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1. Introduction

1.1. Authority

The State Highway Access Management Manual derives from powers conferred on the Director of the Department of Transportation by Section 5501.31 and Section 5515.01 of Ohio Revised Code (ORC).

1.2. Purpose

1.2.1. The State Highway Access Management Manual establishes procedures and standards to protect the utility, function, capacity, and safety of the state highway system. The state highway system constitutes an integrated network of highways interconnecting all areas of the state and serving the safe, efficient movement of people and goods. The state highway system represents an irreplaceable public asset essential to the public health, safety, and welfare. The Ohio Department of Transportation has an obligation and a public-trust responsibility to preserve and maintain this system, to protect the public investment in this system, and to ensure its continued use in meeting state, regional, and local transportation needs.

1.2.2. It is a goal of the Department to preserve and manage the state highway system more effectively. It is a goal of the Department to improve public safety in the development, design, and operation of the state highway system. It is a goal of the Department to maintain and protect the state highway system’s function and ability to move people and goods efficiently and conveniently.

1.2.3. Failure to manage access to and from state highways is a leading cause of accidents, congestion, decline in operating speed, loss of traffic carrying capacity, and increased traffic delays. The proliferation of driveways, intersections, and traffic signals without regard to their proper design, location, and spacing degrades highway operation and performance and poses serious traffic hazards for the traveling public. Failure to manage access significantly reduces traffic mobility, increases congestion, contributes to higher rates of property damage, personal injury, and fatal accidents; increases transportation costs and delays in the movement of people and goods thereby weakening the state’s economic competitiveness and shortening the operational life of the highways.

1.2.4. The effects of poor access management are of statewide concern. Correcting the problems associated with inadequate access management requires expending significant public funds to widen state highways, to provide additional operational and safety improvements, and, in severe conditions, to relocate and construct new highways. These remedial measures are increasingly prohibitive in terms of their economic, social, and environmental costs. Moreover, the benefits are often short-term and temporary. Unless a program of access management is adopted in conjunction with the improvements, the problems soon return and often grow worse.

1.2.5. The Department is committed to implementing access management policies and sound engineering standards that reduce highway congestion, minimize traffic delay, improve traffic flow, preserve highway capacity, and reduce accidents. The Department is further committed to preventing any conditions from occurring in the development, design, and operation of a highway that cause or contribute to a decline in the highway’s designed and intended traffic function and that require excessive expenditure of public funds to correct.
1.2.6. Statewide implementation of access management ensures equitable, uniform, consistent, and systematic application of standards. It prolongs the service life of state highway facilities thereby reducing public costs to develop and maintain an effective state highway system. It promotes healthy economic investment and orderly growth by encouraging close coordination between public and private sectors in land use, development, and transportation planning.

Access management maintains and improves accessibility to business, commercial, and residential development while discouraging undesirable, congested development that can diminish property values and degrade the character and quality of life of a community, making it economically and socially unattractive. It preserves and protects traffic mobility essential to economic and social well-being while providing access as appropriate and necessary in the interest of public and private transportation needs and as compatible with public health, safety, and welfare.

1.2.7. To accomplish its goals and meet its obligations, the Department has developed this State Highway Access Management Manual to manage access to state highways as necessary to protect the public health, safety, and welfare; to preserve the operational and functional integrity of the state highway system; and to promote the safe and efficient movement of people and goods.

1.2.8. The State Highway Access Management Manual addresses the type, design, location, and frequency of driveways, intersecting streets, and other points of vehicular access to state highways. It establishes standards and criteria including, but not limited to, the location and spacing of access connections; safety, design, and construction standards; the location and spacing of traffic control devices; requirements for intersection treatments including auxiliary lanes; and other engineering features necessary to the effective maintenance and protection of the state highway system.

1.2.9. Except in cases of purchase or appropriation of access rights, nothing in this Manual shall deny the property owner the right to reasonable access to the general, public street system. However, the access rights of a property owner are subject to regulation for the public health, safety, and welfare and are subordinate to the public's rights and interests in a safe, efficient highway. The right of an owner of property to access to a state highway or to a particular means of access may be restricted if reasonable, alternative access is available or can be obtained to the general, public street system.

1.3. References and Resources

The standards and specifications applied in the State Highway Access Management Manual are based on engineering judgment and the following standard, engineering references used by the Department. The citation of standard, engineering reference works always refers to the latest publication or edition of the work as amended.


1.3.2. Transportation and Traffic Engineering Handbook, Institute of Transportation Engineers, Washington D.C.


1.3.4. Ohio Manual of Uniform Traffic Control Devices, (OMUTCD), Ohio Department of Transportation
1.3.5. **Location and Design Manual**, Ohio Department of Transportation, Columbus, Ohio.

1.3.6. **Construction and Materials Specifications Manual**, Ohio Department of Transportation, Columbus, Ohio.

1.3.7. **Standard Construction Drawings**, Ohio Department of Transportation, Columbus, Ohio.


1.3.11. **Property Management Manual for the Real Estate Disposal Function**, Ohio Department of Transportation, Columbus, Ohio.

1.3.12. **Volume Warrants for Left-Turn Storage Lanes at Unsignalized Grade Intersections**, M.D. Harmelink, Department of Highways, Ontario, Canada.

1.3.13. **Appraisal Manual for the Office of Real Estate**, Ohio Department of Transportation, Columbus, Ohio.

1.4. **Definitions and Abbreviations**

These definitions are provided and adopted to explain technical words, phrases, and abbreviations used in this document.

1.4.1. "Acceleration lane" means a speed-change lane, including tapered areas, for the purpose of enabling a vehicle entering a roadway to increase its speed to a rate at which it can more safely merge with through traffic.

1.4.2. "Access" or "access connection" means any driveway or other point of entry and/or exit such as a street, road or highway that connects to the general street system. Where two public roadways intersect, the secondary roadway shall be considered the access.

1.4.3. "Access category" means one of the five categories described in **Section 3 of the State Highway Access Management Manual** and determines the degree to which access to a state highway is managed. Categories as they are assigned to specific highway segments are listed in the "State Highway Access Category Inventory."

1.4.4. "Access Management Plan" means a roadway design plan which designates access locations and their design for the purpose of bringing those portions of roadway included in the access management plan into conformance with their access category to the extent feasible.

