are left up to the local jurisdiction, which must by law establish an advisory committee made up of specified local private and public representatives who have an interest in access management. This advisory committee will develop and agree to a proposed set of regulations, which will then be submitted for public hearings and then to the county commissioners for final action."

**14. Does your agency have an Access Classification System (different from the Functional Classification System) that is used for determining the level and type of access management that applies to different roadways?**

• No, we do not use an Access Classification System (Please skip to Question 16.) (15)	No Answer (28)
• No, we rely on the Functional Classification System for access management purposes (Please skip to Question 16.) (16)	No Answer (27)
• Yes (Please proceed to Question 15.) (8)	No Answer (35)

**15. What are the considerations in your agency's Access Classification System? (Please check all that apply.)**

- |   |                |
|---|----------------|
| • Functional classification (5)               | No Answer (38) |
| • Posted speed (2)                            | No Answer (41) |
| • Urban / Rural (4)                           | No Answer (39) |
| • Roadway cross-section / number of lanes (4) | No Answer (39) |
| • Divided / Undivided (2)                     | No Answer (41) |
| • Traffic volume (7)                          | No Answer (36) |
| • Other (Please specify below.) (1)           | No Answer (42) |

Comments:

**Counties:**

- *AZ, Florence:* "We identified Regionally Significant Routes that are corridor related, with intent to manage access more intensively on those routes. These routes cover unincorporated and incorporated areas of the county."

**Cities:**

- *SD, Sioux Falls:* "We looked at a number of considerations but the two biggest were volumes (present and future) and continuity."
- *WA, Federal Way:* "Primary determinant for access classification is planned roadway cross-section."

**16. What variables are part of your agency's criteria for driveway location and design? (Please check all that apply.)**

- |  |                |
|--|----------------|
| • Roadway classification (28)                                      | No Answer (15) |
| • Posted speed along the roadway (26)                              | No Answer (17) |
| • Development type (i.e. commercial, residential, etc.) (26)       | No Answer (17) |
| • Development size or intensity of use (i.e. trip generation) (27) | No Answer (16) |
| • Development location (e.g. urban vs. rural areas) (20)           | No Answer (23) |
| • Others (Please explain below.) (2)                               | No Answer (41) |
| • Geometric design standards for driveways are not addressed. (2)  | No Answer (41) |

Comments:

**Counties:**

- *IA, Sigourney:* "Distance from an intersection, distance between driveways"

**MPOS:**

- *OH, Cincinnati:* "Driveway location and design criteria are addressed by the individual local jurisdictions, not the MPO."

**17. What variables are part of your agency's criteria for traffic signal spacing? (Please check all that apply.)**

- |                                      |                |
|--------------------------------------|----------------|
| • Cycle length (8)                   | No Answer (35) |
| • Speed (9)                          | No Answer (34) |
| • Bandwidth (8)                      | No Answer (35) |
| • Allowable movements (4)            | No Answer (39) |
| • Other (Please explain below.) (14) | No Answer (29) |

Comments:

**Counties:**

- *AZ, Florence:* "Traffic Impact Analysis, combined with our desired spacing based on classification of the road."
- *CO, Fort Collins:* "We have very few signals that are run independently....."
- *GA, Cumming:* "ITE and GDOT recommended spacing requirements are included in the current Ordinance."
- *IL, Woodstock:* "Spacing and meeting signal warrants"
- *IA, DeWitt:* "No signals"
- *IA, Denison:* "NO traffic signals on our system"
- *IA, Sigourney:* "Not applicable"
- *IA, Clarion:* "No traffic signals within jurisdiction"
- *IN, Greenfield:* "Minimum length distances, but after a traffic impact analysis."
- *MN, Jordan:* "1/2 mile min"
- *OH, Newark:* "distance: 1/4 or 1/2 mile spacing"
- *OR, HILLSBORO:* "Contact County Traffic Engineer Jinde Zhu for more information. jinde\_zhu@co.washington.or.us 503-846-7957"

**Cities:**

- *MD, Baltimore:* "Department of Transportation handles this part and may be as checked above."
- *NC, Cary:* "Operational analysis"
- *OH, Columbus:* "In general, we aim for 1000 to 1320 feet for spacing. Closer requires justification based on bandwidth and progression characteristics."
- *OR, Springfield:* "level of performance described in traffic impact study and the City Traffic Engineer's judgement ."
- *WA, Federal Way:* "Cycle length is handled by our Level of Service Standard, so it's not directly addressed by signal spacing criteria."

**MPOS:**

- *MN, Rochester:* "Our traffic signal spacing guidelines are tied basically to roadway type and urban development character. We attempt to establish traffic signal spacing that will allow us to achieve or maintain progressive traffic flow at a target speed (typically 40-45 mph for roadways in urban fringe or suburban areas down to 30-35 mph for roadways in urban core or areas just outside the urban core."
- *OH, Cincinnati:* "Addressed by the local jurisdiction, not by the MPO."

**18. Please indicate the range of traffic signal cycle lengths that are typically implemented by your agency:**

Minimum cycle length (seconds)	Maximum cycle length (seconds)
0-30 (1)	90-120 (6)
31-60 (11)	121-150 (2)
61-90 (0)	151-180 (6)
91-120 (2)	> 181 (1)
N/A (2)	N/A (2)
No Answer (26)	No Answer (26)

**19. Do you have provisions for when the spacing criteria or geometric design standards cannot be met?**

- Yes (Please explain below, and proceed to Question 20.) (21)
- No (Please skip to Question 21.) (13)

- No Answer (9)

Comments:

**Counties:**

- *CO, Fort Collins*: "There's a variance procedure."
- *FL, West Palm Beach*: "Variance process"
- *IA, Dubuque*: "A variance can be authorized by the Dubuque County Board of Supervisor"
- *IA, Sigourney*: "Case by case basis, Board of Supervisor variance"
- *IA, Marion*: "appeal to county engineer and then Board of Supervisors as last resort within county. Court if still an argument."
- *IA, Wapello*: "Relocate drive to meet sight distance criteria"
- *MI, Grand Rapids*: "the applicant can appeal to the board"
- *OH, Newark*: "variance procedures before Planning Commission"
- *OR, HILLSBORO*: "An Access Management Plan is required when spacing criteria cannot be met. The traffic engineering division submits comments to the county land use planner."

**Cities:**

- *NC, Durham*: "Variations are permitted based on Engineering judgement, particularly when the variation will result in an improvement over the existing condition."
- *NC, Cary*: "For signalized locations, we are able to adjust signal timing to ensure coordination."
- *OR, Springfield*: "Evaluated on a case by case analysis of impacts to system balanced with degree of hardship to property."
- *OR, Tigard*: "If the standards can't fully be met, we will typically require the configuration that gets closest to the intent of the standards"
- *SD, Sioux Falls*: "A variance can be issued by the City Engineer."
- *WA, Federal Way*: "Our development standards outline general requirements for modifications from standards, and the Access Management Code outlines more specific criteria."

**MPOS:**

- *MN, Rochester*: "The criteria we have a treated as desired standards but flexibility is afforded to the city or county highway engineer to permit modifications to the standards based on consideration of traffic, safety, existing conditions, etc."
- *OH, Cincinnati*: "Chapter 5552 of the Ohio Revised Code, referenced above, contains a requirement that counties include a provision for requesting variances to the established AM regulations."

**20. Who makes the decision with respect to the allowable flexibility? (Please explain.)**

**Counties:**

- *AZ, Florence*: "County Engineer - based on input from developers, types of development, and staff recommendations."
- *CO, Fort Collins*: "Recommendation of staff - final approval through Board of County Commissioners"
- *FL, West Palm Beach*: "Committee"
- *IL, Woodstock*: "County Engineer, then Transportation Committee."
- *IA, Dubuque*: "A variance can be authorized by the Dubuque County Board of Supervisor"
- *IA, Sigourney*: "Recommendation by county engineer, final decision by Board of Supervisors"
- *IA, Marion*: "county engineer is incharge of all activity within county rights-of-way."
- *IA, Wapello*: "County Engineer"
- *IN, Greenfield*: "The Hancock County Board of Commissioners with a recommendation"

from the County Engineer."

- *MI, Grand Rapids*: "Traffic Engineer or the board"
- *MN, Jordan*: "Consensus on staff"
- *OH, Newark*: "variance procedures before Planning Commission"
- *OR, HILLSBORO*: "County Traffic Engineering Division"

**Cities:**

- *MD, Baltimore*: "I am not the appropriate person to answer this question."
- *NC, Durham*: "Transportation Staff (typically during the Development review/permitting process)"
- *NC, Cary*: "Group decisions."
- *OH, Columbus*: "Division Administrator"
- *OR, Springfield*: "City Traffic Engineer with consultation of City Engineer."
- *OR, Tigard*: "Development Engineer, along with Planning Commission and City Council, where appropriate"
- *SD, Sioux Falls*: "The City Engineer reviews the access permit and considers input from the staff from the review process along with any additional information provided by the applicant."
- *WA, Federal Way*: "Deputy Public Works Director with input from reviewers in Traffic and Development Services Divisions, Development Services Manager, and City Traffic Engineer"

**MPOS:**

- *MN, Rochester*: "The highway engineer for the applicable roadway authority"
- *OH, Cincinnati*: "The County Commissioners appoint a body (or assume that role themselves) which acts on requests for variances from the approved AM regulations."

**21. Does your agency have a driveway permit application process?**

- Yes (Please proceed to Question 22.) (32)
- No (Please skip to Question 24.) (6)
- No Answer (5)

**22. Does the permit application process also apply to changes in existing development that will result in a significant increase in driveway volumes?**

- Yes (Please explain below, and identify what represents a "significant increase" in driveway volume.) (17)
- No (14)
- No Answer (12)



Comments:

**Counties:**

- *CO, Fort Collins:* "We don't define that - we simply say "may include change in amount or type of traffic" etc."
- *GA, Cumming:* "See Ordinance 101"
- *IL, Woodstock:* "Change in-use is a factor. Ordinance also identifies that a Major Access is one that has more than 50 trips per day. Major access permits are the ones that have the more stringent access requirements."
- *IA, rock Rapids:* "As long as the driveway would be able to comply with stopping sight distances it would be allowed. Be aware that we are a county of 11,000 people, rural in nature."
- *IN, Greenfield:* "We issue permits for residential, commercial and farm driveways, but do assign conditions upon permits that may change in the future."
- *MN, Jordan:* "Any Change in Use"
- *OR, HILLSBORO:* "If the intensity of the use triggers land development review, the project could potentially be required to submit a new access permit for the driveway(s)."
- *SC, Beaufort:* "Change of use. Greater than 50% remodeling. Additions that result in an increase of 50 peak-hour trips or more."

**Cities:**

- *MD, Baltimore:* "A change in the use of the existing building or site necessitates to increase or decrease the driveway width. In this case developer applies for a permit to change the driveway."
- *NC, Durham:* "For access to state maintained roadways any changes which result in any increase in traffic volumes (or changes which shift the peak hour of the driveway) require a new access permit. For access to City maintained roadways any changes which require a new site plan to be submitted through our Planning Department trigger the requirement for a new driveway permit."
- *NC, Cary:* "For any changes in use, a new driveway permit is required."
- *OR, Springfield:* "Usually 500 VPD."
- *OR, Tigard:* "Anything needing a planning action, or trip generation increase above a threshold (1,000 to 3,000 trips per day depending on functional class)"
- *SD, Sioux Falls:* "It applies if the original permit states that it applies."

**MPOS:**

- *MN, Rochester:* "A change in use is defined to include: 1. a change in the primary use of the land (e.g. agricultural to residential, residential to commercial, etc). An access permit is granted for a specific use, and a new permit is required when a use changes since the location of an access connection may be suited for one use but not another. This includes changing the use of an existing field access. 2. a substantial enlargement or expansion in the intensity of land use served by a private street or driveway is proposed, defined as a) an increase in the gross floor area of a structure serving a primary use by 25% or 750 square feet, whichever is greater, or b) an increase in the number of parking stalls by 50% or 10 stalls, whichever is greater."

**23. Are all driveway permit applications reviewed at the regional/district level?**

- Yes (15)
- No (15)
- No Answer (13)

Comments:

**Counties:**

*GA, Cumming:* "County Road are controlled at a County level only, with GRETA DRI review process kicking in on major developments as required."

*IL, Woodstock:* "All access permits on County highways are reviewed at the local County DOT office."

*IA, Independence:* "NA"

*IA, Cherokee:* "all driveway permits are reviewed in the County Engineer's office by the Engineer and staff and again by the Board of Supervisors"

*IA, rock Rapids:* "Small county and all permits go thru the main office for review of location and the OK to proceed"

*MI, Grand Rapids:* "we have no regional office"

*OR, HILLSBORO:* "The county reviews all driveway permit applications in unincorporated urban areas and the rural areas."

