



Frequently Asked Questions

The Access Management Regulations 24 VAC 30-73
and
Appendix G Design Standards
Minor Arterials, Collectors, Local Streets

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THE REGULATIONS AND STANDARDS

Overview:

What are the key differences between the new regulations and the principal arterial regulations?

- **Organization** - All exceptions have been consolidated into section 73-120.
- **Access Management Exception Requests** - The information to be submitted for each type of exception to the access management requirements is described in section 73-120 C.
- **Exception Procedures** - The rules and procedures for requesting an exception and for VDOT's handling of the request are described in section 73-120 D. The difference between an exception and an appeal of a decision on an exception request is noted.
- **Appeals** - Section 73-50 was amended to clarify the rules for appeals of a decision by the District Administrator on the denial, revocation, or conditions of an entrance permit, or a decision on an access management exception request. The deadline for a decision was shortened to 30 days.
- **Sight Distance Exceptions** - Section 73-50 was also amended to differentiate between an appeal and a sight distance exception. A sight distance exception request is submitted to the Commissioner. The current 60 day decision deadline is retained.
- **Filing/Decision Deadlines** - All appeal and exception deadlines in sections 73-50 and 73-120 D are specified as "calendar" days to simplify their calculation.

What are the key differences between the new Appendix G standards and the Appendix F principal arterial standards in the Road Design Manual? (See VDOT web site)

- **Roundabouts** - An expanded section on roundabouts that discusses their benefits, VDOT policy, and the approval process is presented in Appendix G starting on page 35. Web site links are included for information on their design.
- **Pedestrians and Bicyclists** - A section on accommodating pedestrians and bicyclists has been added starting on page 40 that offers web site links to VDOT guidelines and standards and to national research reports. A discussion on midblock crosswalks has been included.
- **Sidewalks** - Design criteria for sidewalks at commercial entrances are presented on page 75.
- **User Friendly** - More detailed explanations have been prepared on design criteria like corner clearance (page 78), entrance throat (page 72), and the spacing standards (page 23).

Will the two sets of access management regulations and standards be combined?

The plan is to consolidate the Appendix F principal arterial standards and the Appendix G minor arterial, collector, and local street standards into one document within the Road Design Manual to simplify their use by the private and public sectors and VDOT.

The long term goal is to merge the two sets of regulations so there is one regulation for all functional classifications.

Do the regulations and standards apply to roads in cities and certain towns and counties?

No, they only apply to VDOT controlled roads – those that VDOT maintains and is responsible for entrance permit issuance. The access management regulations and standards do not apply in cities, towns of more than 3,500, and in counties (Henrico and Arlington) that maintain their secondary roads (they do apply on primary routes in these two counties).

Do they apply to VDOT construction projects in localities that maintain their roads?

This depends on the agreement with the locality (cities, certain towns and counties) on which construction standards will be used: VDOT's, the locality's, or a combination. If VDOT construction standards will be used for a project administered by VDOT within the locality, then such standards include Appendix G (and F) of the Road Design Manual. If it will be constructed according to local standards then the access management provisions will not apply.

Can a property owner be denied all access to a highway?

No, section 60 B establishes that VDOT will permit reasonably convenient access to a parcel of record. Furthermore, the access management enabling Code section § 33.1-198.1 states that "private property is entitled to reasonable access" to the highway. However, VDOT is not obligated to approve the owner's preferred location or entrance design and if the parcel is served by more than one road, VDOT can determine that access will be to one of the roads to assure driver safety and efficient highway operation.

Will the regulations allow VDOT to close existing entrances?

The regulations and standards apply to proposed new entrances/intersections. They do not apply to existing entrances where there is no change in the land use as long as the existing entrances are maintained in a good, safe condition. If there will be a significant change in the type or amount of traffic due to a new use of the property, VDOT may require improvements to the existing entrance (see section 110). The redevelopment of a site can affect the existing entrances.

How do the regulations and standards affect pedestrians and bicyclists?

The access management regulations can benefit pedestrians and bicyclists in a number of ways. National research studies have found that fewer entrances improve pedestrian and bicyclist safety by reducing pedestrian-vehicle and bicyclist-vehicle conflicts. The regulations require vehicular and pedestrian connections between adjacent properties. The pedestrian/bicycle friendly design inherent to new urbanism development is accommodated. Entrance design must consider impacts on pedestrians and bicyclists. Minimum sight distance for entrances assures that motorists leaving an entrance can see approaching bicyclists and pedestrians.