1.4.5. "Access operation" means the utilization of an access for its intended purpose, and includes all consequences or characteristics of that process, including access volumes, type of access traffic, access safety, time of the access activity, and the effect of such access on the state highway system.
1.4.6. "ADT" means the annual average two-way daily traffic volume. It represents the total traffic for the year, divided by 365. For purposes of the State Highway Access Management Manual, references to AADT in other resources and publications shall be considered synonymous with ADT.

1.4.7. "Applicant" means any person, corporation, entity or agency applying for an access permit.

1.4.8. "Appropriate local authority" means the board of county commissioners or township trustees if the access is to be located in the unincorporated area of a county, or the governing body of the municipality if the access is to be located within an incorporated municipality. Also referred to as the local authority, and local government.

1.4.9. "Auxiliary lane" means any additional special purpose lane such as: speed change lanes, hill climbing lanes, and turning lanes.

1.4.10. "Bandwidth" means the time in seconds or the percent of traffic signal cycle between a pair of parallel speed lines which delineate a progressive movement on a time-space diagram. It is a quantitative measurement of the through traffic capacity of a signal progression system. The greater the bandwidth, the higher the roadway capacity.

1.4.11. "Capacity" means the ability of the highway to provide service to the volume of vehicles seeking to use the highway. Capacity is most often considered the maximum volume of traffic that can be accommodated by a highway during a specified unit of time. Sometimes it refers to the entire roadway and sometimes to a single lane.

1.4.12. "Channelizing Island" means a defined area between traffic lanes for control of vehicle movements.

1.4.13. "Clear Zone" means the total roadside border area, starting at the edge of the traveled way, available for safe use by errant vehicles. The desired width is dependent upon the traffic volumes and speeds, and on the roadside geometry.

1.4.14. "Control of access" means the condition in which the access right of owners or occupants of land abutting or adjacent to a roadway is controlled by public authority.

1.4.15. "Controlled-access highway" means every street or highway in respect to which owners or occupants of abutting lands and other persons have no legal right of access to or from the same except at such points only and in such manner as may be determined by the public authority having jurisdiction over such street or highway. [Chapter 4511.01 (CC), O.R.C.]

1.4.16. "County roads" include all roads which are or may be established as a part of the county system of roads as provided in sections 5541.01 to 5541.03, inclusive, of the Ohio Revised Code, which shall be known as the county highway system. Such roads shall be maintained by the board of county commissioners. [Chapter 5535.01 (A), O.R.C.]

1.4.17. "Deceleration lane" means a speed-change lane, including tapered areas, enabling a vehicle to leave the mainstream of faster moving traffic and to slow to a safe turning speed prior to exiting the highway.

1.4.18. "Department" means the Department of Transportation, State of Ohio.
1.4.19. "Design Hour Volume" ("DHV") means the hourly traffic volume used in the geometric design of highways. In Ohio, the DHV is the 30th highest hour vehicular volume experienced in a one-year period. See Section 5.6.3, for the methodology to determine D.H.V.

1.4.20. "Design Speed" for the purposes of the State Highway Access Management Manual shall equal the posted speed plus 5 mph or 10 kph.

1.4.21. "Divided highway" means a highway with separated roadways for traffic in opposite directions, such separation being indicated by depressed dividing strips, raised curbing, traffic islands, or other physical barriers so constructed as to prevent or discourage crossover vehicular traffic or otherwise indicated by standard pavement markings or other official traffic control devices as prescribed in the Ohio Manual of Uniform Traffic Control Devices.

1.4.22. "Driveway" or "Private road" means every way or place in private ownership used for vehicular travel by the owner and those having express or implied permission from the owner but not by other persons. [Chapter 4511.01 (DD), O.R.C.]

1.4.23. "Driveway Spacing" refers to the desired distance between adjacent driveways on the side of the roadway, as measured from centerline to centerline, considered necessary for the safe ingress and egress of vehicles and the safe operation of the highway at its posted speed.

1.4.24. "Expressway" means a divided arterial highway for through traffic with full or partial control of access with an excess of fifty percent of all crossroads separated in grade. [Chapter 4511.01 (ZZ), O.R.C.]

1.4.25. "Field approach" or "field access" or "field drive" means an access to undeveloped or agricultural property that has a yearly average use of less than two trip ends per day.

1.4.26. "Freeway" means a divided multi-lane highway for through traffic with all cross roads separated in grade and with full control of access. It is a highway especially designed for through traffic and over which abutting property owners have no easement or right of access by reason of the fact that their property abuts upon such highway, and access to which may be allowed only at highway intersections designated by the Director of Transportation, board of county commissioners, or municipal authorities on roads within their jurisdiction. [Chapter 4511.01 (YY), O.R.C.], [Chapter 5511.02, O.R.C.], [Chapter 5535.02, O.R.C.]

1.4.27. "Frontage Road" means a public street or road auxiliary to and normally alongside and parallel to the main highway, constructed for the purposes of maintaining local road continuity and the controlling of direct access to the main highway.

1.4.28. "Functional Classification" means a classification system that defines a public roadway according to its purposes and hierarchy in the local or statewide highway system. The Federal-Aid Highway Act of 1973 required the use of functional classification to update and modify the Federal-aid highway systems. This legislative requirement is still in effect today. Functional Classification is the grouping of roads, streets, and highways into integrated systems, each ranked by their importance to the general welfare, the motorist, and the land-use structure. The Functional Classification categories are separate from the Access Management categories and are defined using a distinct set of criteria put forth by the Federal Highway Administration (FHWA).

The hierarchy of functional systems is as follows:
1. Rural Areas - Principal arterials, Minor arterials, Major collector roads, Minor collector roads, and Local roads. (Rural areas comprise the areas outside the boundaries of small urban and urbanized areas).

2. Urban Areas - Principal arterials, Minor Arterials, Collector streets, and Local streets. (Urban areas are defined by the Census Bureau as areas with a population greater than 5,000).

1.4.29. "General street system" means the interconnecting network of city streets, county roads, township roads, and state highways in an area.

1.4.30. "Grade separation" means a crossing of two roadways, or a roadway and a railroad, or a roadway and a pedestrian walkway or bike path in such a way that neither facility interferes with the operation of the other.