**Cities:**

*NC, Durham:* "1) Trip Gen > 15,000 vpd 2) Located within a Transportation Improvement Project (TIP) 3) Access located adjacent to an interstate interchange 4) Public School projects"

*NC, Cary:* "The Town reviews and approves all driveway permits. Many of the roadways in our jurisdiction are state routes, so the State DOT reviews the permits as well. If the trip generation of the site is over 3,000/day, the review may go to the HQ of the DOT for review."

*OR, Springfield:* "As a City gov we review all our applications in that context."

*OR, Tigard:* "We don't have regions/districts"

**MPOS:**

*MN, Rochester:* "We are not a state agency - permits are reviewed locally"

**24. Under what circumstances is a Traffic Impact Study required as part of the driveway permit application? (Please explain.)**

**Counties:**

- *AZ, Safford:* "Not specified"
- *CO, Fort Collins:* "When its a part of a development review process."
- *FL, West Palm Beach:* "Volumes are always required"
- *GA, Cumming:* "Traffic Impact Study is required for all County Land Disturbance Permits unless the Director of Engineering grants a waiver."
- *IL, Woodstock:* "For any Major Access permit application (one that generates more than 50 trips per day)."
- *IA, Independence:* "None"
- *IA, Cherokee:* "Have not had the need or situation to require a traffic study due to the low ADT volumes we deal with on our road system."
- *IA, Denison:* "When a lower speed limit might be used to reduce sight distance required. When minor roadway grading might be completed to facilitate meeting sight distance requirements"
- *IA, Dubuque:* "none required"
- *IA, Sigourney:* "Not applicable"
- *IA, Marion:* "When the county engineer deems it appropriate a traffic impact study is required. This usually happens when the developer disagrees with the requirement imposed by staff for development."
- *IA, Wapello:* "never has been necessary."
- *IA, rock Rapids:* "Not"
- *IA, Creston:* "NONE"
- *IN, Greenfield:* "They have to meet certain minimum criteria for size of development or it can be required by the County Engineer."
- *MI, Grand Rapids:* "determined by traffic engineer"
- *MN, Jordan:* "# of homes, commercial sq ft., or engineering judgement"
- *NJ, Trenton:* "If there are more than 50 parking spots created"
- *OH, Newark:* "Currently a judgement call. We are investigating triggering mechanisms"

- *OR, HILLSBORO*: "If the use surpasses the threshold at the time of development review (thresholds determined by Resolution and Order 86-95), a TIS would be required as part of the driveway permit application."
- *SC, Beaufort*: "Traffic Impact Studies are required for developments that create more than 50 peak-hour trips."

**Cities:**

- *CA, Monterey*: "Potential for adverse traffic impacts to adjacent street segment and intersections."
- *MD, Baltimore*: "Any development that is more than 15,000 sq ft in gross floor area triggers TIS and have to apply to DOT to either request an exemption or jump start the study."
- *NC, Durham*: "If the peak hour trip generation of the site results in a net increase of 150 or more peak hour trips."
- *NC, Cary*: "As a part of site plan or rezoning, traffic studies are required if the development will exceed 50 peak hour trips (regardless of how many driveways)."
- *OH, Columbus*: "A TIS is not required as part of the driveway permit process. A TIS is triggered through zoning or development actions."
- *OR, Springfield*: "Usually 500 VPD increase."
- *OR, Tigard*: "Any zone change Trip generation increase above a certain threshold (1,000 to 3,000 depending on functional class); smaller trip generations if the development would add traffic to an over-capacity location, as identified by staff. Since there are many over-capacity locations, this tends to be the common triggering criteria"
- *SD, Sioux Falls*: "A TIS is required at rezoning, final plans, or for a building permit if no TIS exists at any of those times and what is being proposed could be expected to generate 100 trips in the peak hour. Also a TIS would be required for an existing use to obtain another arterial access."
- *TN, Nashville*: "Only if discretionary zoning changes are required."
- *WA, Federal Way*: "Any increase in evening peak hour trips, or 100 trips during any other peak hour."

**MPOS:**

- *MN, Rochester*: "A TIR would be required along with a driveway permit if the following trip generation thresholds were exceeded For development in the County outside a municipality: 1) Uses that generate more than 500 vehicle trips per day according to the Institute of Transportation Engineers most recent Trip Generation Manual or 30 heavy vehicle trips per day based on the best available data. 2) Developments having direct access onto existing or planned Interstate, Interregional, Strategic Arterial or Major Arterial highway as designated by the adopted Functional Designation Map in the ROCOG Long Range Transportation Plan 3) Residential General Development Plans with 25 or more dwellings whose primary access beyond the limits of the development will be a gravel surfaced road, or 50 or more dwellings where the primary access beyond the limits of the development will be a paved road For developments within a municipality: 1) a land use type which has an average trip generation rate of 125 trips per acre per day or greater, according to most current versions of the ITE Trip Generation Informational Report or comparable research data published by a public agency or institution, and which will generate, based on the size of the development, a 750 or more average daily trips; or 2) Designed so as to concentrate 1,500 or more average daily trips through a single access point; or 3) Designed so that it utilizes an at-grade access opening onto an existing or proposed freeway or expressway as indicated on the adopted Thoroughfare Plan"
- *OH, Cincinnati*: "Decisions regarding the requirements for a TIS, as well as for its content, methodology, and level of detail, are left to the local jurisdictions."

**25. Does the Traffic Impact Study identify improvements to mitigate impacts?**

- Yes (Please proceed to Question 26.) (27)

- No (Please explain below, and skip to Question 27.) (5)
- No Answer (11)

Comments:

**Counties:**

*AZ, Safford:* "It should"

*IA, Cherokee:* "Not applicable"

*IA, Denison:* "See comments for item 24"

*IA, Marion:* "many times the study concludes that traffic is not impacted sufficiently to require mitigation, but when the study indicates that traffic is adversely impacted and needs to be addressed solutions are provided.."

*MN, Jordan:* "part of process, first step is to sit down with county/city/developer to agree on what needs to be studied."

**Cities:**

*SD, Sioux Falls:* "Lane needs are identified and developers are then asked for additional right-of-way as needed."

**26. Please answer the following questions:**

**Who pays for the identified ON-SITE (e.g. access driveway) improvements?**

- Developer /Applicant / LandOwner/ Permittee (30)
- DOT/State (0)
- Local / Municipality / Town / City (0)
- Combination (1)
- No Answer (12)

**Who pays for the identified OFF-SITE improvements?**

- Developer /Applicant / LandOwner/ Permittee (23)
- State / Locals (1)
- Local / Municipality / Town / City (1)
- Combination (5)
- No Answer (12)

**27. Is a Traffic Impact Fee collected?**

- Yes (Please proceed to Question 28.) (14)
- No (Please skip to Question 29.) (21)
- No Answer (8)

**28. On what basis is the Traffic Impact Fee determined?**

- |  |                |
|--|----------------|
| • Based on the projected traffic impacts. (7)    | No Answer (36) |
| • Based on the size and type of development. (8) | No Answer (35) |
| • Other (Please explain below.) (4)              | No Answer (39) |

Comments:

**Counties:**

*AZ, Florence:* "We have a formal development impact fee that is based on a capital improvement plan. The fee is assessed per house, or per square foot for various types of commercial/industrial uses. The basic analysis is based on Vehicle Miles Travelled that each type of activity generates."

*IA, Independence:* "na"

*IA, Cherokee:* "Not applicable"

*IA, Sigourney:* "Not applicable"

*IA, Marion:* "we collect a development fee under a project agreement based upon a matrix using factors such as traffic generation and cost of construction of needed improvements."

*NJ, Trenton:* "If a developer has an impact- off tract and funds are not in place to complete the entire project, then we will collect an escrow. Also, in one section of the county, a Transportation

Development District exists. In that district, there is a fee based on a traffic impact formula and needed improvement districtwide. The fee is approximately \$1000 per am PLUS pm peak hour trip"

SC, Beaufort: "Based on vehicle miles generated for a size and type of development. Vehicle miles utilizes the Average Daily Trip Generation Rate from ITE Trip Generation Manual along with average trip length."

**Cities:**

MD, Baltimore: "DOT has it procedures and basis to the study fee structure."

NC, Cary: "It is a combination of size and projected trip impact and is different for different areas of town."

OR, Springfield: "Based upon per new trip on the system (not on the driveway). Rate per trip based upon cost of existing and proposed capacity of system over planning horizon (typ 20 yr) divided by the number of new trips on the system over the planning horizon."

**29. What resources (if any) do you use or consult when addressing access-related issues in your daily work? (Please check all that apply.)**

- |   |                |
|---|----------------|
| • Reference documents developed by your agency (Please cite below, and provide a web-link or paper copy if available.) (16) | No Answer (27) |
| • Access Management Manual (TRB) (18)   | No Answer (25) |
| • A Policy on Geometric Design of Highways and Streets (AASHTO "Green Book") (27)   | No Answer (16) |
| • Highway Capacity Manual (TRB) (18)  | No Answer (25) |
| • NCHRP reports (Please specify below.) (8)   | No Answer (35) |
| • ITE reports or Journal articles (Please specify below.) (11)  | No Answer (32) |
| • Research papers (Please specify below.) (4)   | No Answer (39) |
| • Other publications (Please specify below.) (10)   | No Answer (33) |
| • I don't use or consult any resources. (3)   | No Answer (40) |

**Comments:**

**Counties:**

AZ, Safford: "City of Mesa Engineering and Design Standards MCDOT Roadway Design manual"

AZ, Florence:

"<http://pinalcountyaz.gov/Departments/PublicWorks/Documents/Manuals/REGIONALLYSIGNIFICANTROUTESSAFETYMOBILITYACCESS.pdf>"

CO, Fort Collins: "this survey is getting really long - I don't have time to list all of them.... it would have nice if your email would have warned that this was a lengthy survey."

GA, Cumming: "Ordinance 101"

IL, Woodstock: "Access Control and Right of Way Ordinance Permit and Procedures Manual

<http://www.co.mchenry.il.us/Common/CountyDpt/highway/hwyPermits.asp>"

IA, DeWitt: "County policy and subdivision ordinances"

IA, Denison: "AASHTO - Geometric Design of Very Low-Volume Local Roads (ADT<400) Iowa Primary Road Access Management Policy"

IA, Sigourney: "Driveway permit policy"

IN, Greenfield: "ITE Trip Generation Indiana Department of Transportation Driveway Permit Manual"

MI, Grand Rapids: "State highway dept specs."

NJ, Trenton: "ITE Trip Generation Manual Transportation Development District Plan"

OR, HILLSBORO: "Community Development Code Article V Resolution and Order 86-95"

SC, Beaufort: "SCDOT Access and Roadside Management Standards (ARMS) Manual. NCHRP 375"

**Cities:**

*NC, Durham:* "NCDOT Policy on Street and Driveway Access to North Carolina Highways"

*OH, Columbus:* "ITE Trip Generation Manual"

*OR, Tigard:* "See Tigard website for design standards and municipal codes and transportation system plan"

*SD, Sioux Falls:*

"[http://www.sioxfordfalls.org/PublicWorks/engineering/construction\\_mgmt/design\\_docs\\_templates/design\\_standards](http://www.sioxfordfalls.org/PublicWorks/engineering/construction_mgmt/design_docs_templates/design_standards) ITE Trip Generation Manual"

*WA, Federal Way:* "City code, sections 22-1541 thru 22-1544"

(<http://srch.mrsc.org:8080/code/template.htm?jsessionid=409A00F240C8EE5DF8C1E7339FF6F603?view=main>) accessmanagement.info (particularly NCHRP 548) WSDOT access management standards (on state highways)"

**MPOS:**

*MN, Rochester:* "NCHRP 457 NCHRP 348 NCHRP 420 Background Papers #1 -13 prepared for Oregon Department of Transportation (in mid 1990's) by Layton and Stover Highway Capacity Software Minnesota DOT Road Design Manual ITE Transportation Impact Analysis for Site Development (2007) Minnesota DOT Best Practices for Rural Entrances Policy National Highway Institute Coursebook for Course # 15255 Florida DOT Quality/Level of Service Handbook"

*OH, Cincinnati:* "See Item #6 above. NCHRP 548 Ohio DOT Access Management Manual Other state AM Manuals and Publications."

**30. How is access management at your agency enforced? (Please check all that apply.)**

- |  |                |
|--|----------------|
| • Access permits are required. (29)                                | No Answer (14) |
| • Other types of permits are required (Please specify below.) (10) | No Answer (33) |
| • Negotiations among parties involved. (13)                        | No Answer (30) |
| • Legal action is taken. (3)                                       | No Answer (40) |
| • Other (Please specify below.) (8)                                | No Answer (35) |
| • The policies are not enforced. (1)                               | No Answer (42) |

Comments:

**Counties:**

*AZ, Safford:* "Building permit"

*AZ, Florence:* "Right of Way use permits are required."