Can VDOT require improvements in addition to the locality's land use regulatory conditions?

Because VDOT controls connections to state highways, section 100 C of the regulations establishes that any transportation-related improvements committed to by a local government through the land use regulatory process does not release the entrance applicant from improvements required by VDOT.

Is a Chapter 527 traffic impact study acceptable to show compliance with the regulations?

A traffic impact analysis study that is sufficiently detailed may be used to document the effect of a proposed entrance and its related traffic on highway operation and show compliance with the Appendix G entrance design standards. If the characteristics of the development or the highway being accessed change, more up-to-date information and additional analysis will be required.

Section 120 B requires VDOT's review of a development's Chapter 527 traffic impact study to include comments on the development's compliance with the access management requirements such as shared entrances, interparcel connections, and entrance spacing.

BASIC CONCEPTS

Commercial, Private, & Subdivision Entrances:

What is the difference between a commercial and a private entrance?

A private entrance serves the occupants of up to two private residences (a residential driveway). The regulations have expanded the scope of the private entrance to also include an entrance that allows an agricultural operation to gain access to fields (not its main entrance) and entrances to civil and communication infrastructure facilities that generate 10 trips per day or less such as cell towers, pump stations, water towers, electrical substations, and storm water management basins.

A commercial entrance is one that serves any other use of land. Although the term "commercial" is used, commercial entrance regulations and standards apply to highway entrances for "non-commercial" uses such as schools, churches, subdivision streets, and apartment complexes.

Which access management regulations and standards apply to private entrances?

In both the 24VAC30-73 minor arterial/collector/local street and the 24VAC30-72 principal arterial regulations, section 40 describes the procedures for obtaining a permit for a private entrance; section 60 specifies the penalties for installing a private entrance without a permit; section 90 describes the rules for the design, location, and installation of a private entrance; and section 130 describes the requirements for drainage at private entrances. The remainder of the regulations, including the access management requirements, does not apply to private entrances.

The Private Entrances chapter in Appendix G provides the details on, and an illustration of (Figure 4-1), the design criteria for a private entrance.

What changes have been made to private entrance permit rules and procedures?

Entrance Drainage Pipes: Due to funding reductions, VDOT is no longer able to install culvert drainage pipes at private entrances free of charge (Section 90 B). The property owner will now be responsible for the installation of the entrance drainage pipe and stabilization of the road's shoulder. However, at the request of a property owner, VDOT can handle the installation and bill the property owner for the cost when finished (the property owner still furnishes the pipe). The District and Residency have the discretion to choose whether to offer this service (at cost). In all cases the property owner is responsible for grading beyond the shoulder.

Entrance Permit: The applicant shall be charged the private entrance permit fee, currently \$40. When VDOT does not install the culvert pipe, a minimum \$500 guarantee fee, letter of credit, or surety bond must be supplied by the applicant to cover VDOT's costs to fix or remove a culvert pipe that has been installed incorrectly. Upon inspection of the installation, the surety is returned or the bond is cancelled. See the Land Use Permit Manual sections 150-300, -330 B.1, and -1700.

Do the regulations and standards apply to subdivision street connections?

Yes, a subdivision street connection is a commercial entrance (serves three or more residences) so the regulations and Appendix G design standards including spacing apply, **except** for the following:

- The radii, width, and angle for subdivision street and alley connections, and
- The spacing distance between two or more subdivision street connections to a road with a functional classification as a local street.

The standards for the above items are in the Road Design Manual Appendix B.1, Subdivision Street Design Guide, pages 21 to 23.

How does VDOT coordinate entrance permit issuance with local land development approval?

The regulations make it clear in section 100 B that an entrance permit will not be issued until the locality approves the site plan or subdivision plat as VDOT does not want to infringe on a locality's authority to regulate land use.

Why are right-in/right out partial access entrances emphasized in the regulations?

The reason is that a right-in/right-out entrance is the safest type of entrance design. National Highway Institute research has shown that over 70% of traffic crashes at entrances involve left turns (having to cross lanes of on-coming traffic). Preventing left turns also reduces congestion by removing the potential for vehicles to back up while waiting for a motorist to make the turn.

Functional Classification of Highways:

Where do I find maps identifying the functional classification of highways?

The VDOT access management web page <http://www.virginiadot.org/projects/accessmgt/default.asp> provides links to maps of principal arterials, maps of all highways by functional classification, and a list of principal arterials by locality. Functional classification maps are also available on the VDOT web site under Projects or by using the search field.