1.4.31. "Gradient" or "grade" means the rate or percent change in slope, either ascending or descending from or along the highway. It is to be measured along the centerline of the roadway or access.

1.4.32. "Highway" or "Street" means the entire width between the boundary lines of every way open to the use of the public as a thoroughfare for purposes of vehicular travel. [Chapter 4511.01(BB), O.R.C.]

1.4.33. "Interchange" means a facility that provides ramps for access movements between intersecting roadways that are separated in grade. The ramps and any structures used to accomplish the movement of traffic between the roadways are considered part of the interchange.

1.4.34. "Interchange Justification Study" means a plan similar in nature to an access management plan but limited to the immediate influence area of an interchange for the protection of the freeway's functional integrity.

1.4.35. "Intersection" means: (1) The area embraced within the prolongation or connection of the lateral curb lines, or, if none, then the lateral boundary lines of the roadways of two highways which join one another at, or approximately at, right angles, or the area within which vehicles traveling upon different highways joining at any other angle may come in conflict; (2) Where a highway includes two roadways thirty feet or more apart, then every crossing of each roadway of such divided highway by an intersecting highway shall be regarded as a separate intersection. If an intersecting highway also includes two roadways thirty feet or more apart, then every crossing of two roadways of such highways shall be regarded as a separate intersection; (3) The junction of an alley with a street or highway, or with another alley, shall not constitute an intersection. [Chapter 4511.01 (KK), O.R.C.]

1.4.36. "Intersection Sight Distance" means the distance at which a motorist attempting to enter or cross a highway should be able to observe traffic in order to make his desired movement. The required distance varies with the speed of the traffic on the main highway.

1.4.37. "Inventory" means the listing, maintained by the Department, which gives the access category for each section of state highway as assigned and determined in accordance with Section 2.2 of the Manual.
1.4.38. "Issuing authority" means the government entity which issues access permits.

1.4.39. "KPH" means a rate of speed measured in kilometers per hour.

1.4.40. "Lane" means the portion of a roadway for the movement of a single line of vehicles. It does not include the gutter or shoulder of the roadway.

1.4.41. "Level of Service" (LOS) is a qualitative measure describing a range of traffic operating conditions such as travel speed and time, freedom to maneuver, traffic interruptions, and comfort and convenience as experienced and perceived by motorists and passengers. Six levels are defined from A to F, with A representing the best range of conditions and F the worst.

1.4.42. "Limited access highway or freeway" is a highway especially designed for through traffic and over which abutting property owners have no easement or right of access by reason of the fact that their property abuts upon such highway, and access to which may be allowed only at highway intersections designated by the Director of Transportation.

1.4.43. "Local government" means the board of county commissioners or the township trustees if the highway section is located in an unincorporated area of a county or the governing body of the municipality if the highway section is located within an incorporated municipality.

1.4.44. "Median" means that portion of a highway separating the opposing traffic flows.

1.4.45. "Median Island" means a curbed island which prevents egress traffic from encroaching upon the side of the drive used by ingress traffic. The island ensures that ingress traffic has the necessary maneuvering space.

1.4.46. "MPH" means a rate of speed measured in miles per hour.


1.4.48. "Peak Hour Volume" refers to the highest traffic volume in 60 consecutive minutes in one (or both) of the two traditional peak periods of traffic, the morning period from 7 a.m. to 9 a.m. and/or the evening period from 4 p.m. to 6 p.m. This volume is generally based on 60-minute, 30-minute, or 15-minute periods. While traffic may peak near the noon hour, trip generation rates do not usually exist for this period.

1.4.49. "Permit issue date" also known as "date of issue" means the date when the authorized Department official signs the permit.

1.4.50. "Permittee" means any person, unit of government, public agency or any other entity that can own property, to whom an access permit is issued. The permittee, normally the property owner served by the access, is responsible for fulfilling all the terms and conditions of the permit.

1.4.51. "Person" means every natural person, firm, co-partnership, association, or corporation. [Chapter 4511.01 (W), O.R.C.]
1.4.52. "Potential for signalization" means an access that has the potential to meet any of the warrants for a traffic signal as defined by the OMUTCD.

1.4.53. "Right-of-Way" is a general term denoting land, property, or the interest therein, usually in the configuration of a strip acquired for or devoted to transportation purposes. When used in this context, right-of-way includes the roadway, shoulders or berm, ditch, and slopes extending to the right-of-way limits under the control of the state or local authority. [Chapter 4511.01(UU), O.R.C.]

1.4.54. "Relocate" means to remove and establish in a new place, and may include, if necessary to conform a property's access to the provisions of the State Highway Access Management Manual, merging or combining non-conforming access with other existing access so as to eliminate the non-conformance. In such event, the property owner or permittee, if applicable, may be required to remove all physical elements of the non-conforming access, such as curb cuts and surfacing material, and install curbing, barriers, or other physical separators to prevent continued use of the access.

1.4.55. "Roadside" means that area between the outside shoulder edge and the right-of-way limits.

1.4.56. "Roadway" means that portion of a highway improved, designed or ordinarily used for vehicular travel except the berm or shoulder. If a highway includes two or more separate roadways, the term "roadway" means any such roadway separately but not to all such roadways collectively. [Chapter 4511.01 (EE), O.R.C.]

1.4.57. "Signal" means a traffic control signal.

1.4.58. "Signalization" means installing or modifying a traffic control signal.

1.4.59. "Signal progression" means the progressive movement of traffic at a planned rate of speed without stopping through adjacent signalized locations within a traffic control system.

1.4.60. "Single unit vehicle" means a single frame vehicle, longer than a passenger car, as described dimensionally by AASHTO as a single unit design vehicle generally including delivery trucks, haul vehicles, camping and recreational vehicles, and motor homes, having an overall length of greater than 19 feet and two or more axles.

1.4.61. "Slope" means the relative steepness of the terrain expressed as a ratio or percentage. Slopes may be categorized as positive or negative and as parallel or cross slopes in relation to the direction of traffic.

1.4.62. "Speed change lane" means a separate lane for the purpose of enabling a vehicle entering or leaving a roadway to increase or decrease its speed to a rate at which it can safely merge with or diverge from through traffic. Acceleration and deceleration lanes are speed change lanes.