*CO, Fort Collins:* "development review approval"

*IL, Woodstock:* "Access permit categories are: Major Access Minor Access Emergency Access Temporary Construction Access"

*IA, Denison:* "Remove if non-conforming"

*IA, Sigourney:* "Reports of illegal entrances - followup with letter to owner requesting voluntary removal or participation in driveway permit process. If not exercised by owner, county will remove entrance."

*IA, Marion:* "We use road agreement to make participation enforceable."

*IA, Rock Rapids:* "If they do not have a permit and will not pay the fee we will eliminate the driveway and place the cost on their taxes"

*OH, Newark:* "Development Permit from us is required prior to receiving a building permit"

*OR, Hillsboro:* "Land use application conditions of approval"

**Cities:**

*MD, Baltimore:* "DPW and Zoning enforcement issue citations."

*NC, Durham:* "1) Based on staff review/recommendations developers/applicants typically prefer access restrictions and conditions during the zoning process, in order to receive favorable approval of requested zoning rights by the City Council. 2) Development Ordinance requires Traffic Impact Analysis (and mitigation measures) for developments which generate 150 or more peak hour trips. Additional

Transportation Special Use Permits with require findings of fact are also required for developments which generate 600 or more peak hour trips."

*OR, Springfield:* "Land use permits per Oregon law."

*WA, Federal Way:* "Access is permitted under the land use permitting processes."

**MPOS:**

*GA, Atlanta:* "Our policy has not yet had to be enforced. But, if necessary, we could take funding away from the project."

*MN, Rochester:* "Access requirments are typically imposed initially at the general development plan and platting stage. These requirements are then checked at the time a site plan is submitted for approval of building permit/zoning certificate. This is done in both the city and the county we work for. For existing lots that predate access management ordinances/policies, the county will require an access permit. The city will typically enforce its access management requirements along at the building permit / zoning certificate stage. For anything other than a single family or twin home a site plan must accompany the permit request, and thus access can be reviewed."

*OH, Cincinnati:* "Enforcement is up to local Jurisdictions, not the MPO."

**31. Please indicate if there is coordination between your agency and the local land use agency on the following items: (Please check all that apply.)**

- |                                     |                |
|-------------------------------------|----------------|
| • Zoning / rezoning (28)            | No Answer (15) |
| • Corridor overlay zones (10)       | No Answer (33) |
| • Site plan review (26)             | No Answer (17) |
| • Subdivision review (29)           | No Answer (14) |
| • Building permit approvals (20)    | No Answer (23) |
| • Other (Please specify below.) (2) | No Answer (41) |

Comments:

**Counties:**

*IA, Marion:* "Building permits are not issued unless a legal accees to the property exists by permit through the road department."

*OR, HILLSBORO:* "The county is the local land use agency."

**Cities:**

*NC, Cary:* "In Cary, we have a development review committee that is made up on staff from Engineering, Planning, Fire, Inspections and Permits, etc. We coordinate on all site plans."

**MPOS:**

*MN, Rochester:* "the City of Rochester has a Land Development Manual ordinance that incorporates zoning, subdivision and other site development requirements including access management. We coordinate with the city engineer on administration of this ordinance. We also coordinate closely with the County Highway Engineer on access and land development mattes outside of the municipality. Our agency is responsible for administering the county land development ordinances (zoning / subdivision) as well as building permits, and we refer all development applications to the County highway engineer for review."

**32. How are transportation and land use decisions, as related to access management, typically coordinated among two or more agencies (e.g. State, county, municipality)?**

- The agency that has jurisdiction over the subject roadway typically governs. (21)
- The agency that has jurisdiction over the land use typically governs. (4)
- Coordination meetings occur among the involved agencies. (9)
- An Access Management Plan is prepared. (1)
- Transportation and land use decisions are made separately and not coordinated. (2)
- Other (Please specify below.) (0)

- No Answer (6)

Comments:

**Counties:**

- *AZ, Florence:* "Land use agency governs, but we require approval of the agency that has jurisdiction over the road - initially approval of the TIA, followed by permit from the agency."
- *CO, Fort Collins:* "Jurisdictional agency governs with input and courtesy reviews from others....."
- *OR, HILLSBORO:* "The county governs, but the county coordinates and consults regularly with the cities when they are involved."

**Cities:**

- *WA, Federal Way:* "Under state law, the city is responsible for access permitting on state highways (except for freeways), but our standards have to be at least as restrictive as the State's."

**MPOS:**

- *MN, Rochester:* "While final jurisdiction lies with the roadway authority, we utilize coordination meetings and a application referral process to insure that all agencies (highway and land use) have the opportunity to review development applications."

**33. If access-related conflicts arise between your agency and other agencies, how are these conflicts resolved?**

- The more restrictive regulations among the involved agencies apply. (7)
- The less restrictive regulations among the involved agencies apply. (0)
- Coordination meetings occur among the involved agencies. (25)
- Other (Please explain below.) (4)
- No Answer (7)

Comments:

**Counties:**

- *IA, Independence:* "elected board"
- *IA, Denison:* "Have not had any conflicts"
- *IN, Greenfield:* "Whoever has jurisdiction has the final decision."

**Cities:**

- *OH, Columbus:* "Agency with permitting authority has final decision."

**34. Does your agency have an appeals process?**

- Yes (Please proceed to Question 35.) (23)
- No (Please skip to Question 38.) (12)
- No Answer (8)

**35. What decisions can be appealed? (Please explain.)**

**Counties:**

- *AZ, Florence:* "Virtually anything can be appealed to our elected officials."
- *FL, West Palm Beach:* "All"
- *IL, Woodstock:* "Any decision related to access can be appealed."
- *IA, Dubuque:* "A variance for driveway permit can be authorized by the Dubuque County Board of Supervisor"
- *IA, Sigourney:* "Denial of entrance application by Highway Department."
- *IA, Marion:* "any decision may be appealed to the Board of Supervisors."
- *IA, rock Rapids:* "They can always go to the Board of Supervisors"



- *IN, Greenfield*: "Sight and separation variances. Also lengths of auxiliary lanes."
- *MI, Grand Rapids*: "all staff decisions"
- *MN, Jordan*: "Access permit"
- *NJ, Trenton*: "The first layer of appeal is to the full Planning Board. After that they can appeal to the Board of Chosen Freeholders. Next they can go to the Administrative Courts."
- *OH, Newark*: "Any staff decision"
- *OR, HILLSBORO*: "Land use applications (i.e. subdivisions) involving an Access Management Plan or a stand alone Access Management Plan application."
- *SC, Beaufort*: "Typically, an access management decision can be appealed to the Zoning Board of Appeals where land use development is tied to the access appeal. If the access appeal does not have a land use development (the land being developed is in an incorporated town/city and the access is to a county road) the appeal goes to the County Administrator. Most decisions that have been appealed to date include request for additional access driveways that have been rejected."

**Cities:**

- *CA, Monterey*: "Driveway permit conditions may be appealed to City Council."
- *MD, Baltimore*: "Curb Cut permit disapprovals."
- *NC, Cary*: "Developers can always request that their plans be elevated to a Town Council review and approval versus a staff review and approval process."
- *OR, Springfield*: "all of them"
- *OR, Tigard*: "Essentially all decisions can be appealed to a higher level"
- *SD, Sioux Falls*: "Whether or not to permit an access and the type of access allowed"
- *WA, Federal Way*: "Any of it."

**MPOS:**

- *MN, Rochester*: "The ordinance states An applicant whose Access Permit or Access Plan is not approved, or is approved with conditions not agreed to by the applicant, shall have 60 days to appeal the decision in writing, stating the reasons for which an appeal should be approved."

**36. What is the basis for the appeals process? (Please explain.)**

**Counties:**

- *AZ, Florence*: "So far, the developer appeals have been based on economic impacts to them if they do not get greater driveway access. I would love to establish a formal basis on which appeals are to be judged, but have been unable to create that so far."
- *IL, Woodstock*: "They have to meet certain criteria. See Ordinance."
- *IA, Dubuque*: "A property owner may request a hearing"
- *IA, Sigourney*: "Board of Supervisors has authority over secondary road system."
- *IA, Marion*: "relief from unnecessary regulation or review by private engineer to apply more gentle criteria"
- *IA, Rock Rapids*: "I want and they won't let me have"
- *IN, Greenfield*: "The applicant does not agree with the Engineers recommendation."
- *MI, Grand Rapids*: "applicant asks board"
- *MN, Jordan*: "Developer disagrees with staff"
- *NJ, Trenton*: "An applicants interpretation of our rights under the law"
- *OR, HILLSBORO*: "See Community Development Code Section 209 <http://washtech.co.washington.or.us/LDS/CDCdocs/207-212.pdf>"
- *SC, Beaufort*: "See 35."

**Cities:**

- *MD, Baltimore*: "To provide the appellant an opportunity to explain his reason for approval."
- *NC, Cary*: "The developer would request that their plan be sent to Town Council for review."
- *OR, Springfield*: "per land use codes and state law."
- *OR, Tigard*: "Applicable codes and regulations"

- *SD, Sioux Falls*: "property owner hardship"
- *WA, Federal Way*: "Under our land use permits, any party of record can appeal any part of an approval."

**MPOS:**

- *MN, Rochester*: "The ordinance states Appeal Process Appeals on decisions regarding an Access Permit shall be referred to the Olmsted County Board of Commissioners Public Works Subcommittee for review and recommendation to the full Board of Commissioners within 30 days of filing the appeal. Following receipt of the Public Works Committee recommendation, the Board of Commissioners shall hold a public hearing to consider the appeal within 45 days, but in no case more than 60 days following the filing of an appeal."

**37. Who has the authority to decide an appeal? (Please explain.)**

**Counties:**

- *AZ, Florence*: "Our elected Board of Supervisors."
- *CO, Fort Collins*: "Board of County Commissioners"
- *FL, West Palm Beach*: "Committee of department heads"
- *IL, Woodstock*: "County Engineer and Transportation Committee."
- *IA, Dubuque*: "the Dubuque County Board of Supervisor"
- *IA, Sigourney*: "Board of Suprvisors"
- *IA, Marion*: "Board"
- *IA, rock Rapids*: "The Board of supervisor---- I have never had this happen and I don't think that they would overrule me if I said it was a traffic hazard."
- *IN, Greenfield*: "Board of Commissioners."
- *MI, Grand Rapids*: "the board"
- *MN, Jordan*: "County Board"
- *NJ, Trenton*: "Planning Board or Freeholders"
- *OH, Newark*: "The Planning Commission"
- *OR, HILLSBORO*: "Board of County Commissioners, Hearings Officer or Planning Commission depending on the type of application."
- *SC, Beaufort*: "See 35."

**Cities:**

- *MD, Baltimore*: "Site plan review committee and final decision will be made by DPW Director."
- *OH, Columbus*: "Not formal. Division Administrator decides conflicts."
- *OR, Springfield*: "Staff, Planning Commission, City Council, Land Use Board of Appeals (state level judicial board), court system."
- *OR, Tigard*: "Typically the next level in the chain: staff Director Planning Commission City Council Oregon Land Use Board of Appeals courts"
- *SD, Sioux Falls*: "City Engineer"
- *WA, Federal Way*: "It depends on the underlying land use process being appealed. It could be the Public Works Director for low-level processes, City Council for Comprehensive Plan amendments, but most are heard by a Hearings Examiner."

**MPOS:**

- *MN, Rochester*: "Criteria for Approval of an Appeal An appeal may be approved if the Board of Commissioners find that: 1. There is no reasonable use of the property under the conditions imposed by this ordinance; and 2. The plight of the landowner is due to conditions unique to the property and not created by the landowner, and 3. The appeal, if granted would not result in an unsafe condition. Conditions may be imposed in the approval of any appeal as necessary to effect compliance with the spirit and intent of this ordinance"

**38. As part of your program, are there provisions for the preparation of Access Management Plans or Corridor Management Plans?**

- Yes (Please proceed to Question 39.)
- No (Please skip to Question 46.)
- No Answer

**39. Who is involved in preparation of the Plan? (Please explain.)**

**Counties:**

- *IL, Woodstock:* "DOT staff"
- *NJ, Trenton:* "Planning and Engineering Divisions"
- *OR, HILLSBORO:* "The applicant prepares the Access Management Plan for the county's review."
- *SC, Beaufort:* "Traffic Engineering and Planning"

**Cities:**

- *MD, Baltimore:* "Applicant."
- *OR, Tigard:* "The city and state work together on access plans for key state highways"
- *SD, Sioux Falls:* "The City, possibly the DOT, and/or private individuals"

**40. Why would a Plan be developed? (Please explain.)**

**Counties:**

- *CO, Fort Collins:* "If CDOT wants one."
- *IL, Woodstock:* "To reduce, consolidate or rebuild access points."
- *NJ, Trenton:* "For site specific corridors"
- *OR, HILLSBORO:* "When access standards cannot be met, a plan is required."
- *SC, Beaufort:* "As part of a plan to address future deficiencies where widening may not be practical. New roadways where the elected leaders want the capacity and safety of the new roadway to be maintained."