It is important to remember that certain minor arterials have been classified for access management purposes as principal arterials due to their regional importance for moving people and goods. These are shown in a gold/brown color on the principal arterial map.

What is the process for assigning a functional classification to a developer's new road?

All new subdivision streets are provided with a "local street" federal functional classification. The Metropolitan Planning Organization (MPO) or a county/city outside of an MPO can submit a request for the classification or reclassification of a road to the VDOT Residency Administrator, who will forward the request to VDOT's Central Office Transportation Mobility Planning Division to process. More information is available on the VDOT web site under "Functional Classification."

Has VDOT changed the functional classification of any highways for the new regulations?

No. The new regulations and standards will not affect the functional classification of highways.

What if a locality assigns a different functional classification to a highway?

The federal classifications are used to assure statewide uniformity. However, section 60 C of the regulations states that “Entrance standards established by localities that are stricter than those of VDOT shall govern.” So if the County has assigned a higher classification to a road (minor arterial rather than collector) and has adopted spacing standards for the minor arterial classification that are greater than the VDOT collector spacing standards, the County’s spacing standards would govern.

The opposite also would apply. If the County has assigned a road to a lower classification than VDOT’s (collector instead of minor arterial) and the County’s collector spacing distances are lower than the VDOT minor arterial spacing standards, VDOT’s would govern.

What is the difference between primary and secondary highways and the federal functional classifications for highways?

The primary and secondary systems of highways are designated by the Commonwealth Transportation Board. Primary highways are assigned route numbers under 600 and secondary highways route numbers 600 and above. Functional classification is based on the federal system of classifying groups of highways according to their intended purpose to serve through traffic movement, to provide access to property, or a combination of both.

Urban and Rural Highways:**How do I determine if a highway is “urban” or “rural”?**

The terms “urban area” and “rural area” are explained in the Introduction chapter of Appendix G and are defined in the regulations. They are based on Federal Highway Administration criteria such as the Census population, focusing on density. The easiest way to determine whether a highway is urban or rural is to review the highway functional classification maps on the VDOT web site. Highways located in the light green portions of the maps (the federal urbanized and small urban areas) are urban highways and those located in the pale beige areas of the maps are rural highways.

Is a highway located in an Urban Development Area considered an urban highway?

No. Each term has a different definition and purpose. § 15.2-2223.1 of the Code requires localities that meet certain population and/or growth rate thresholds to identify one or more urban development area in their comprehensive plan where future growth will be directed. A locality, such as Floyd County, is considered a rural area under Federal Highway Administration population density criteria but because of its growth rate (15% for Floyd County) is required to identify an urban development area. In this case, the highways in Floyd County’s designated urban development area(s) will have a rural functional classification.

ACCESS MANAGEMENT REQUIREMENTS

Section 120 C of the Regulations

What are the five access management requirements and related exceptions?

1. Entrances are not permitted in the functional area of an intersection or interchange (near ramps). (Section 120 C.1)

Exception: VDOT approval of a traffic engineering study documenting that highway operation and safety will not be adversely impacted.

2. Entrance to be shared with adjoining properties. (Section 120 C.2)

Exceptions: A. Adjacent property owner will not agree to share the entrance. Provide written evidence that a reasonable agreement could not be reached.

B. Physical constraints to creating a shared entrance: topography, adjacent hazardous land use (e.g. heavy industrial, quarry, or petroleum/natural gas transmission facility), environmentally sensitive areas such as a stream or wetland.

3. Compliance with Appendix G spacing standards for entrances, intersections, & crossovers (“entrance”); for entrances/intersections near interchange ramps. (Section 120 C.3)

Exceptions:

A. The specific location of the entrance is identified on a:

- i. Plan of development or in a condition proffered as part of a rezoning that was approved by the locality prior to October 14, 2009.
- ii. Site plan, preliminary/final subdivision plat, SSAR conceptual sketch submitted by the locality to VDOT and received by VDOT prior to October 14, 2009.

B. Entrance located on a highway within the limits of a VDOT/locality approved access management corridor plan with different spacing standards.

C. Entrance located on an older, established business urban highway corridor where existing spacing did not meet the spacing standards prior to October 14, 2009.

D. Entrances to be located within a new urbanism type development.

E. The development’s second or additional entrance does not meet the spacing standards but are necessary for the streets to be accepted into the secondary system.