1.4.63. "State highway" means all state highways as established by law and part of the state highway system as established by law excepting those state highway routes into and through municipal corporations. [5511.01, 5501.11 O.R.C.]
1.4.64. "State roads" include the roads and highways on the state highway system. [Chapter 5535.01 (A), O.R.C.]

1.4.65. "Stopping sight distance" means the distance required by a driver of a vehicle, traveling at a given speed, to bring the vehicle to a stop after an object on the roadway becomes visible. It includes the distance traveled during driver perception and reaction times and the vehicle braking distance.

1.4.66. "Storage length" means additional lane length added to a deceleration lane to store the maximum number of vehicles likely to accumulate in the lane during a peak hour period to prevent stored vehicles from interfering with the function of the deceleration lane or the through travel lanes.

1.4.67. "Taper" means a transitional area of decreasing or increasing pavement width to permit the formation or elimination of an auxiliary lane.

1.4.68. "Township roads" include all public highways outside municipalities other than state or county roads. The board of township trustees shall maintain all such roads within its township. The board of county commissioners may assist the board of township trustees in maintaining such roads. This section does not prevent the board of township trustees from improving any road within its township.

1.4.69. "Traffic Impact Study" (TIS) is a study which is required to be completed before an access permit can be approved and issued for any development or land use which generates or has the potential to generate traffic volumes exceeding the threshold value specified in Section 4.7.2.3. The purpose and need for the TIS is to determine more precisely the impacts of the access usage, to mitigate these impacts through the proper location, design, and construction of the access connection(s), and to ensure the continued functional and operational integrity of the highway. See Section 5.

1.4.70. "Traveled way" means that portion of roadway for the through movement of vehicles, exclusive of shoulders, gutters, and auxiliary lanes.

1.4.71. "Trip end" means a single or one-direction vehicle movement with either the origin or the destination inside a study area. A vehicle leaving the highway and entering a property is one trip end and later leaving the property and entering the highway is another trip end.

1.4.72. "Turn Lane Warrant Analysis" means a methodology used in determining if turn lanes are required due to applicants proposed/existing traffic volumes.

1.4.73. "Variance" is a granting of permission to depart from the standards and requirements of the State Highway Access Management Manual because of unique circumstances or existing special conditions. (See Section 2.8.)

1.4.74. "Warrant(s)" means the criteria by which the need for a treatment or improvement can be determined.

1.4.75. "Working day" means any week day in which a normal day of work can be performed exclusive of delays which result from inclement weather, labor disputes and
material shortages. It does not include weekends and legal holidays.

1.5. Implementation

1.5.1. After September 1, 1998, all vehicular access and connections to the state highway system should be regulated in accordance with the provisions of the State Highway Access Management Manual or in accordance with policies, standards, and requirements adopted by local authorities as provided in Section 1.5.4. No person shall construct any new access or modify an existing access resulting in a change of use as defined in Section 2.10 that provides direct vehicular movement to or from any state highway to or from property abutting a state highway without a valid access permit approved either by the Department or by the appropriate local authority.

1.5.2. All access connections providing vehicular movement to or from a state highway, and in use prior to September 1, 1998 or constructed in accordance with a valid permit issued by an appropriate local authority having jurisdiction over the highway at the time of issuance of the permit shall be considered access connections exempt from the policies, requirements, criteria, and standards of the State Highway Access Management Manual.

1.5.3. Any exemption provided under Section 1.5.2 shall remain in effect until or unless the provisions and conditions as defined in Section 2.10 become applicable to the access connection.

1.5.4. Local municipalities may adopt policies, standards, and requirements for regulating and permitting access to or from non-limited access state highways that meet or exceed the Department's standards and that are consistent with the purpose of the State Highway Access Management Manual as stated in Section 1.2. Where such local authority has adopted access standards and requirements, the Department may review those policies, standards, and requirements and determine whether they are consistent with the purpose and standards of the State Highway Access Management Manual. The Department may coordinate and cooperate with the local authority in implementing the locally adopted process for permitting access to state highways within the municipality.
2. Administration

2.1. Purpose

2.1.1. This section sets forth the procedures and requirements governing the issuance of permits by the Ohio Department of Transportation for use or occupancy of right-of-way on state highways for the purpose of constructing and using private driveways and approaches and/or public road and street intersections connecting with a state highway.

2.2. Access Inventory

2.2.1. The Department shall maintain an inventory of each section of state highway listing its access assignment based on the access categories described in Section 3. This inventory shall be updated as needed to reflect changes in the highway environment affecting the access requirements of the highway. The initial assignment of access categories and any subsequent revision shall be determined in cooperation and coordination with appropriate local authorities, including public input, to ensure that assignments are compatible with preserving and maintaining the highway's intended and designed function within the state highway system and within the context of the area's transportation needs and plans.

The Access Inventory listing the access category of each section of state highway in the district shall be available from the appropriate District Office.

2.2.2. Access assignments in the inventory shall be based on and consider the following:

- current functional classification;
- existing and projected traffic volumes and vehicle mix;
- existing and projected capacity and level of service;
- a survey of existing character of land and proposed or anticipated land use adjacent to the highway, whether developed or undeveloped, and the type of development;
- a survey of physical features of the roadway;
- adopted local transportation plans and needs;
- adopted local land use and zoning plans, subdivision/commercial/industrial regulations;
- availability and reasonableness of alternative access to public street and road system rather than to the state highway; and
- posted or operating speed.

2.2.3. Requests for changes in the access category of a state highway or sections thereof may be submitted to the Department by the appropriate local authority. All requests must include information pertaining to the factors cited in Section 2.2.2 and must explain the need for the requested change. The explanation must also discuss how the requested change is consistent with and conforms to the purpose and standards of the State Highway Access Management Manual and does not compromise the public health, safety, and welfare. A change in access category shall not be made solely to accommodate a specific access request or to allow the permitting of access connections that would otherwise not be permitted.
2.2.4. The Department may coordinate and cooperate with local governments in the review of plats, zoning, subdivision, and other land use regulations affecting the safety and operation of state highways to ensure that future access requirements related to local land use decisions are consistent with the purposes and standards of this Manual. The issuance or approval of any permit, agreement, plat, subdivision, plan, or correspondence shall not abrogate or limit the regulatory powers of the Department or local issuing authority exercised in the protection of the public's health, safety and welfare.