**Cities:**

- *MD, Baltimore:* "To provide the permit reviewer with all the information needed to approve the plan."
- *OR, Tigard:* "To improve capacity and safety through access management; developing a corridor plan provides clearer expectations (and higher probability of meeting those expectations) when development does occur"
- *SD, Sioux Falls:* "To assist development to identify access locations very early on To protect important corridors"

**41. What is included in the Plan? (Please explain.)**

**Counties:**

- *NJ, Trenton:* "Access locations, DTS, signal locations and intersection improvements"
- *OR, HILLSBORO:* "See Community Development Code Section V <http://washtech.co.washington.or.us/LDS/CDCdocs/501.pdf>"
- *SC, Beaufort:* "As previously indicated, driveway spacing requirements, full access spacing requirements, signal spacing, signal requirements, driveway design, auxillary lane requirements. Adjacent parcel connectivity requirements."

**Cities:**

- *MD, Baltimore:* "Site plan, driveway length width proximity to intersections or other driveway locations."
- *OR, Tigard:* "typically access locations and future cross-access easements"

- *SD, Sioux Falls*: "Identified access locations and types, needed lanes, and projected queue lengths."

**42. Who pays for the Plan? (Please explain.)**

**Counties:**

- *NJ, Trenton*: "County or grants"
- *SC, Beaufort*: "The County and often partnered with local municipality."

**Cities:**

- *MD, Baltimore*: "Applicant."
- *OR, Tigard*: "city and state"
- *SD, Sioux Falls*: "The party that initiated the plan"

**43. How is the Plan implemented? (Please explain.)**

**Counties:**

- *CO, Fort Collins*: "If adopted by the various agencies, they all implement it together."
- *NJ, Trenton*: "By ordinance through or master plan and land developmetn standards"
- *OR, HILLSBORO*: "Conditions of Approval linked to an AMP and/or land use decision"
- *SC, Beaufort*: "Goes thru Planning Commission and then thru County Council for adoption by ordinance. If also with incorporated boundaries, the plan will go thru the local planning commission and town council in parallel with the County."

**Cities:**

- *MD, Baltimore*: "After building permit is issued will proceed to construction."
- *OR, Tigard*: "typically through the development process; some state or city funded access consolidation or median projects are constructed."
- *SD, Sioux Falls*: "The ploans are reviewed to verify that access permits as received meet the plan."

**44. How frequently have such Plans be developed? (Please explain.)**

**Counties:**

- *CO, Fort Collins*: "Along the various state highways - seems like we're working on one every few years."
- *SC, Beaufort*: "Since 2001, we have adopted 5 plans for 5 corridors."

**Cities:**

- *MD, Baltimore*: "As many times as requested."
- *OR, Tigard*: "One key plan was developed recently; its next stage (specific lcoations) is getting started now"
- *SD, Sioux Falls*: "We have been developing about two major corridor plans each year."

**45. How successful have these Plans been? (Please explain.)**

**Counties:**

- *CO, Fort Collins*: "Sort of. Good ideas and general guidelines. The hang up is that they often rely on re-development which tends to take place one parcel at a time, and the whole vision needs multiple parcels to work."
- *NJ, Trenton*: "Too soon to tell"
- *OR, HILLSBORO*: "The vast majority are approved and not appealed."
- *SC, Beaufort*: "Very."

**Cities:**

- *MD, Baltimore*: "Most of the time."

- *OR, Tigard*: "fairly successful"
- *SD, Sioux Falls*: "So far the plans have been very successful"

**46. Is driveway reduction or consolidation considered in highway reconstruction projects?**

- Yes (Please explain below.) (30)
- No (4)
- No Answer (9)

Comments:

**Counties:**

- *AZ, Florence*: "We attempt to do this on every major project, and have used frontage roads or changes in driveway configurations as ways to consolidate. We also have required development to provide cross-access easements that may or may not be used when neighboring properties develop."
- *CO, Fort Collins*: "As possible."
- *GA, Cumming*: "We do try to bring all reconstruction project access control up to current County requirements."
- *IA, Independence*: "voluntarily"
- *IA, Cherokee*: "If safety due to sight distance or distance from an intersection is an issue."
- *IA, Dubuque*: "Try to recommend shared driveway access"
- *IA, Marion*: "access restrictions have been set by the Board of Supervisors based upon recommendations provided by MPO or county engineer. This has generally resulted in a moratorium on additional accesses for designated roads slated for improvement. We remove access to conform to policy as land is platted or zoning or use is changed and review is required for change to take effect."
- *IA, Rock Rapids*: "If they are not being used or they want one large/bigger driveway they usually let us combine or move to a safer location."
- *IA, Clarion*: "If the driveway is no longer used it is not reconstructed"
- *IN, Greenfield*: "Try and reduce the number of access points."
- *MI, Grand Rapids*: "if we can through the design we consolidate driveways with property owners permission."
- *OH, Newark*: "Does not apply"
- *OR, Hillsboro*: "Reduction and/or consolidations are reviewed as part of the project design (considering the functional class evaluation)."
- *SC, Beaufort*: "It really depends on the budget and SCDOT's willingness to go to bat with issues of adverse condemnation. They have been stung in the past on this."

**Cities:**

- *MD, Baltimore*: "Yes, unnecessary and abandoned driveways usually are consolidated. This action helps to preserve on street parking and or helps for traffic flow."
- *OH, Columbus*: "Preliminary engineering phase determines driveway consolidation or elimination that results in a safer roadway operation. Accidents are analyzed. Public involvement and right-of-way phases typically finalize the plan."
- *OR, Tigard*: "We try to get as close to the standards as possible through new construction"
- *SD, Sioux Falls*: "The City of Sioux Falls and the SDDOT strive to provide better access management on every reconstruction project that occurs in the City."
- *TN, Nashville*: "Unused or abandoned driveways are eliminated where ever feasible."
- *WA, Federal Way*: "But it rarely happens."

**MPOS:**

- *MN, Rochester*: "In a major reconstruction project the city and county will typically look at existing access and whether reasonable opportunities exist to improve compliance with the standards/guidelines for access management as part of the project. In minor projects or projects

simply involving a pavement overlay or reclamation access will typically not be modified (except possibly to correct geometric design deficiencies)"

- *OH, Cincinnati*: "On State Highways, the Ohio DOT includes this as a standard element of highway reconstruction projects."

**47. Have any independent access management-related studies or research been undertaken at, or for, your agency?**

- Yes (Please cite below, and provide a web-link or paper copy if available.) (3)
- No (32)
- No Answer (7)

Comments:

**Counties:**

- *IA, Marion*: "Iowa Dot and CETRE at Iowa State have provided base information for some understanding of criteria and need to control access."
- *SD, Sioux Falls*: "Whenever we do a corridor plan we usually have it completed by an engineering consultant with experience in traffic engineering. Here is one example. It is on the SDDOT webpage but work for access management was done by HDR.  
<http://www.sddot.com/sd100/index.asp>"

**MPOS:**

- *GA, Atlanta*: "<http://www.atlantaregional.com/html/4096.aspx>  
[http://www.atlantaregional.com/documents/gwinnett\\_access\\_mgmt.pdf](http://www.atlantaregional.com/documents/gwinnett_access_mgmt.pdf)"

**48. Have exclusive access management projects targeting the reduction or consolidation of driveways and median openings been attempted by your agency?**

- Yes (10)
- No (28)
- No Answer (5)

Comments:

**Counties:**

- *IA, Marion*: "they are effective at reducing the number of drives. We do not have statistics that would convince that it has been effective. Intuitively, fewer conflicts and better design should provide the result over time."
- *MN, Jordan*: "During road reconstruction we try to fix access issues, no follow up study on how it improves operations or safety."
- *NJ, Trenton*: "In process"
- *SC, Beaufort*: "They have been excellent in preserving capacity and improving safety."
- **Cities:**
- *NC, Cary*: "Several have been undertaken to improve the safety at intersection and they have been extremely successful."
- *OR, Springfield*: "Median installation in high crash rate blocks was very effective in reducing crashes."
- *WA, Federal Way*: "We have a small amount in our operational budget for access management retrofits, typically involving left-turn restrictions through the use of precast block curbing. This is usually used at high-collision rate driveways, and we have typically seen reductions in collision rates in the 60-90% range. We've even gotten a couple "thank you" letters from business patrons!"

**49. Have any education or training opportunities related to Access Management been provided within your agency?**

- Yes (9)
- No (29)
- No Answer (5)

Comments:

**Counties:**

- *AZ, Florence:* "As we developed our Access Management manual we held numerous meetings - with other municipalities, with elected officials, with developers and their engineers. Developers and land use attorneys typically fought any efforts to restrict access as being anti development."
- *CO, Fort Collins:* "Just for staff - not for the public."
- *NJ, Trenton:* "Participation in TRB Conferences"
- *SC, Beaufort:* "Not yet, but we are developing a 1-day workshop for development engineers involved in permitting projects to explain the access management program."

**Cities:**

- *MD, Baltimore:* "To permit reviewers i.e planners , traffic engineers and surveyors. Successful."
- *WA, Federal Way:* "All the Traffic Division staff have been to at least one training session provided by the state T2 center."

**MPOS:**

- *GA, Atlanta:* "NHI course on Access Management"
- *OH, Cincinnati:* "OKI has been a regional leader in the promotion of Access Management principles for over 25 years. Early on, we explained what it was and how it could benefit traffic flow and safety. Then we had to explain how to develop and implement AM programs. This culminated in the 2002 revisions to the Ohio Revised Code which specifically allow counties to develop and implement AM regulations. The value of AM has now become widely understood and accepted by both the private and public sectors, and AM has become standard practice among local jurisdictions."

**50. Have any community outreach activities been undertaken by your organization with respect to access management?**

- Yes (11)
- No (27)
- No Answer (5)

Comments:

**Counties:**

- *AZ, Florence:* "Done at same time as above."
- *CO, Fort Collins:* "Only for specific projects - with web pages, open houses, newsletters, etc. Short of some explanations on our web site, we haven't done general information."
- *IL, Woodstock:* "Recent Ordinance was given a public meeting prior to approval."
- *NJ, Trenton:* "site specific corridor. Public has learned the tradeoffs between access management and DTS"
- *OR, HILLSBORO:* "Community outreach does occur when dealing with large scale projects (i.e. roadway realignment)."
- *SC, Beaufort:* "During our corridor access management plan development, we typically have public meetings and/or public hearings."

**Cities:**

- *OR, Springfield:* "Property owners and business operators in vicinity of media project. Response was negative but Council approved median."
- *OR, Tigard:* "Access management is a key topic of the outreach meetings for our transportation system plan"

- *SD, Sioux Falls*: "Prior to having the City Council consider our access management standards we took them to our local Infrastructure Review and Advisory Board and spent a few months educating that group on what we wanted to do to get them to recommend the proposed changes to the City Council also. The IRAB made the recommendation and then the City Council passed the standards."

- *WA, Federal Way*: "As part of our arterial projects that involve median installation, we have a representative from the Chamber of Commerce (who is also Chair of the Planning Commission) attend Open House meetings to discuss project impacts on businesses. He owns a business that was affected by one of our earlier projects and can talk from personal experience about how to plan ahead for the changes in the business environment."

**MPOS:**

- *GA, Atlanta*: "As part of our program to create regional access management policies and standards listening sessions and a regional forum have been scheduled to solicit input."

- *OH, Cincinnati*: "See response to Item #49 above."

**51. Have your agency's access-related decisions been challenged in the courts?**

- Yes (Please describe below.) (4)
- No (Please describe below.) (34)
- No Answer (5)

Comments:

**Counties:**

- *IA, DeWitt*: "none to date"
- *OR, HILLSBORO*: "Over the last 5 years, we have had only several appeals of AMPs."
- *SC, Beaufort*: "Our decisions have been challenged in courts via adverse condemnation lawsuits against the DOT during reconstruction projects. The County has not been directly involved in the lawsuit."

**Cities:**

- *MD, Baltimore*: "The DPW Director decision for curb cuts is final."
- *OR, Tigard*: "Dolan Vs City of Tigard"
- *SD, Sioux Falls*: "There has been some court cases but they have all been through the SDDOT at this point."

**MPOS:**

- *OH, Cincinnati*: "N/A to MPOs."

**52. On what basis were your agency's access-related decisions challenged in the courts? (Please check all that apply.)**

- |  |                |
|--|----------------|
| • Rational / essential nexus (Please specify below.) (1)   | No Answer (42) |
| • Access would not provide "reasonable access" (Please specify below.) (1)                         | No Answer (42) |
| • Lack of "direct access" (Please specify below.) (2)  | No Answer (41) |
| • Inequity relative to access allowed for other properties in the area (Please specify below.) (0) | No Answer (43) |
| • Reduction in property value (Please specify below.) (2)  | No Answer (41) |
| • Other (Please specify below.) (3)  | No Answer (40) |

Comments:

**Counties:**

- *CO, Fort Collins*: "Sorry - this survey is way too long."
- *GA, Cumming*: "On several two lane to four lane median"



projects this issue has been put forward."