F. Not enough property frontage, entrance limited to right-in/right out movements.

4. Vehicular/pedestrian connections to boundaries with adjacent undeveloped properties. Required on a minor arterial; may be required on a collector. (Section 120 C.4)

Exceptions: i. Physical constraints: topography, adjacent hazardous use, stream, wetlands.

ii. If the permit applicant refuses to provide such connections or extend existing connections, the entrance shall be restricted to right-in/right-out movements.

5. Insufficient spacing between a proposed signalized entrance and an adjacent traffic signal, entrance restricted to right-in/right-out movements. (Section 120 C.5)

Exception: VDOT approval of a traffic engineering study that (i) evaluates suitability of entrance location for design as a roundabout and (ii) documents that the signalized entrance will not impair highway operation and safety.

What is the best way to assure compliance with the access management requirements?

It is important to consider the requirements as early as possible in the land development review process so the design of the development can be adjusted as needed to assure compliance. VDOT land development review staff will comment on a proposed development's compliance with the access management requirements and are required to include comments on such compliance in their review of traffic impact studies submitted in accordance with the Traffic Impact Analysis Regulations 24VAC30-155.

Functional Area of Intersections and Interchanges:**Can a commercial entrance be located in the functional area of an intersection or interchange?**

Entrances in close proximity to intersections and interchange ramps can cause conflicting and confusing turning movements, blocked entrance ingress and egress, and backups into the intersection or on the interchange off ramps. These problems can lead to traffic crashes, pedestrian injuries, and congestion. The functional area of intersections is discussed on pages 75 and 76 of Appendix G. Sometimes a shared entrance or interparcel connections can help address the problem. The entrance may have to be restricted to right-in/right-out movements.

Shared Entrances:**What is the purpose for requiring entrances to be shared?**

It reduces the number of entrances on the highway. Fewer entrances and their turning movements prevent crashes and helps reduce congestion. Several properties can gain access to a traffic signal. The neighboring property owner benefits by having an entrance established in advance that meets the spacing standards. A shared entrance is an excellent way for two properties with limited road frontage to be able to obtain an entrance without having to request spacing exceptions.

Will VDOT be reviewing the shared entrance agreement between the property owners?

While VDOT does not have the legal resources to review shared easement agreements, VDOT will make sure they have been recorded. Section 120 C.2 requires a commercial entrance applicant to submit with the entrance permit application a copy of the recorded agreement to share the entrance (the easement) and to maintain the portion of the entrance in the VDOT right-of-way. The copy will have the Deed Book and Page numbers stamped on it. Each property owner should protect their interests by having an attorney review the agreement.

What is considered "written evidence" of a developer's inability to reach a "reasonable agreement" to share an entrance?

Written evidence will be in the form of correspondence (e.g. a letter, email, or affidavit) from the adjacent property owner stating their unwillingness to participate in the sharing of the entrance. If the adjacent property owner agrees to share the entrance, but subject to conditions that the permit applicant believes are unreasonable, the permit applicant can bring this to the attention of the District Administrator or designee who will consider such matters on a case by case basis. The intent of the shared entrance requirement is that the entrance applicant not be penalized if the neighbor refuses to cooperate.

Spacing Standards for Entrances and Intersections:

What is the spacing standards requirement?

Section 120 C.3 requires the spacing of proposed entrances and intersections to comply with the spacing standards in Appendix G of the Road Design Manual. See the APPENDIX G SPACING STANDARDS and the EXCEPTIONS TO THE SPACING STANDARDS below.

Vehicular and Pedestrian Circulation between Properties:

Why is VDOT requiring vehicular/pedestrian circulation between adjoining properties?

Traveling between properties reduces trips (traffic) on the highway. It offers the opportunity for several properties to benefit from having access to a signalized intersection. A motorist can travel directly to the land use on the left without having to enter the highway and make a series of U turns. Existing and planned sidewalks can be extended to enhance pedestrian activity. It can facilitate customer circulation between businesses, like within a shopping center.

The vehicular connection would typically be between parking lots. Addressing this matter at the time of rezoning, site plan, and subdivision plat review allows vehicular and pedestrian connections to be included in the initial design of a project.

How will the developer know if vehicular connections “may be required” on collectors?

Unless VDOT asks for it during the review of a rezoning application, site plan, or subdivision plat or when applying for an entrance permit, the developer does not have to provide such connections if located on a collector. For example, it may be required when there already are vehicular connections on the adjacent parcel that can be extended.