2.2.5. Land uses including residential, commercial, and industrial development approved by local authority should ensure that all requirements for access to state highways are provided in conformance with locally adopted access management programs, or, in their absence, with the State Highway Access Management Manual.

2.3. Access Permit Application

2.3.1. Applications for permits for direct access to a state highway may be submitted to the office of the County Manager or to the ODOT District Office in which the highway is located. At its discretion, the District Office may authorize the County Manager to review, approve, and issue access permits for single family residences for Minimum Use Driveways (no more than five trip ends in the peak hour). All other applications received in the office of the County Manager shall be forwarded immediately to the District Office. The District Office shall have the final responsibility for accepting applications for access permits to include reviewing the permit applications for completeness and conformity to the Department’s State Highway Access Management Manual and other applicable Local, State, and Federal regulations; issuing the permits; inspecting construction to ensure compliance to any conditions of the permit; and maintaining records of all applications and permits.

2.3.2. Permit applications shall include a completed Department Form No. MR 505 and any attachments necessary for the Department to review and assess the application accurately and thoroughly. Permit applications must bear the complete name(s), address(es), telephone number(s), and signature(s) of the property owner(s). Application by the contractor or anyone other than the owner of the property, or his authorized agent is not acceptable.

Applications for permits for public road approaches and subdivision street approaches, which are to become public roads, shall bear the signature of the County or Municipal Engineer and the property developer. (In lieu of the County or Municipal Engineer’s signature on the application form, a letter or other documentation indicating approval of the developer’s road or street plan by the county or Municipal Engineer would also be acceptable).

2.3.3. A minimum of two complete copies of the application and any attachments shall be submitted. The Department may require additional copies based on the scope, location, and expected impacts of the access proposal. Contact the appropriate District Office to determine the total number of copies of attachments needed with the submittal. The date of submission of the application and any accompanying material shall be appropriately marked on the material.

2.3.4. The information and level of detail required to review an application will vary
according to the type and usage of the access connection requested. Material not relevant to the evaluation and review of the application will not be requested or required of the applicant. Prior to submitting a permit application, applicants may wish to contact the appropriate District Office for information about the application process and the type of information that may be required to be submitted. For example, an application for a minimum use driveway connection for a single family dwelling will require less information and can generally be processed more quickly than applications for connections to multi-family, high density residential or commercial/retail developments which have greater traffic impacts on the highway. Similarly, applications for access to state highways in lower access categories will generally require less detailed information than applications for access to higher access categories. Contact the appropriate District Office to determine the total number of copies of attachments needed with the submittal.

2.3.5. Information and/or attachments may include but are not limited to the following:

- property and ownership maps showing the location of the property;
- site plans, drawings, and/or construction plans as necessary showing the location of the proposed access connection with reference to the highway, right-of-way, property lines, any existing buildings, structures and parking, and existing access connections on abutting properties and on properties opposite the proposed access connection;
- the use to be served by the proposed connection (i.e. residential, industrial, commercial, retail and the type of business to be served);
- existing property usage and conditions including existing available access, easements, and relation to abutting public roads and streets;
- extent of proposed work including the type, width, radii, and location of any proposed access with respect to property lines and to the highway; the type, location, length, size, and dimensions of any existing and proposed drainage structures; and hydraulic data;
- subdivision, zoning, or local development plan, if applicable;
- and for larger and higher volume locations such as those potentially generating 100 or more trip ends in the peak hour or for locations identified by the District as requiring further traffic analysis, traffic data for existing and future conditions including traffic generated in peak hours and daily volumes; for higher volume developments, parking and internal traffic circulation plans; and traffic controls.
- Show existing access points on both sides of the roadway for 1000' on either side of the centerline of the proposed access point.

2.3.6. It is strongly recommended that applicants seeking access permits for large, high volume residential, industrial, and/or commercial and retail development (sites potentially generating 100 or more trip ends in the peak hour) request a preliminary meeting with appropriate Department personnel and/or local authorities. A preliminary meeting is especially recommended for access proposals whose traffic generation may require more detailed study including a Traffic Impact Study. Applicants should provide sufficient materials such as preliminary maps, plans, and documents to illustrate the site, the size and type of proposed land use, estimated traffic volumes and vehicle types generated by the site, adjacent public roads and highways, and any existing or available access points.

A preliminary meeting provides Department personnel and/or local authorities an early opportunity to examine the feasibility of the access proposal with the applicant and to
consider whether it is permissible under the Department's access standards. Department personnel and/or local authorities will decide whether a TIS is warranted, and if so, to define its scope. They can discuss site specific conditions and options for site access location and design; review the applicability of requirements in the State Highway Access Management Manual or requirements in any locally adopted access plans as accepted by ODOT District and Central Office; and agree on the necessary materials to be submitted with the formal permit application.

Preliminary discussion of these matters can expedite later review and evaluation of the permit application. Comments, suggestions, and recommendations made during any preliminary meeting are in no way binding upon the Department or the local authorities in subsequent evaluation of a formal permit application or decisions about the issuance of a permit.

The Department's request for a TIS or the applicant's performance of a TIS does not presume the subsequent approval of an access request or issuance of an access permit by the Department. Issuance of a permit is based on the results of the TIS showing to the Department's satisfaction that the access proposal or its modification will not degrade the traffic operation and function of the highway, that the improvements required by the proposal or its modification are consistent with the Manual, and that they are feasible and implementable.

2.3.7. In areas where a local jurisdiction has established policies and procedures for regulating access and issuing permits for access to state highways in accordance with provisions in Section 1.5.4, an applicant must comply with those local regulations. A permit issued by a local authority may be reviewed by the Department.

2.3.8. An application shall be refused if, in the opinion of the Department, necessary and essential information is missing. The applicant will be notified within thirty working days of any omissions in the application submittal that needs correction.

2.3.9. In evaluating and acting on an acceptable application, the Department shall use this State Highway Access Management Manual, the Real Estate Manual (Sections 4500 and 7400), and any other applicable state law. An access permit shall be issued only in compliance with the State Highway Access Management Manual of the Ohio Department of Transportation and may include terms and conditions deemed necessary to support and protect the public's health, safety, and welfare. The Department may impose terms and conditions as necessary to meet the requirements of the Manual.