- *IA, Cherokee:* "Not applicable"
- *IA, DeWitt:* "NA"
- *OR, HILLSBORO:* "Staff informed me that the most recent appeal granted was due to the way Section 501 of the Community Development Code (CDC) is written. Staff felt that engineering standards should not be included in the CDC. They should be left up to traffic engineering to review and provide findings for the applicant's submittal."

**Cities:**

- *MD, Baltimore:* "Never been challenged."

**MPOS:**

- *OH, Cincinnati:* "N/A"

**53. Were the U.S. Supreme Court cases of *Nollan vs. California Coastal Commission* or *Dolan vs. City of Tigard* cited in court rulings that affected your access management program?**

- Yes (11)
- No (27)
- No Answer (5)

**Comments:**

**Counties:**

- *AZ, Florence:* "Though not used in court, they are cited by attorneys in letters when seeking to gain additional driveway access - primarily commercial sites."
- *IA, Marion:* "na"

**Cities:**

- *OR, Tigard:* "Note: Dolan really dealt with development requirements and costs; it did not deal with access"

**MPOS:**

- *OH, Cincinnati:* "N/A"

**54. Is there an access management-related practice or procedure applied by your agency that you believe would be of particular value to other transportation agencies?**

- Yes (Please explain below, and proceed to Question 55.) (11)
- No (Please skip to Question 56.) (22)
- No Answer (10)

**Comments:**

**Counties:**

- *GA, Cumming:* "The use of projected traffic volumes to determine access requirements is usefull in high growth locations to insure future mobility."
- *IL, Woodstock:* "The Ordinance"
- *IA, Denison:* "Significant increase in usage of an existing entrance"
- *MN, Jordan:* "We base our access managment on our Future Functional Classification Map - not current. At the edge of a growing metro area our County population is expected to double by 2030. We are setting up the system to address the future needs. If we allow access under our current fun. class. we would be having to spend public dollars to fix issues someday when traffic increases and the classification changes."
- *NJ, Trenton:* "Not yet but hopefully soon"
- *OR, HILLSBORO:* "Resolution & Order 86-95"

**Cities:**

- *MD, Baltimore:* "Review our development guidebook and policies on line: <http://www.baltimorecity.gov/government/planning/plansMapsPublications.php>"
- *NC, Cary:* "We have a connectivity ordinance that is very effective in ensuring that neighborhoods have multiple ingress and egress options which reduces the need for a lot of access points on the "main" roads."
- *WA, Federal Way:* "As mentioned previously, having a business representative that can speak knowledgably about the impacts of access management can help assuage a lot of concerns that can derail a good project."

**MPOS:**

- *GA, Atlanta:* "Other MPOs may want to link L230 funding to access management plans."
- *OH, Cincinnati:* "Chapter 5552 of the Ohio Revised Code sets out good procedural requirements for developing and implementing an access management policy at the county level."

**55. Would this practice or procedure make an appropriate case study to consider including in the Synthesis report?**

- Yes (6)
- No (10)
- No Answer (27)

**56. What would an ideal access management policy/document include? (Please check all that apply.)**

- |  |                |
|--|----------------|
| • Authority to manage access. (32)           | No Answer (11) |
| • Authority to deny access. (28)             | No Answer (15) |
| • Access spacing standards. (30)             | No Answer (13) |
| • Geometric design standards. (30)           | No Answer (13) |
| • Traffic impact analysis requirements. (29) | No Answer (14) |
| • Other (Please explain below.) (3)          | No Answer (40) |

Comments:

**Counties:**

- *IL, Woodstock:* "Fees, plan preparation guidelines, utility issues."
- *IN, Madison:* "A clear differentiation between proactive and reactive access management. Reactive access management application is applying access management retroactively. Reactive access management is needed where subdivision of land has been allowed without any consideration for long-term access management principles. Proactive access management is implemented prior to natural-use or agricultural-use land undergoes "conversion." Conversion is the subdivision of land into smaller parcels."

**Cities:**

- *OH, Columbus:* "Operational guidelines for the use of medians and U-turn opportunities."

**57. On a scale of 1 to 5 (with 1 being "not considered" and 5 being "very relevant"), to what extent does Access Management at your agency consider the following:**

Transit-oriented development (TOD)	Sustainability	Context-sensitive solutions (CSS)	Transit provisions	Pedestrian provisions
• "1" – (16)	• "1" – (8)	• "1" – (5)	• "1" – (12)	• "1" – (7)
• "2" – (7)	• "2" – (4)	• "2" – (7)	• "2" – (10)	• "2" – (4)
• "3" – (7)	• "3" – (10)	• "3" – (9)	• "3" – (7)	• "3" – (9)

• “4” – (4)	• “4” – (6)	• “4” – (9)	• “4” – (4)	• “4” – (8)
• “5” – (0)	• “5” – (4)	• “5” – (3)	• “5” – (1)	• “5” – (5)
• “No Answer” – (9)	• “No Answer” – (11)	• “No Answer” – (10)	• “No Answer” – (9)	• “No Answer” – (10)

Comments:

**Counties:**

- *IA, Cherokee:* "Most of our access requests come from the rural sector, so it has not been an issue here in the county."

**MPOS:**

- *GA, Atlanta:* "Our agency does not have particular guidelines and procedures that govern or regulate access on any roadways. However, we embrace that all of the above items are part of a comprehensive access management program/policy."

**58. Please identify any RESOURCES that you would like to see developed to help improve the implementation of access management.**

**Counties:**

- *AZ, Florence:* "The "Michigan Left" parkway is currently being touted as a way to have high volume corridors with restricted left turns. Several AZ agencies are adopting this concept as an Arizona Parkway. We would like to see additional research on this, and how agencies are able to use in retrofits."
- *IA, Cherokee:* "None I can think of."
- *IN, Greenfield:* "More information on spacing of signalized intersections."
- *IN, Madison:* "Public education is the number one key. Before the public can begin to appreciate the need for access management, the functional classification system must be improved to remove several flaws within the classification system."

**Cities:**

- *MD, Baltimore:* "Universal Access Management and Design Standards Manual."
- *OR, Tigard:* "Good figures to cite on how much access management improves safety (such as a percentage reduction in accident rates under \_\_\_\_ conditions, etc) and capacity (such as a percentage increase in capacity under \_\_\_\_ conditions)"

**59. Please identify any RESEARCH that you would like to see be performed to help in the implementation of access management.**

**Counties:**

- *IA, Cherokee:* "no suggestions"
- *IN, Greenfield:* "Minimum distances for driveways from intersections. Rural vs Urban. Factors to consider."

**Cities:**

- *MD, Baltimore:* "The impact of Curb cuts and or access drive way on on street parking."
- *WA, Federal Way:* "More research on economic impacts - this needs constant updating to at least have the appearance of relevance to the business community."

**60. On a scale of 1 to 5 (with 5 being “very successful” and 1 being “very unsuccessful”) how would you rate the success of your agency in managing access?**

- 1 (Please explain below.) (1)
- 2 (Please explain below.) (4)
- 3 (Please explain below.) (8)
- 4 (Please explain below.) (15)
- 5 (Please explain below.) (8)
- No Answer (7)

Comments:

**Counties:**

- *AZ, Safford:* "Our guidelines have not been adequately developed."
- *AZ, Florence:* "Still undetermined. We just recently (Oct 08) got our Board to adopt the standards."
- *GA, Cumming:* "Since ordinance 101 was enacted in 2005, access management has become more consistent."
- *IL, Woodstock:* "The McHenry County Division of Transportation has a very good track record in the management of access issues on County highways in the County."
- *NJ, Trenton:* "We have had trouble completing our code which is holding us back"

**Cities:**

- *CA, Monterey:* "Very old cities are limited in their ability to make large access changes, but incremental changes are made that gradually improve traffic conditions and safety."
- *MD, Baltimore:* "Due to the existence of site plan review guidelines, driveway standards and manuals and their availability on line and hard copies to the development community, there is little misunderstanding between the applicants and the reviewing & approving bodies, the agency is very successful in managing access requests."
- *NC, Durham:* "We have been relatively successful, but our requirements have never been legally challenged. If legally challenged in court we may not have the adopted/published standards to prevail."
- *OH, Columbus:* "Not enough planning is done ahead of time to guide location and design of access points on a corridor basis. Tend to react to development rather than guide it."
- *SD, Sioux Falls:* "We are doing an excellent job of access management on our new arterials that are being built."
- *TN, Nashville:* "No real standards. Results depend on the knowledge, skills and commitment of reviewer."
- *WA, Federal Way:* "Although we've been wimpy on consolidating access with widening projects, we've held pretty firm on new development, and we've been able to maintain political support on most occasions that get raised to a political level."

**MPOS:**

- *GA, Atlanta:* "Our policy was enacted in 2005 and only applied to new projects entering the TIP. Since then we have not been able to issue a call for projects so very few projects actually fall under the rule."
- *OH, Cincinnati:* "See response to Item #49 above."

**61. What are the strengths of your agency's access management program? (Please check all that apply.)**

- |  |                |
|--|----------------|
| • It provides uniformity in controlling access. (22)   | No Answer (21) |
| • It provides flexibility for judgment decisions. (23) | No Answer (20) |
| • It represents a defensible administrative rule. (10) | No Answer (33) |
| • It has strong organizational commitment. (11)        | No Answer (32) |
| • Other (Please explain below.) (2)                    | No Answer (41) |

Comments:

**Counties:**

- *IL, Woodstock:* "It follows state statutes with regard to the powers allowed Counties for access management."

**MPOS:**

- *OH, Cincinnati:* "OKI promotes all of the above, but the specific details are left to the implementing local jurisdiction."

**62. What barriers or difficulties have you or your organization encountered in implementing access management? (Please check all that apply and specify.)**

- |  |                |
|--|----------------|
| • Technical (Please explain below.) (7)  | No Answer (36) |
| • Political (Please explain below.) (21)   | No Answer (22) |
| • Legal (Please explain below.) (2)  | No Answer (41) |
| • Organizational / Institutional (Please explain below.) (6)   | No Answer (37) |
| • Staffing / resources (Please explain below.) (9)   | No Answer (34) |
| • Other (Please explain below.) (3)  | No Answer (40) |
| • Barriers to implementing Access Management have not been encountered (Please skip to Question 64.) (5) | No Answer (38) |

Comments:

**Counties:**

- *AZ, Safford:* "lack of training in this area for small entity application small staff"
- *AZ, Florence:* "As discussed earlier - primary resistance comes from commercial development, and they appeal to elected officials. Their appeals are that we are not developer friendly, and that our policies may cause them to move their project elsewhere. The potential loss of a tax revenue causes political intervention. This was the primary discussion from developers and their attorneys as we developed our Access Management manual. We ended up putting much more flexibility in the process in order to allow them to argue each case."
- *IA, Marion:* "Access issues should not be judged by a political body. we have been reasonably successful at keeping the discussion about design, but it is difficult to provide equity when politics becomes even a small part of the decision."
- *IN, Greenfield:* "Sight distance requirements. Applicants want to vary from the minimum requirements."
- *IN, Madison:* "A lack of public support, based on a lack of understanding of what is being lost by not implementing access management. The functional classification system needs improvement to make it understandable and the need for access management convincing to the general public."
- *NJ, Trenton:* "see 60"
- *OR, HILLSBORO:* "competing land use values urbanization vs. mobility"
- *SC, Beaufort:* "Political primarily because developers are constantly pushing for more access. The public is constantly pushing for less access. As a result, the County is constantly caught in the middle."

**Cities:**

- *MD, Baltimore:* "Sometimes politic over rules proffessionalism."
- *NC, Durham:* "We only have a few staff members with the training or knowledge of the importance of access management. When those staff members leave, new staff members go through a learning curve."
- *OH, Columbus:* "Technical - Not enough state of the art knowledge is applied throughout community, both public and private sector. No home grown experts. Organizational - No specific access management resources staff/resources identified. Management understands what access management is but is not committed to deliberate application. No policies or procedures exist on how to guide application. Political - Access management is seen as anti-growth. Staffing - Not a specific job duty."
- *OR, Tigard:* "All of the above Geometric property constraints Fear of losing business is a big issue for access management of existing businesses"
- *SD, Sioux Falls:* "We had to spend a long time educating politicians on the technical aspects of access managment and even now we need to show developers how we got our numbers often. Implementing our standards has been a bigger time drain than first thought so the need to add another staff member has arisen (we are preparing to advertise for the position)"
- *TN, Nashville:* "No consistency in application. When restrictions are opposed by the

developer, they are frequently reversed due to political pressure."