How many connections have to be provided?

Generally, a connection will be made to the boundary of each property on both sides of the applicant’s parcel to allow internal circulation parallel to the highway. There may be cases where a connection may also need to be provided to the boundary of a property to the rear based on planned development in the vicinity.

When would a pedestrian connection need to be constructed?

If a network of sidewalks (or pedestrian paths) is planned for the vicinity, they will need to be constructed to the boundary lines of the property. If sidewalks abut the entrance permit applicant’s property, a connection will need to be made and the sidewalks extended into and through the property as appropriate for the situation.

Does a developer have to purchase cross access easements from adjoining property owners?

No, section 120 C.4 does not require the purchase of cross access easements. Instead it specifies that the developer shall record a cross access easement and construct a connection on the developer’s property to its boundary with an adjoining undeveloped parcel. A condition of an entrance permit for the adjoining parcel will then be to do the same. Each property owner will be responsible for maintaining the portion of the connection on their land.

Who will be responsible for maintaining an interparcel connection or shared entrance?

Keeping the interparcel connection or shared access point in serviceable condition is the responsibility of the landowners. VDOT is not responsible for the maintenance of commercial entrances or for internal circulation routes between a shopping center and any outparcels.

Will the adjoining property owner be required to extend the vehicular or pedestrian connection into their property?

A condition of the entrance permit for the adjoining property will be to extend the connections established at the common boundaries to provide cross parcel traffic circulation. If the adjoining property owner refuses to make such connections, then the regulation states that the adjoining property owner's entrance will be physically restricted to right-in/right-out only movements.

Will extending a vehicular connection mean the applicant won't get an entrance to the highway?

No, the purpose of the section 120 C.4 requirement is reduce trips on the highway, not to deny an entrance to the property.

Are frontage roads required?

No, frontage roads are only referenced as one way to provide vehicular circulation between parcels. Where a frontage road is pursued, built to VDOT standards, and the land dedicated for public use, VDOT will accept responsibility for its maintenance (see "Frontage Roads" on page 84 of Appendix G).

When would a property owner not have to provide these connections?

First, this requirement applies to entrances to minor arterials. On collectors, this requirement does not apply unless the specified by VDOT.

Second, an exception to this requirement can be requested due to physical constraints preventing compliance. The exception request would need to include documentation of topography problems, environmental areas such as streams, wetlands, pond or the presence of a neighboring hazardous land use such as heavy industrial, a quarry, or petroleum/natural gas transmission facility. Upon receipt and verification of the documentation the exception request can be quickly approved.

Third, the permit applicant can decide not to offer the connections. In this case the proposed entrance will be restricted to right-in/right-out movements.

Traffic Signals:**Why is a traffic signal not allowed if signal warrants can be met but not the spacing standard?**

The requirement seeks to assure efficient traffic progression through fewer signals per mile. This will maximize safety, reduce stop and go traffic and congestion, improve the traffic carrying capacity of the highway, and lower fuel use and vehicle emissions – all of which are the objectives of access management as stated in the § 33.1-198.1 enabling legislation. By achieving these objectives, the performance of highways is maximized reducing the need to spend limited

construction funds to widen or build new roads. However, VDOT can approve the signal if a traffic engineering study is submitted that shows acceptable operational levels can be achieved and motorist safety will not be jeopardized (see signalized entrance exception on page 14).

EXCEPTIONS TO THE ACCESS MANAGEMENT REQUIREMENTS

Why do the regulations provide exceptions to the access management requirements?

The Regulations were drafted to anticipate potential situations where an entrance applicant might not be able to comply with the requirements and to provide VDOT the flexibility to approve an exception to address the situation (e.g. adjacent landowner refuses to share an entrance). The property owner benefits by knowing up front what the exceptions are to the rules, what information needs to be submitted, and the procedure for seeking approval. The exceptions help to assure that the access management requirements are reasonable and fair.

How do I apply for an exception to the access management requirements?

Contact the Residency Office or in Northern Virginia the District land development office to discuss the exception.

The Access Management Exception Request form is used for requesting an exception. It is available on the VDOT access management web page and from the Residency and District Offices. The form also provides a good summary of the exceptions and the information that needs to be submitted for the request to be approved.

Each access management requirement in section 120 identifies what needs to be submitted to request an exception to the requirement. A description of the exception request review and approval process is presented in section 120 D.

How long will it take to receive a decision from VDOT on the exception request?