2.3.10. When the District Office determines that an application is complete and acceptable, the original application and any copies shall be marked appropriately with the date of acceptance. The date of acceptance by the Department shall be used in calculating the required time frame for the review of the permit application.

2.4. Access Permit Application Review Process

2.4.1. Except as provided in Sections 1.5.4, 2.3.7, and 2.12, the Department will review all permit applications. The Department has the authority to approve all permit applications requesting the use or occupancy of right-of-way on state highways for the purpose of constructing and using private driveways and approaches and public road and
street intersections connecting with a state highway. It is the Department's goal to complete the review process for all permit requests as expeditiously as possible. The scope, location, and expected impacts of the access proposal will determine the level of required detail and the type of review necessary to evaluate the application and the length of time necessary to conduct the review and evaluation.

2.4.2. The District Office shall review all permit applications for completeness and conformance with applicable Departmental policies and regulations, and shall coordinate the subsequent review process with appropriate Department personnel within the District and/or Central Office.

2.4.3. The date of acceptance of the permit application by the Department as determined by Section 2.3.10 shall be used in calculating the required time frame for the review of the permit application.

2.4.4. Permit applications for new access or modification of existing access to Category I or Category II highways shall be forwarded to the Office of Roadway Engineering for coordination of Central Office review. All such requests shall meet applicable Department and Federal Highway Administration requirements and review procedures as provided by such regulations. Access requests to CAT I highways shall follow the procedures in Volume I of the Location and Design Manual. Access modifications on limited access facilities will require appraisal and acquisition processes as delineated in Sections 4503 and 7400 of the Real Estate Manual. Be advised, on non-LA controlled R/W, ODOT's decision to deny a new permit, or modify an existing driveway permit because of a change in use, may impact the value of the property for which the permit is requested. Because each parcel of property is unique, in some instances an appraisal of land may be necessary when determining what type of access is appropriate. The District Real Estate Administrator should be involved in any instances where this is an issue. In addition, for answers to questions involving the value of property affected by a permit, please contact the Office of Real Estate at (614) 466-7490 or the Office of Chief Legal Counsel at (614) 466-3664.

2.4.5. Permit applications requesting access to non-limited access highways do not require Central Office review (See Section 2.8 for variance procedures). The District Office may, at its discretion, request concurrent Central Office review of any such applications. Concurrent review of access requests on High Emphasis sections (See Section 4.4.3 and 4.4.4.) is recommended. The review and final action on Categories III, IV, and V applications not requiring a TIS shall be completed by the District Office within forty working days of the date of acceptance of the application.

2.4.6. All permit applications for access which the District determines will generate or has the potential to generate traffic volumes at full build out and occupancy exceeding the threshold values specified in Section 5.2.1 shall require completion of a Traffic Impact Study (TIS) and shall be reviewed and processed in accordance with the provisions in Section 5.

2.4.7. The review of the permit application shall take into consideration the proposed method and duration of construction and the effect on highway traffic. Additional traffic controls for maintaining traffic during construction, time limits or hours of the day when lanes or shoulders may be closed, or other prudent controls may be appended as
conditions to the permit to ensure compliance with requirements of the OMUTCD, to
protect traffic from unnecessary delay, or to minimize the possibility of accidents.

2.5. Access Permit Approvals

2.5.1. After receiving the recommendations of the District reviewing authorities for
permit applications not requiring Central Office review or after receiving the
recommendations and/or approval of the appropriate Central Office reviewing authorities,
and after all studies, agreements, construction plans, right-of-way appraisals, real estate
processes, and other applicable requirements of state and/or federal regulations are
completed to the Department's satisfaction, a decision will be made. The District Deputy
Director shall either approve the access request as proposed, or require design
modifications as appropriate and necessary, or deny the access request, consistent with the
standards and provisions contained within the State Highway Access Management
Manual and other applicable Department regulations.

2.5.2. When a permit is to be issued for an approved access connection, the permit shall
be issued on Form No. MR 509, including any modifications, conditions, or restrictions
that apply to the permit as necessary. The District Deputy Director shall sign the permit
form on behalf of the Director of Transportation, and a copy of the permit package shall
be given to the permittee. A permit is not valid until it is signed by the District Deputy
Director.

2.5.3. No changes, modifications, or revisions may be made to the location or design or
to the conditions and terms as contained in an approved access permit by any Department
personnel without the written approval of the District Deputy Director and in accordance
with the State Highway Access Management Manual.

2.6. General Provisions Applying to All Access Permits

2.6.1. The granting of an access permit does not convey to the permittee or to the
property served any rights, title, or interest in state highway rights-of-way or in the design
or operation of the state highway, or in any way abridge the right of the Department in the
exercise of its jurisdiction over state highways.

2.6.2. If, in the future, it is necessary for improved safety and operation of the highway or
for the benefit of the traveling public, the Department, as directed by the Director of
Transportation, may reconstruct, relocate, modify, repair, or remove any access
connection or any features or fixtures thereof. And in the future, if it is necessary for
improved safety and operation of the highway or for the benefit of the traveling public,
the Department may redesign the highway including installing any auxiliary lanes and
modifying any allowable turning movements. Any such changes in roadway design that
are necessary for improved safety and operation of the highway or for the benefit of the
traveling public shall not require a permit modification for an access point since the
permit confers no private rights to the permittee over the control of the highway design.

2.6.3. The District Deputy Director acts for and on behalf of the Director in issuing and
carrying out the provisions of all access permits. The District Deputy Director has full
authority to ensure that all provisions of the access permit are complied with fully and to
reject any materials, design, and workmanship that do not meet applicable Department
standards.

2.6.4. Failure on the part of the permittee to comply fully with the provisions and conditions of the access permit will be cause for suspension, revocation, or annulment of the permit thereby rendering the access connection illegal and subject to Departmental action under Section 2.11.

2.6.5. The acceptance of the permit by the party or parties to whom the permit was granted constitutes an agreement to comply with all conditions, terms, and restrictions printed or written on or attached to the permit.