- *WA, Federal Way*: "Access restrictions tend to get used as a bargaining chip in right-of-way negotiations on capital projects. We've also had problems with a particular councilmember that loves to grandstand and present himself as the great rescuer of the hapless businessman being ruined by an uncaring bureaucracy."

**MPOS:**

- *GA, Atlanta*: "Access management has been embraced at the staff level of our organization and the state DOT. However, the political leadership is still rather beholden to the development lobby and has not shown a strong will to limit or manage access on a comprehensive level."
- *OH, Cincinnati*: "For years we encountered a diversity of opinions from local jurisdictions, especially counties, about their legal ability to implement AM programs and policies (some of which we felt came from overly cautious county prosecutors). Finally, we undertook an effort to promote and enact new state legislation, resulting in the adoption of Chapter 5552 of the Ohio Revised Code."

**63. What are your suggestions as to how these barriers can be overcome? (Please explain.)**

**Counties:**

- *AZ, Florence*: "We need data that shows that access management does not cause loss of business."
- *IA, Cherokee*: "n/a"
- *IA, Marion*: "end the review at the engineer"
- *IN, Greenfield*: "Sight distances are necessary and the requirements will have to be followed."
- *IN, Madison*: "Make a few simple changes to the functional classification system."
- *SC, Beaufort*: "Better communication."

**Cities:**

- *MD, Baltimore*: "No suggestion at this time."
- *OR, Tigard*: "Better information Patience"
- *SD, Sioux Falls*: "You need to work with everyone that wants to see the numbers and show them what you are doing otherwise they will never trust the agency on access management."
- *TN, Nashville*: "It would take a complete change in attitudes and staffing."
- *WA, Federal Way*: "I wish I knew."

**MPOS:**

- *GA, Atlanta*: "Education. Also, because of significant and growing problems with funding transportation projects, Access Management may become more enticing as an inexpensive way to maintain and enhance roadway capacity."
- *OH, Cincinnati*: "See item #62 above."

**64. What areas of your agency's access management program need to be improved? (Please check all that apply.)**

- Yes (Please proceed to Question 65.) (17)
- No (Please skip to Question 66.) (16)
- No Answer (10)

**65. What areas of your agency's access management program need to be improved? (Please check all that apply.)**

- It needs to be reviewed and updated. (8) No Answer (35)
- It is regarded as only a guide, and is subject to political influences. (3) No Answer (40)

- Is is subject to interpretation and applied inconsistently. No Answer (37)  
(6)
- Other (Please explain below.) (4) No Answer (39)

Comments:

**Counties:**

*IN, Greenfield:* "We need additional requirements for more urban areas. i.e. connectivity, access roads."

*SC, Beaufort:* "We currently cover specific corridors, but we need to be able to apply county-wide"

**Cities:**

*NC, Durham:* "Additional documentation is necessary to be better prepared to legally defend the program if challanged, however opening the door to a public adoption process of published standards would likely result in a lowering of the standards we are currently implementating. This is especially true as the econonic conditions in our community (and most of the country) are currently experienicing a slight decline."

*NC, Cary:* "We are always looking at oppourtunities for improvement so while we are very successful currently, we would be open to other ideas that we could try."

**MPOS:**

*GA, Atlanta:* "It would help if the policy was broadend to any roadway project that goes in the TIP. Also, regional guidlines or standards would help."

**66. Are any changes to your agency's access management program planned or currently being implemented?**

- Yes (Please explain below.) (8)
- No (27)
- No Answer (8)

Comments:

**Counties:**

• *AZ, Safford:* "Clarifying it"

• *AZ, Florence:* "We are working on all cities/towns to adopt. Also working on a permit process."

• *IL, Woodstock:* "The Ordinance was just recently updated with the new Ordinance in affect on Jan. 1, 2009."

• *IA, Sigourney:* "Policy was written in 1997."

• *IA, Marion:* "we are restricting access to lots to one unless an engineering reason exists to allow a second."

• *NJ, Trenton:* "we need to finish it and adopt it"

• *OR, HILLSBORO:* "relaxing standards on unique urban arterials"

• *SC, Beaufort:* "See #65 above."

**MPOS:**

• *GA, Atlanta:* "We are in the process of attempting to create regional consensus on access management policies and standards with Georiga DOT and the Georgia Regional Transportation Authority."

**67. Does your organization have performance measures for identifying progress being made in access management?**

- Yes (Please explain below.) (3)
- No (31)
- No Answer (9)

Comments:

**Counties:**

- *IA, rock Rapids:* "The State of Iowa sends a survey every year that has us list and traffic safety measure we have taken on driveways and on how many it was applied"
- *OR, HILLSBORO:* "over time comparing SPIS data and evaluating system performance based upon volume to capacity (level of service) data"

**Cities:**

- *WA, Federal Way:* "Collision rates are our ultimate performance measure."

**68. Please identify any MPOs, county, or municipal agencies that have access management programs that you would recommend we invite to participate in this survey.**

**Counties:**

- *AZ, Safford:* "Arizona Department of Transportation"
- *AZ, Florence:* "Maricopa County. Pima County has just begun a study."
- *GA, Cumming:* "Gwinnett County, Cobb County"
- *IA, Cherokee:* "I do not know who has a good access program"
- *IA, Marion:* "Corridor MPO for the Cedar Rapids metropolitan area in Iowa."
- *OR, HILLSBORO:* "Oregon Dept. of Transportation City of Beaverton"
- *SC, Beaufort:* "Town of Mount Pleasant, SC"

**Cities:**

- *MD, Baltimore:* "None."

**MPOS:**

- *GA, Atlanta:* "Paulding County, Georgia DOT Cobb County, Georgia DOT"
- *OH, Cincinnati:* "Butler County Engineer's Office Hamilton County Engineer's Office Warren County Engineer's Office"

**69. If needed, who in your organization could we contact for additional follow-up information?**

- It is OK to contact me for additional follow-up.
- Please contact someone else. (Please provide their name, telephone number, and e-mail address below.)
- No Answer



**Appendix “D”**  
**Access Management Retrofit Toolbox**

## 1.0 Retrofit Techniques: Access/Driveway Location and Operation

The following retrofit techniques are described below:

- 1) Consolidate and/or relocate driveways.
- 2) Encourage adjacent properties to share access.
- 3) Coordinate driveway locations on both sides of the roadway.
- 4) Maximize corner clearance by locating access as far from the intersection as possible (i.e. near the property line).
- 5) Provide separate left-turn entrances and exits at major traffic generators.
- 6) Install barrier to prevent uncontrolled access along property frontage.
- 7) Install driveway channelizing island to discourage left-turn maneuvers.

### 1.1 Consolidate and/or relocate driveways

#### *Description*

Access connections are eliminated or relocated to reduce the number of conflict points and increase the spacing between conflict points. Access connections are located on lower-function roadways when conditions allow.

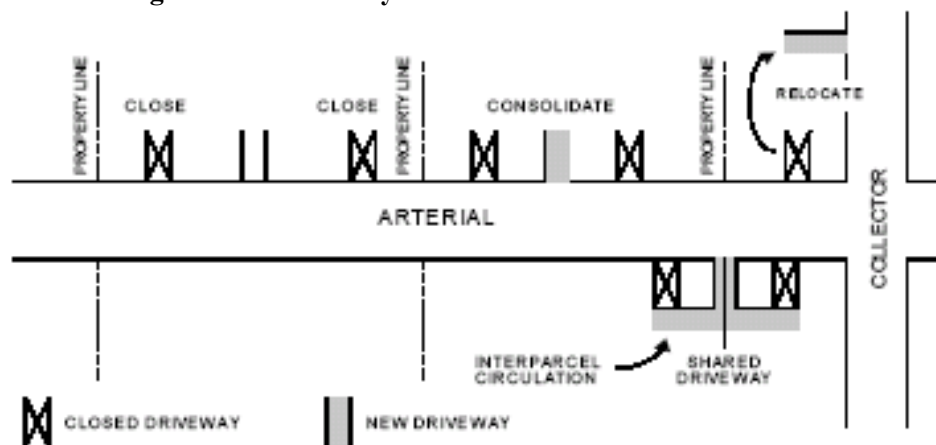
#### *Applications*

- 1) Site specific, on roadways intended to serve through travel, where there are a high number of access connections per mile.
- 2) The traffic related to access connections has a significant adverse impact on roadway safety and operations.

#### *Implications*

- Less driver confusion.
- Improved safety.

**Figure B-1: Driveway Consolidation and/or Relocation**



## 1.2 Encourage adjacent properties to share access

### *Description*

The provision of a shared, or joint-use, access connection onto a roadway to minimize the number of conflict points.

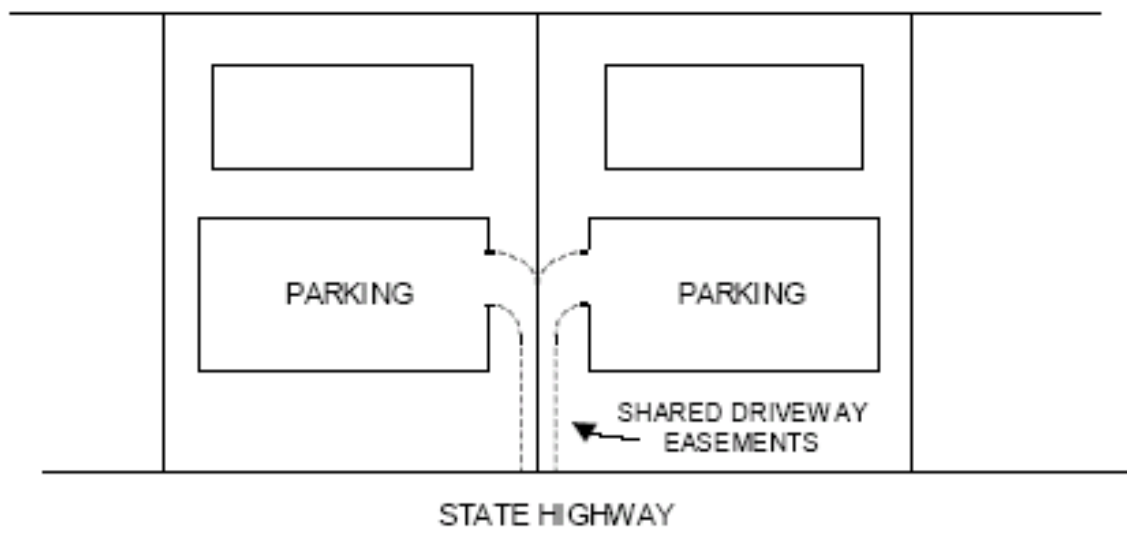
### *Application*

Site specific, where the elevations and nature of the land uses are compatible and local conditions warrant.

### *Implications*

- Adjacent land uses should not require separate access connections.
- Reduces roadway conflicts and improves safety.

**Figure B-2: Shared Driveways**



### 1.3 Coordinate driveway locations on both sides of the roadway

#### *Description*

Aligning access connections on opposite sides of a roadway to create a single four-leg intersection, or providing a sufficient offset distance between driveways to avoid problems with queue spillback.

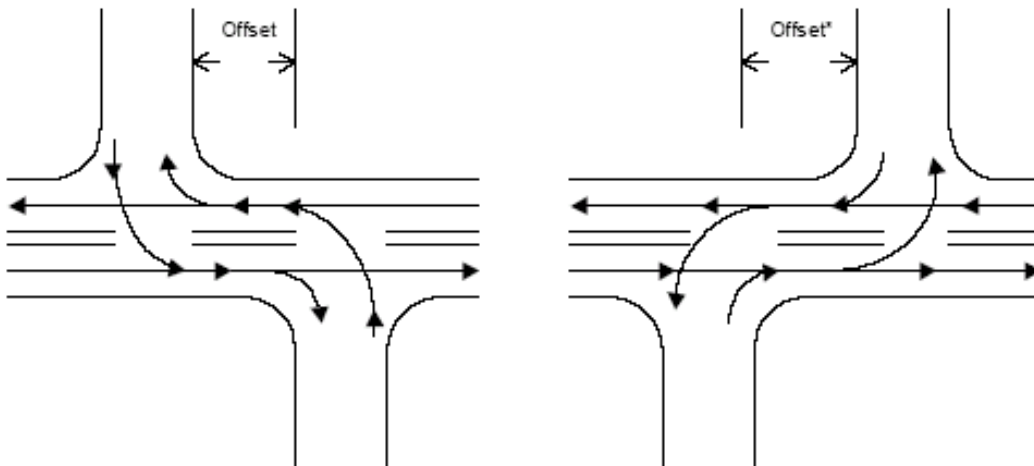
#### *Applications*

- 1) On roadways where there is an excessive number of closely-spaced access connections on both sides of the roadway, and as a result, there are safety and operational problems such as inadequate storage distances for turning traffic.
- 2) Increasing offsets applies to low-volume and low-speed roadways.