A decision will be made within 30 calendar days of receipt of the written request and all required documentation. Some of the requests can be handled fairly quickly such as an exception to the shared entrance requirement while others that involve the review of a traffic engineering study (e.g. signal spacing exception) may take the full 30 days.

What is the difference between an access management exception and a design exception?

A Design Exception is required for exceptions to the Appendix G design standards, such as for sight distance and the length of a right or left turn lane. An Access Management Exception applies to exceptions to the Appendix G entrance/intersection spacing standards (pages 24 to 27).

Information on the Design Exception rules, process and form is in the Road Design Manual, Appendix A, Memorandum IIM-LD-227 on the VDOT web site under Business Center, Manuals. Information on Access Management Exception rules and process are in section 120 of the regulations and the form is available on the access management web page.

APPENDIX G SPACING STANDARDS

Do the spacing standards in Table 2-2 apply to divided and undivided roads?

They apply to both type of roads, except for collectors (see the Table 2-2 notes on page 24). Collectors have different spacing standards for intersections on undivided vs. divided roads. The function of collectors is to provide access to property with less emphasis on accommodating through traffic. As a result, the spacing for intersections on undivided collectors is significantly less than for median divided multilane collectors that carry more traffic and are more likely to evolve to minor arterial status.

Do the spacing standards apply to private entrances?

No, the spacing standards only apply to commercial entrances.

How do the spacing distances for one type of entrance or intersection apply to the others?

The spacing standards establish the minimum distances between each intersection/entrance type. Along a highway, though, the different types of access points will be intermixed. Signalized intersection spacing applies to other signalized intersections. The spacing standard for unsignalized intersections provides the minimum distance between such intersections and between unsignalized and signalized intersections. Finally, partial access entrances are separated from each other and from intersections by the partial entrance spacing standard. See the note on page 24 of Appendix G.

How are the spacing distances measured?

They are measured from the centerline of the entrance/intersection to the centerline of the adjacent entrances/intersections both upstream and downstream.

How is the interchange spacing applied if a ramp leads to a full auxiliary lane?

The spacing would be determined as if there was a ramp taper and measured accordingly. See page 26 in Appendix G.

What is the difference between the corner clearance and entrance spacing standards?

Corner clearance addresses how close a commercial entrance on a minor side street can be to the street's intersection with a major roadway. The Table 2-2 spacing standards apply to entrance locations along the highway. Corner clearance establishes the minimum distance entrances need to be separated from an intersection to prevent queued vehicles from backing up onto the highway or blocking entrances near the intersection. The greater of the spacing standards and the corner clearance will apply. See Appendix G page 78 for more details on corner clearance.

What are the spacing standards for roundabouts?

Roundabouts are defined as a "circular intersection." Since roundabouts are not signalized, roundabouts are separated from other intersections by the unsignalized intersection spacing standard. A roundabout design can offer an attractive alternative to a signalized intersection since the spacing distance is less. Because roundabouts require less upstream approach and downstream

exit areas, the partial access entrance spacing is used to separate roundabouts from each other. See the Appendix G Roundabout chapter (page 35) for more information.

What is the spacing standard for commercial entrances on a local street?

The primary function of local streets is to provide access to property and to other streets. So the spacing standard for commercial entrances on local streets is 50 ft, measured between the ends of radii of adjacent entrances. Figure 4-11 on page 93 of Appendix G presents an illustration of local street entrance design and separation.

However, the Subdivision Street Design Guide (page 22), Appendix B.1 in the Road Design Manual establishes the spacing standard distance between two or more subdivision street connections to a road with a functional classification as a local street.

What if a land owner doesn't have enough property frontage to meet the spacing standards?

When a parcel can not meet the spacing standards due to parcel dimensions or a physical constraint such as topography or an environmentally sensitive area, section 120 C.3.f establishes that the entrance shall be physically restricted to right-in/right-out movements. It should be located to achieve the maximum separation possible. VDOT will not deny total access to property but will restrict access to the safest type of entrance to prevent traffic crashes and congestion.

Why is design speed referenced as a replacement for legal speed limit?

The intent of the spacing standards is to use the legal speed limit in their application because it is readily available and easy to determine. Unless a road is new or been widened, a road's design speed may not exist. The design speed is not available for many VDOT highways.

Referencing design speed in the Table 2-2 footnotes provides VDOT with the flexibility to use the design speed if available, since the design speed is usually 5 to 10 mph higher than the speed limit and people tend to drive closer to the design speed. The greater the speed of a vehicle, the longer it takes to stop to avoid a collision with motorists' entrance and intersection turning movements, suggesting the need for a larger spacing distance.