2.6.6. The permittee shall save harmless the Department, the State of Ohio, and all of its representatives from all suits, actions, or claims of any character, brought on account of any injuries or damages sustained by any person or property in consequences of any neglect or on account of any act or omission as a result of the issuance of the permit.

2.6.7. The District Deputy Director when required or at his/her discretion may require a performance bond or certified check as a prerequisite to the issuance of a permit.

2.6.8. When access is requested for property abutting state highways assigned to different access categories, the access should be given to the highway in the lower category.

2.7. Construction and Compliance with Access Permits

2.7.1. All work authorized under the conditions of the permit shall be performed to the satisfaction of the Department, and the entire expense shall be borne by the permittee. No work shall be performed as authorized by the permit, until the permittee has contacted the office or the individual named on the permit, as the Department’s appointed representative, and received instructions.

2.7.2. The Department’s appointed representative shall inspect all work covered by the permit and ensure that the work is being performed in accordance with the permit conditions and plan specifications. If the work is not being performed as specified, the work shall be stopped and the Department’s representative shall complete the Permit Inspection Certificate, Form No. MR 678 reporting the action and the circumstances to the District Deputy Director. The permittee shall be notified of the Department’s action and its causes, and given an opportunity to correct the problem.

2.7.3. All work to be performed as authorized by the permit shall be completed within the time frame specified on the permit. A permit shall be considered void if the work is not completed within the required time frame, thereby rendering the access connection illegal and subject to Departmental action under Section 2.11. The permittee may request an extension from the District Office. The request must be in writing and must explain why the extension is necessary and when the work is expected to be completed.

2.7.4. If the permittee performs any work contrary to the orders of the District Deputy Director or appointed representative or contrary to the conditions and provisions of the permit, and after due notice of the violation fails to correct such work, the District Deputy Director shall notify the permittee that the permit is void, thereby rendering the access connection illegal and subject to Departmental action under Section 2.11.
2.7.5. Access Permits involving construction impinging on the roadway or shoulders shall include a Maintenance of Traffic Plan in accordance with the OMUTCD. Any needed closure of lanes or shoulders shall be described in terms of location, duration, time of day, etc. Lane and shoulder closures and other work shall not commence until all Traffic Control Devices are in place. Traffic Control Devices shall be removed immediately when they are no longer needed. Lane or shoulder closures or other hazards existing for a longer time period than necessary may be cause for the Department to order revocation of the permit and immediate closure of the work areas, removal of all hazards, and removal of all equipment.

2.7.6. Upon completion of the work authorized by the permit, the permittee shall leave the highway clean of all rubbish, excess materials, temporary structures and equipment, and all parts of the highway shall be left in a condition acceptable to the Department.

2.7.7. Upon satisfactory completion of the work authorized by the permit, the Department's appointed representative shall complete the Permit Inspection Certificate, Form No. MR 678 certifying that the permittee has complied with the terms of the permit.

2.8. Variance Procedures for Access Requests

2.8.1. An access variance grants permission to depart from the standards and requirements of the State Highway Access Management Manual because of unique circumstances or existing special conditions.

2.8.2. Applicants seeking a variance from the standards and regulations of the State Highway Access Management Manual must submit the request at the time preliminary plans are submitted as an attachment to the permit application form. A subsequent request for a variance may be allowed as a supplement to a previously submitted application if the Department determines that it is in the public interest to do so and that sufficient time remains in the review period to consider the variance. All requests for a variance shall be processed as follows:

1) Requests for a variance on Limited Access (LA) facilities or on roadways classified as Access Management Categories 1, 2, or High Emphasis Category 3 (3H) shall be submitted by the District to Central Office.
2) Variance approvals on all non-limited access facilities or on roadways classified as Access Management Categories Low Emphasis 3 (3L), or Categories 4, or 5 may be processed by the District.
3) Prior to applicant notification, any disapprovals at the District level shall be forwarded to Central Office for an independent review and formal decision on the variance request.

2.8.3. The request for a variance shall specify, in writing, why the variance is appropriate and necessary and shall document the unique conditions or special circumstances that make it impractical and unfeasible to meet the applicable standards and/or requirements of the State Highway Access Management Manual. The documentation shall show that the applicant has considered all practical and reasonable alternatives to mitigate the unique conditions or special circumstances, that the alternatives are not feasible or practical, and that without the variance the applicant will be deprived of reasonable access. A variance will not be granted for procedural requirements or the applicant acting
with or without knowledge of the applicable standard or requirement.

2.8.4. In considering a request for a variance, the Department shall determine if:

- the variance meets minimum acceptable ODOT engineering standards including geometric design, operation, and safety elements and if the variance is shown to be beneficial to the traveling public; and
- the variance is not detrimental to the public health, safety, and welfare; and
- the variance must be shown to be beneficial to both the planned or intended operation of the state highway; and
- the variance must be shown to be in conformance with an access management plan, if applicable, that has been accepted by ODOT District and Central Office.

2.8.5. The granting of a variance shall also consider the factors cited in Section 2.2.2, and shall be consistent with the purposes of the State Highway Access Management Manual cited in Section 1.2.

2.8.6. The Department shall make every reasonable effort to make a determination on a variance within sixty days from receipt of all required information.

2.8.7. When a variance is granted, the documentation of the reason(s) for approving the variance shall be included in the Department files and records pertaining to the permit. The terms and conditions of the approved permit and variance shall state that the permittee may be required to improve, modify, eliminate, or correct the condition responsible for the variance when it is evident that the justification for the variance is no longer valid.

2.8.8. If a variance is approved allowing direct access to a state highway when the access proposal cannot meet the standards of the State Highway Access Management Manual, or when the property would otherwise be without reasonable alternative access, the permit may stipulate conditions and terms for the expiration of the permit when the necessity for the variance no longer exists.

2.9. Variance Appeals Procedures

2.9.1. 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.

2.9.2. Within thirty days of the filing of an appeal with the Office of the Director or his designee, the Director or his designee shall determine whether the Department's action is consistent with the requirements of the Manual, or whether the Department acted in an arbitrary or capricious manner, or whether the Department abused its discretion in the application of the State Highway Access Management Manual. The decision of the Director or his designee is the final agency action on the permit request. The applicant shall be notified of the final decision.