#### *Implications*

- Reduces conflicting movements along a roadway and improves safety.
- Simplifies signalization where traffic signals are involved.
- Increases available storage distances.

**Figure B-3: Driveway Location Coordination**



*Align driveways or, as shown above, provide sufficient offset distance.  
Offset\* = Sum of storage requirements for both left-turn movements on the arterial.*

**1.4 Maximize corner clearance by locating access as far from the intersection as possible (i.e. near the property line)**

***Description***

Move or locate an access connection, and its associated conflict area, as far from an intersection as possible.

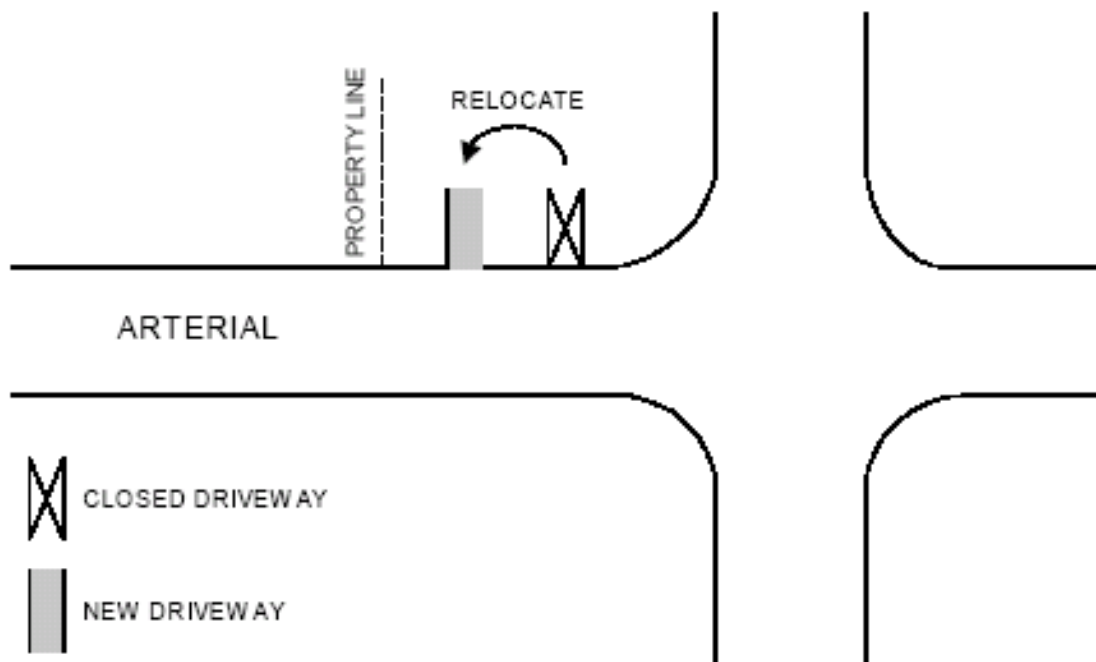
***Applications***

- 1) On the approaches to an intersection where the frontage of the abutting properties would allow the relocation of the access connection to be shifted away from the intersection.
- 2) Where there is an access connection upstream of an intersection that is blocked by standing queues that extend from the intersection.

***Implications***

- Reduces driver confusion.
- Separates conflicts and improves safety.

**Figure B-4: Corner Clearance Retrofit**



## 1.5 Provide separate left-turn entrances and exits at major traffic generators

### *Description*

Replaces either one or two full-movement access connections with two limited-turn connections to separate the left-turn movements to and from the site.

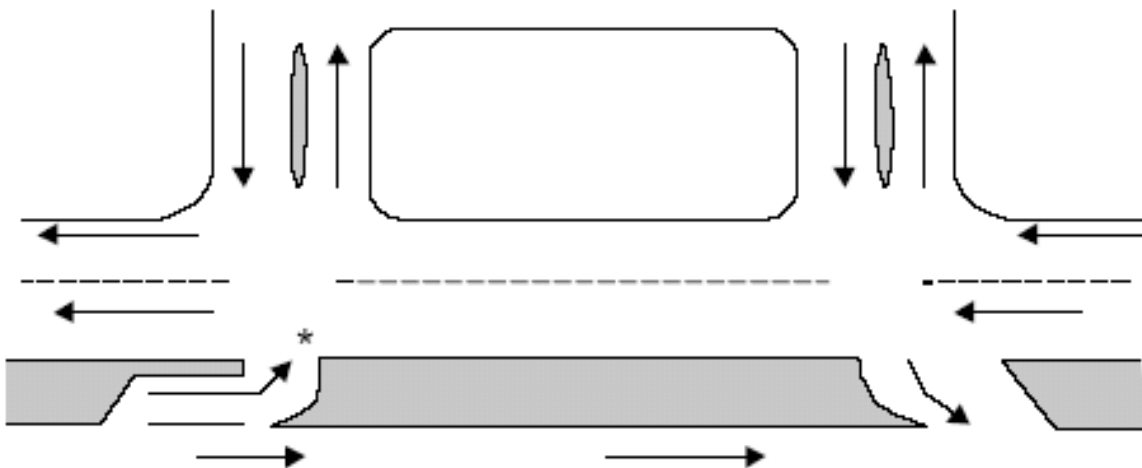
### *Applications*

- 1) Mainly applicable on divided roadways at regional shopping centers or major traffic-generators with significant left-turn volumes and sufficient frontage to provide for adequate separation distances between the two connections.
- 2) Where there is insufficient storage distance for the turning movements at the two or more existing full-movement driveways.

### *Implications*

- Reduces conflicts at each location.
- Where driveways are signalized, allows for two-phase signal operation.
- Disperses entering and exiting traffic within the development site.

**Figure B-5: Left-turn Entrances and Exits at Major Traffic Generators**



\* = Median opening should be designed to physically prohibit the left-turn exit from the development.

## 1.6 Install barriers to prevent uncontrolled access along property frontage

### *Description*

The installation of a barrier (i.e. a guide rail or curbing) between the edge of a roadway and the parking area to narrow the access connection and reduce the conflict area.

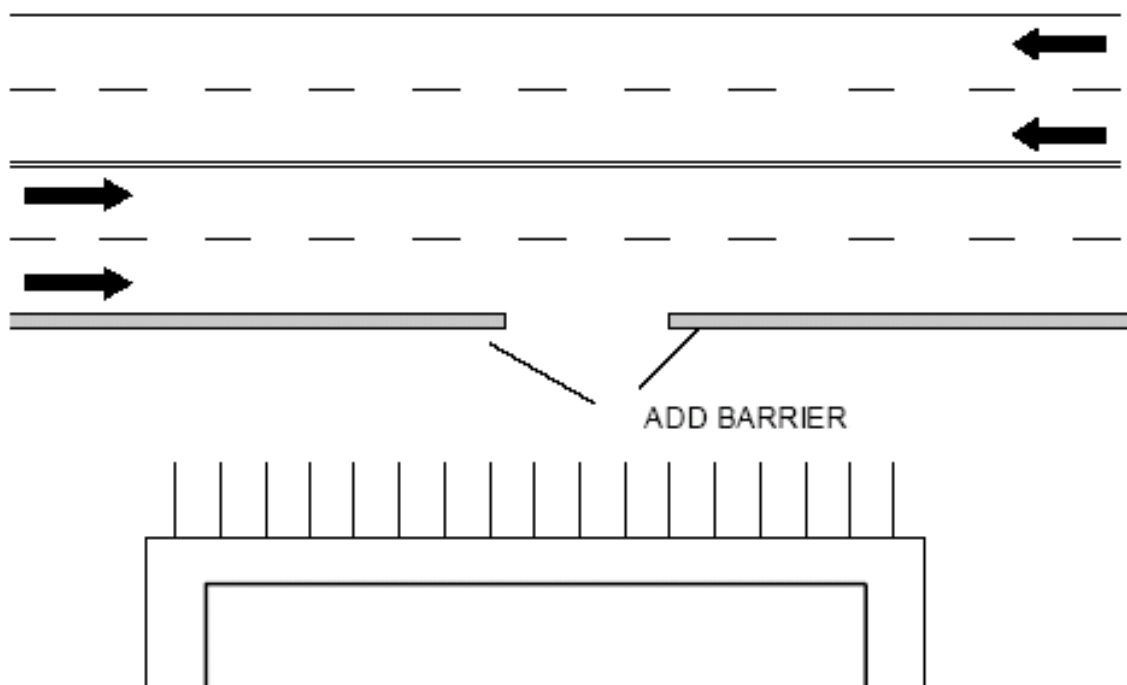
### *Application*

Strip commercial developments where the parking areas are not physically separated from the adjacent roadway, and as a result, the driveway openings are not defined.

### *Implications*

- Defines driveways and improves driveway visibility.
- Reduces number of conflicting movement locations and improves safety.
- Makes walking easier and safer for pedestrians, and allows for sidewalks.

**Figure B-6: Installation of Barriers**



## 1.7 Install driveway channelizing island to discourage left-turn maneuvers

### *Description*

A channelizing island is used in a driveway throat at its intersection with a roadway to restrict selected left-turn movements and limit the basic crossing conflicts.

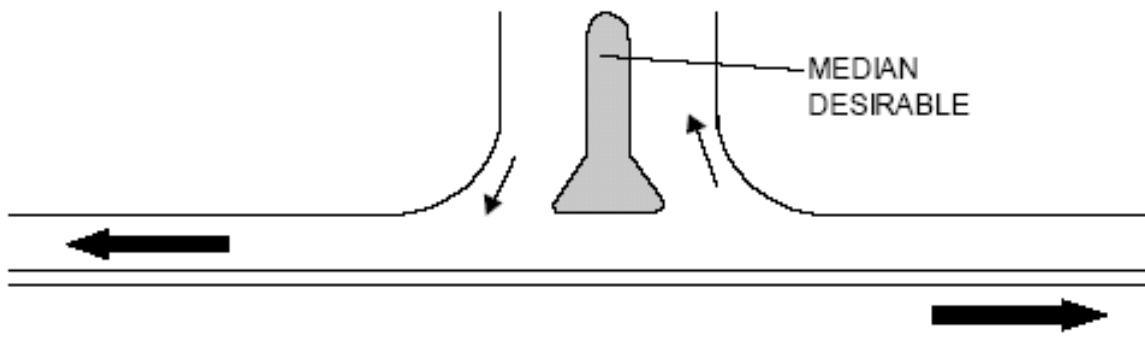
### *Applications*

- 1) Where left-turns are undesirable, and there is a need to restrict driveway movements to right-in/right-out on undivided roadways.
- 2) Where there is a high accident rate or frequency related to left-turn movements.

### *Implications*

- Eliminates left-turn conflicts where these movements are problems.
- Provides pedestrian refuge at high-volume driveways.
- May need enforcement to prevent wrong-way moves.

**Figure B-7: Driveway Channelizing to Restrict Left-Turns**





## 2.0 Retrofit Techniques: Roadway Design

The following techniques are considered:

- 1) Construct or modify median to allow only left turns from a major roadway.
- 2) Install two-way left-turn lane.
- 3) Provide left-turn deceleration lane.
- 4) Provide right-turn deceleration lane.
- 5) Install right-turn deceleration lane to serve several driveways.
- 6) Install non-traversable median with left-turn deceleration lane.

### 2.1 Construct or modify median to allow only left-turns from a major roadway

#### *Description*

A median opening is reconfigured to eliminate the left-turn movement from an abutting property onto the roadway.

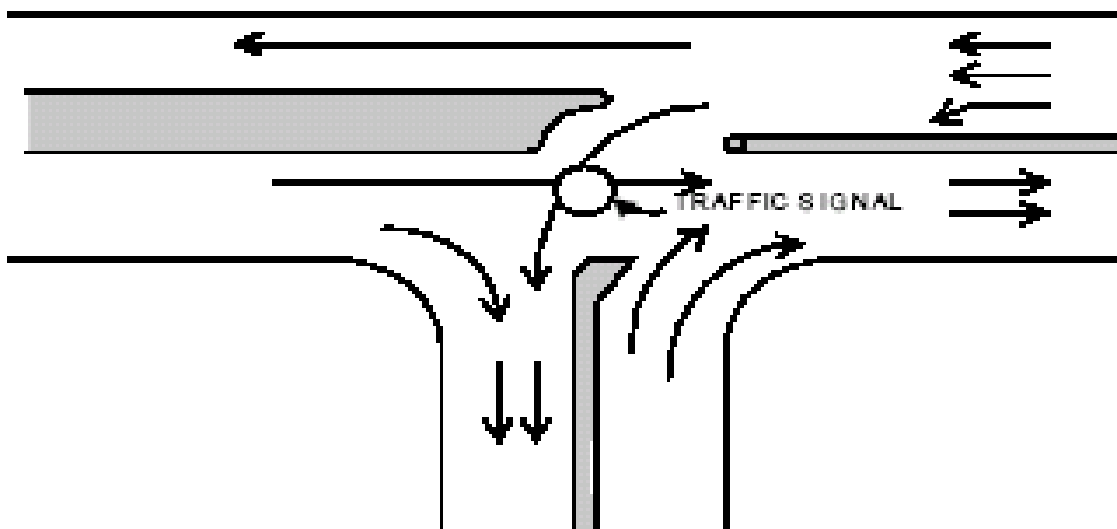
#### *Application*

Where there are safety or operational problems caused by the left-turn egress movement from a development and the re-routing of traffic that would occur as a result of the left-turn restriction could be satisfactorily accommodated.