When do the spacing standards apply to VDOT highway construction projects?

If a public hearing had been conducted on the project design prior to the October 14, 2009 effective date, the spacing would not apply. Projects that were in the planning stage prior this date but the plans had not been made public would need to comply with the spacing standards.

Do the spacing standards take into account the characteristics of urban roads?

The spacing standards have been significantly reduced for urban highways due to higher density land use, smaller parcels with less road frontage, slower traffic speeds, and a greater need to accommodate pedestrians/bicyclists. Distances between destinations tend to be shorter so a lower level of mobility may be acceptable. In addition, spacing exceptions can be approved for streets within new urbanism, higher density mixed use developments as well on older sections of urban highway corridors where the existing pattern of entrances do not meet the spacing standards.

Can existing commercial entrances be affected by the spacing standards?

An existing entrance may be affected if it will be upgraded from a partial access entrance to a full access entrance or from an unsignalized intersection to a signalized intersection. The owner of an existing commercial entrance is entitled to its continued use as long as it is maintained in a safe condition and can handle the traffic for which it was designed.

Why are the spacing standards for entrances/intersections near interchange ramps not based on the road's functional classification?

National research studies recommend that spacing be based on the number of travel lanes on the highway crossing the interchange, not its functional classification. Spacing distances between ramp terminals and entrances/intersections are higher for multilane than two-lane highways because the motorist's maneuvers at multilane roads are more complex, such as crossing through lanes to reach a left turn lane at an intersection. Functional classification is not applied because arterials and collectors can be two lane or multilane.

EXCEPTIONS TO THE SPACING STANDARDS

Section 120 C.3 of the Regulations

What are the rules for grandfathering the location of entrances identified in rezoning cases, site plans and subdivision plats?

Rezoning: The specific location of entrances identified in a proffered plan of development or written condition that was approved by the locality prior to the October 14, 2009 are exempt from the spacing standards in Appendix G. The proffer would have to show or describe the location of the entrance using some type of measurement such as the distance from property boundaries.

Site plan, subdivision plat, conceptual sketch: The specific location of entrances or intersections shown on site plans, preliminary and final subdivision plats, and Secondary Street Acceptance Requirements (on the VDOT web site) conceptual sketches are exempt from the spacing standards if the locality submits it to VDOT and VDOT receives it prior to October 14.

Approval: An exception request must be submitted to VDOT along with a copy of the land development document according to the procedures in Section 120 D.

Does the grandfathering of entrance locations apply to conditional uses and special exceptions?

No, the regulations only reference certain local land development review documents such as rezoning proffered conditions.

If the location of a signalized intersection is grandfathered, is the applicant entitled to a traffic signal?

The location would be exempt from the intersection spacing standards in Table 2-2 of Appendix G, but whether the signal will be allowed will depend on whether the signal meets the warrants according to the Manual on Uniform Traffic Control Devices, available on the VDOT web site under Business Center, Manuals.

Where does a new urbanism development have to be located to receive a spacing exception?

New urbanism, traditional neighborhood developments that meet certain criteria such as having a pedestrian friendly road design (see section 120 C.3.d) must be located either within a designated urban development area as defined in § 15.2-2223.1 of the Code or in an area designated by the local comprehensive plan for higher density development. The spacing exception is for the entrances and intersections internal to the development.

What would be considered an older, established business corridor of a locality?

This would be a section of a highway corridor in an urban area in which most of the properties have been developed for business uses where the spacing pattern of the existing entrances and intersections within that section of the corridor did not meet the spacing standards as of October 14, 2009. Aerial photography can be used to identify them. VDOT approval of older, established business corridors and their boundaries will have to be conducted on a case by case basis. Spacing distances can be approved that are consistent with the established spacing pattern on the corridor.

What are the advantages for a locality to work with VDOT on an access management highway corridor plan?

Access management plans offer flexibility in the application of the regulations and standards to meet the special needs of different areas of the Commonwealth. Property owners, developers, the locality and VDOT will be able to know in advance where the access management requirements can be met and where exception requests can be expected.

Opportunities for sharing entrances and vehicular/pedestrian circulation between adjoining properties can be identified as can physical constraints that would prevent their use. Parcels with insufficient property frontage to meet the spacing standards can be identified. Recommendations can be made about turn lanes, signal synchronization, crossovers locations. Areas can be identified where the Appendix G spacing standards can be met, where they can be exceeded, and where shorter spacing distances are appropriate.