#### *Implications*

- Reduces conflicts and delays.
- Where only one direction of travel is signalized, signals can be installed without adversely affecting progression.
- Adequate provisions are needed for the U-turns that will be made instead of direct left-turn exits.

**Figure B-8: Median Modification**



## 2.2 Install two-way left-turn lane

### *Description*

A flush, painted median lane for making left-turns from a roadway.

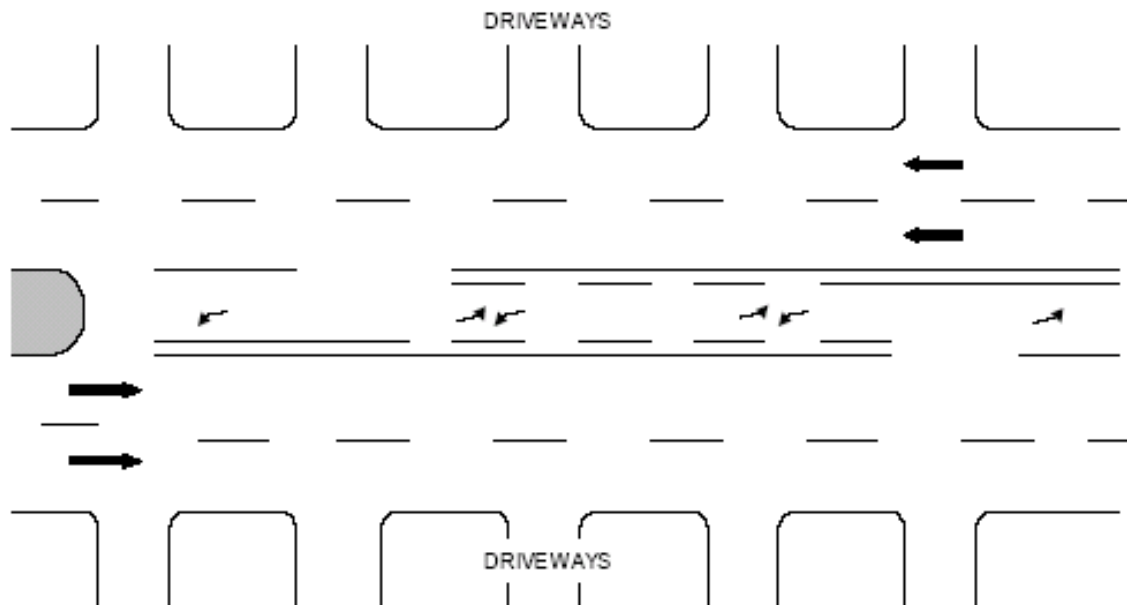
### *Applications*

- 1) Roadway sections where numerous, closely-spaced, low-volume access connections exist and projected traffic volume is less than 24,000 vehicles per day.
- 2) Minor urban roadways that are intended to provide access to small commercial parcels.

### *Implications*

- Removes left-turns from through travel lanes.
- Reduces accident rates relative to undivided cross-section.
- Permits use of center lane for left-turns exiting from abutting property.

**Figure B-9: Installation of Two-Way Left-Turn Lane (TWLTL)**



## 2.3 Provide left-turn deceleration lane

### *Description*

An auxiliary left-turn lane on the roadway to remove the left-turning vehicles from the through travel lanes.

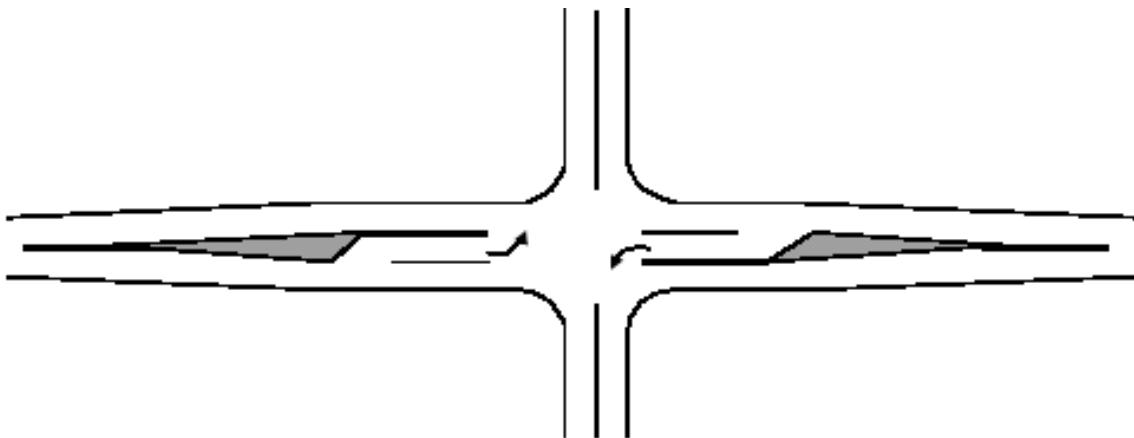
### *Applications*

- 1) Where it is desirable to provide a protected area for left-turning vehicles.
- 2) To improve traffic safety where there is a pattern of rear-end collisions or collisions involving left-turns.

### *Implications*

- Lanes may be provided by widening roadway, by placing lane within a median, or by re-striping roadway with narrower lanes, depending upon physical conditions.
- Improves traffic operations and safety by removing turning vehicles from through lane.
- Increases capacity at signalized intersections.

**Figure B-10: Left-Turn Deceleration Lane**



## 2.4 Provide right-turn deceleration lane

### *Description*

An auxiliary right-turn lane on the roadway to remove the right-turning vehicles from the through travel lanes.

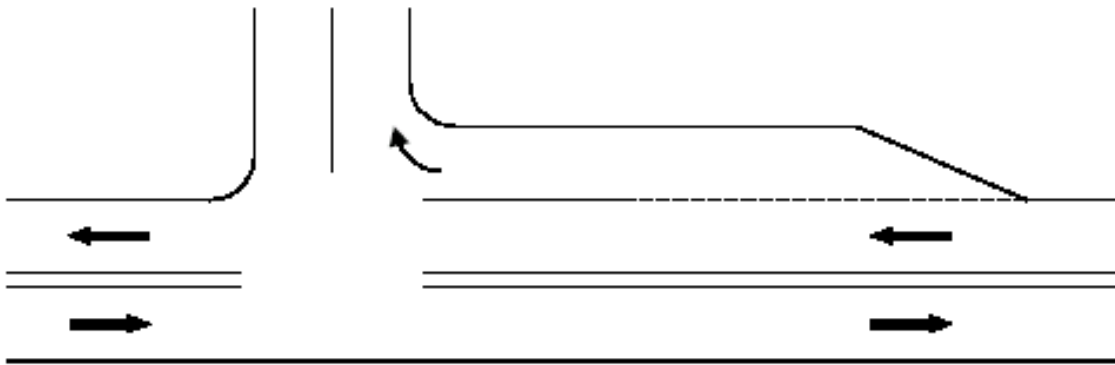
### *Application*

Where it is desirable to provide a protected area for right-turning vehicles. To improve traffic safety where there is a pattern of rear-end collisions or collisions involving right turns.

### *Implications*

- Increases capacity at signalized intersections.
- May not be desirable along multi-lane roads where a high volume of pedestrians are present (i.e. to avoid excessive width).

**Figure B-11: Right-Turn Deceleration Lane**



## 2.5 Install right-turn deceleration lane to serve several driveways

### *Description*

An auxiliary lane that removes right-turning vehicles for a series of driveways from the through travel lanes.

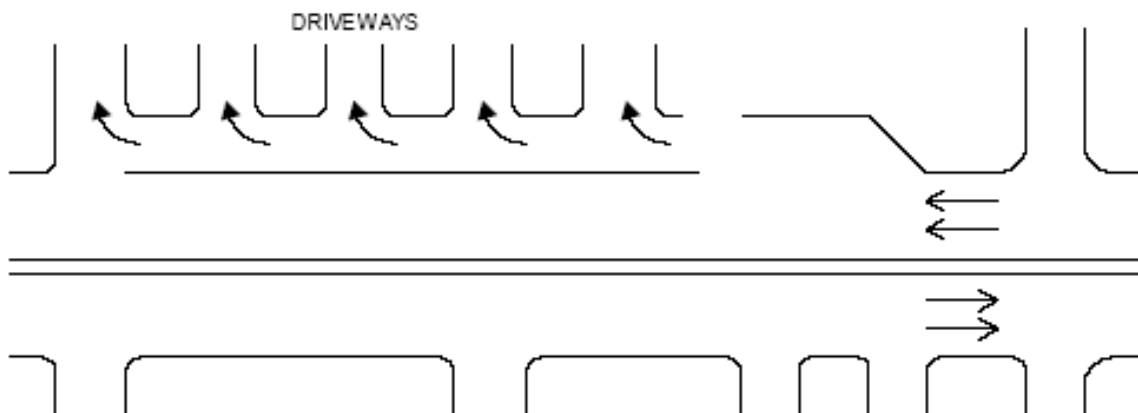
### *Applications*

- 1) Sections of roadway where the spacing of direct access connections makes the construction of separate right-turn lanes impractical.
- 2) Where it is desirable to remove the right-turn movements from the through travel lane to reduce delays to the through traffic.
- 3) Where there has been a problem with rear-end conflicts caused by right-turning vehicles along a roadway section with numerous access connections.

### *Implications*

- Reduces speed differential between through and right-turning vehicles.
- Reduces delay to through vehicles.
- Length should be limited to discourage use by through traffic.
- Allows for right-in and right-out.

**Figure B-12: Right-Turn Deceleration Lane Serving Several Driveways**



## 2.6 Install non-traversable median with left-turn deceleration lane

### *Description*

The installation of a non-traversable median on multilane roadways prevents left-turns and U-turns across the median except at a few designated locations.

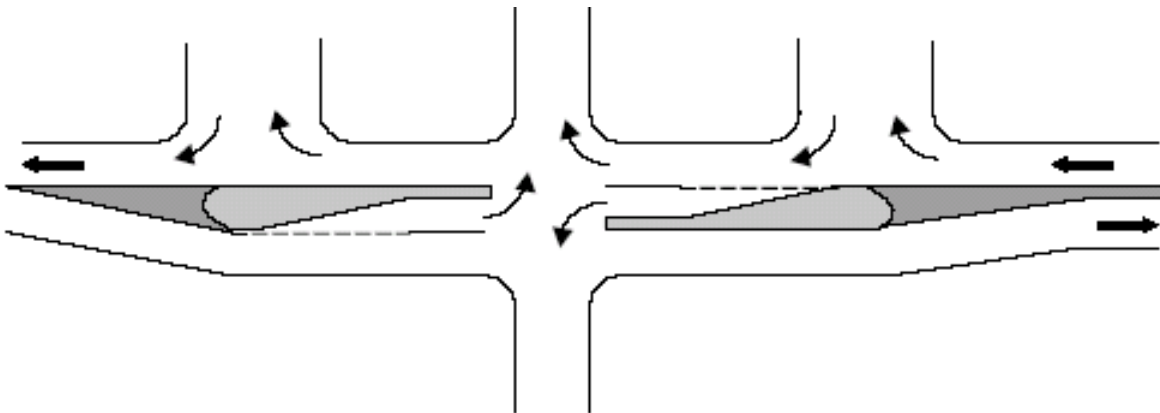
### *Applications*

- 1) Where there are safety and operational problems caused by left-turn movements at minor access connections that are located near major intersections.
- 2) Where there is a need to allow for the deceleration and storage of left-turning vehicles outside of the through travel lanes.
- 3) High-accident experience associated with mid-block, left-turning vehicles.

### *Implications*

- Reduces head-on conflicts.
- Reduces accident rate as compared to an undivided roadway section.
- May limit access to some developments to right-turns only.
- Where a continuous median is installed, property owners may express concern over possible loss in business. Generally, effects are greatest on drive-by activities. Economic impacts tend to decrease as traffic volumes increase because safe access is enabled by medium openings.

**Figure B-13: Installation of Non-Traversable Median**



Author's note: The materials in this appendix were adapted from Chapters III-F and III-G prepared by Urbitran Associates, Inc. of the *Review of SDDOT's Highway Access Control Process, Study SD99-01: Final Report*, prepared by Dye Management Group, Inc. in February 2000.