Can the spacing standards in a locality's existing corridor plan supersede VDOT's?

If the spacing standards in the corridor plan are lower than VDOT's, it must be reviewed and approved by VDOT in order to apply (see section 120 C.3.b of the regulations).

What is the process for VDOT approval of an access management corridor plan?

Contact the VDOT Residency or District Transportation Planning or Land Development staff for information on the review and approval process.

How can problems with meeting the spacing standards be avoided?

It will be important for local planners, transportation consultants, and developers to consider the spacing of entrance and intersection locations during the preparation of zoning, site plan, subdivision plat, and SSAR subdivision conceptual sketches.

What are the options if a proposed signalized entrance can not meet the spacing standards?

Section 120 C 5 specifies that in this situation the entrance will be restricted to right-in/right-out movements. The developer can request an exception to this requirement by submitting a traffic

engineering study that shows acceptable operational levels can be achieved and motorist safety will not be jeopardized. In addition, a new component of such a study is to evaluate the suitability of the entrance location for design as a roundabout.

APPENDIX G DESIGN STANDARDS

Why are the entrance design standards for minor arterials and collectors the same as those for principal arterials?

The type or functional classification of the abutting highway is not relevant to many of the standards. Throat depth is based on the traffic generated by the land use. Turn lanes focus on the speed of the highway and the length of the auxiliary lane necessary to safely decelerate. Curb radii are designed to accommodate the design vehicle expected to use the entrance. Stopping sight distance is based on the distance it takes for a motorist to stop at a given speed.

What changes were made to the commercial entrance design illustrations?

First, a design illustration has been added on page 93 of Appendix G for commercial entrances on local streets. The minimum entrance width has been reduced from 30 ft for a standard commercial entrance to 24 ft. A minimum 50 ft separation between ends of radii of adjacent entrances has been established. This is the spacing distance for commercial entrances on local streets.

Second, a new low volume commercial entrance design for highways with shoulders is presented on page 89 and described on page 75. “Low volume” site requirements are a maximum: 5,000 vehicles per day (VPD) on the fronting highway, 200 entrance VPD, and 10% truck trips per day. Curb and/or gutter are not required and the entrance width is a minimum 18 ft and maximum 30 ft. The intent of this design is to reduce entrance construction costs for small businesses and other uses that do not generate much traffic.

What other key changes were made to the design criteria for commercial entrances?

More detail is provided on page 73 about the pavement for commercial entrances, turn lane, and tapers – asphalt, concrete, or pavers of a construction (e.g. sub-base, base, surface asphalt) comparable to the pavement of the adjacent highway.

The “effective” radius must be used where on-street parking is allowed near the entrance (typically the actual radius of the entrance curbing plus the width of the parking lane). The radius is where the edge of the entrance is rounded to permit easier entry and exit by turning vehicles (page 74).

Finally, a web link is furnished on page 75 for obtaining design criteria to accommodate sidewalks at commercial entrances (the pedestrian route across the entrance).

How does the design of a median opening determine whether it is considered a crossover?

New definitions in the regulations and Appendix G for “crossover” and “median opening” explain that crossovers are median openings that provide the full range of turning movements (crossing and left/right turning movements). A median opening that physically restricts movements to only left turns and U turns is a directional median opening and therefore not a crossover. A directional median opening can be used to create a right-in/right-out/left-in entrance.

Do the design standards allow midblock pedestrian crosswalks?

Midblock crosswalks can be used to provide locations for pedestrians and bicyclists to cross the highway where pedestrian/bicyclist attractors are located on opposite sides of the road. The characteristics of the highway and the design of the crosswalk will need to be evaluated. Midblock crosswalks are discussed on page 42 of Appendix G.

Where in Appendix G can I find information on designing partial access entrances?

Illustrations for using concrete islands to channelize entrance turning movements to create a right-in/right-out entrance on undivided highways are presented on page 80 of Appendix G. While concrete islands may not be as effective as medians, they can still prevent a majority of left turns.

Medians are the best way to prevent left turn movements at an entrance. Medians can also be used to create right-in/right-out entrances in which certain left turn movements are allowed. The Median chapter on pages 57 to 59 discusses directional median opening design and presents an illustration of one for left-in only and U turns. Eight types of entrance channelization designs are illustrated on page 17 and 18 of Appendix G.