2.9.3. If the variance request is denied, the applicant may submit a permit application and
plans reflecting the decision.

2.10. Use of Access

2.10.1. It is the responsibility of the property owner to ensure that the use of the access to the property is not in violation of the permit terms and conditions of the Department's regulations and guidelines. The terms and conditions of any permit are binding upon all assigns, successors-in-interest, heirs and occupants. If any significant changes are made or will be made in the use of the property which will affect access operation, traffic volume, or vehicle type, the permittee or property owner shall contact the Department to determine if a new access permit and modifications to the access are required.

2.10.2. The property owner or permittee, if applicable, may be required to reconstruct, relocate, redesign, or otherwise modify an existing access in order to conform to the standards and design specifications of the State Highway Access Management Manual when a change in use of the property results in a change in the type or nature of access operation. A change in use may include, but is not limited to, structural modifications, remodeling, a change in the type of business conducted, expansion of an existing business, a change in zoning, or a division of property creating new parcels, but does not include modifications in advertising, landscaping, general maintenance, or aesthetics which do not affect traffic operations and safety.

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.

2.10.3. A change in use which results in a change in the type or nature of access operation is presumptively established when, following the change in use, any of the events enumerated in Section 2.10.2 occur or are reasonably expected to occur by proper application of the ITE Trip Generation Manual.

2.11. Access Permit Violations

2.11.1. Any access connection providing direct access to a state highway that is constructed or established after the effective date of adoption of the State Highway Access Management Manual without an approved permit issued in accordance with
Chapters 5515.01, 5515.02, and 5589.10, O.R.C. and in accordance with the requirements of the State Highway Access Management Manual shall be considered an illegal obstruction within the highway right-of-way.

2.11.2. Upon determining that an access connection is illegal under the terms of this Manual, the Department may treat the connection as an obstruction within the highway right-of-way and require its removal under Chapter 5515.02, O.R.C. or proceed by any other appropriate and necessary civil and/or criminal action pursuant to Chapter 5515.02, O.R.C. or Chapter 5589.10, O.R.C.


2.12.1. Access management plans may be developed by appropriate local authorities or ODOT for a designated state highway or section of state highway, the purpose of which is to improve traffic flow, reduce congestion and travel delay, maintain highway capacity, reduce accidents, and protect public health, safety, and welfare.

2.12.2. The access management plan should establish a comprehensive roadway design for the highway and provide a means of bringing the highway into conformance with its assigned access category and its functional purpose to the greatest extent possible.

2.12.3. The access plan should achieve the best possible balance between state, regional, and local transportation plans, goals, and infrastructure and the maintenance of the highway's current and future functional and operational integrity.

2.12.4. An access plan should identify existing and future access locations along with their related design elements, including traffic signal locations. To the greatest extent possible, the access plan should meet the functional criteria and design standards of the highway's assigned access category and conform to the design standards and specifications contained in Section 4 of the State Highway Access Management Manual.

2.12.5. For roadways under ODOT’s jurisdiction, the local authority shall partner with the Department in documenting the access plan and should incorporate, at a minimum, appropriate standards and specifications of the State Highway Access Management Manual. The proposed plan should be available for public comment and review in accordance with the public involvement process and requirements of the Department and local authority.

2.12.6. Adoption of an access plan developed by a local authority for roadways under ODOT jurisdiction shall be concluded by a formal written agreement signed by authorized representatives of the Department and the local authority. After approval and adoption, all modifications and revisions to the access plan shall be approved by the Department.
3. Access Category Description and Characteristics

3.1. Purpose and Use

This section describes the Access Categories to which all sections of state highways have been assigned. Each Category describes the function of the highways included in the category and the operational standards that are applied to maintain the highway's function in terms of capacity, traffic flow, and safety.

3.2. Category I

3.2.1. Function

3.2.1.1. Highways in this category are designed and intended to provide mobility for high volumes of traffic at high speeds over long distances. They serve major interstate, intrastate, and interregional travel demand for through traffic. In urbanized and metropolitan areas, they may also serve high volumes of intra-city travel at high speeds. All interstate and freeway facilities are included in this category.

3.2.2. Operational Standards

3.2.2.1. All opposing traffic movements are physically separated by grade separations and medians. Public access to a Category I highway is provided by means of interchanges properly spaced, located, and designed in accordance with prevailing Department regulations and/or federal regulations applicable to federal-aid highways. Direct private access to Category I highways shall not be permitted. Highways in Category I are designed and intended to achieve a minimum posted speed of 55 mph.

3.3. Category II

3.3.1. Function

3.3.1.1. Highways in this category are designed and intended to provide mobility for relatively high speed, high volume, long distance, through traffic for interstate, interregional, intercity, and some intra-city travel. This category typically includes principal rural arterials of statewide significance, major urban expressways, and facilities in an early stage of design, intended to become Category I highways as funding and priorities allow. This is the highest category allowing at-grade intersections.

3.3.2. Operational Standards

3.3.2.1. Public access is provided by means of interchanges or public street intersection. Signalized intersections should be based on one mile spacing. One-half mile spacing may be allowed when there is no reasonable alternative access to the general street system.
3.3.2.2. Category II highways are designed and intended to achieve a minimum posted speed of 50 mph in areas without signals and 45 in areas with signals. A proposal for access may not presume a lower posted speed or request a lower posted speed to accommodate the access request.

3.3.2.3. Direct private access shall not be permitted unless the property retains deeded rights and has no reasonable alternative access to the general, public street system. When direct private access must be provided, the permit condition shall stipulate that the access shall be closed when other, reasonable access to a lower access category street or highway becomes available and permitted or at such time as the highway is improved to a Category I and access is provided via frontage roads or other such means.

3.3.2.4. Direct private access permitted pursuant to Section 3.3.2.3 shall be for right turns only. Left turn movement may be permitted if (1) the access does not have potential for signalization, and (2) travel circuity in one direction exceeds two miles, and (3) a left turn movement can be designed to the Department’s satisfaction that meets all safety, design and operational standards. Left turn movements shall not be permitted if a median is already established and the proposed opening of the median does not provide, in the determination of the Department, any significant operational or safety benefits to the general public or would be counter to the purpose of the median construction and the continued function of the highway at the category assigned to it.

3.3.2.5. The Department may allow modifications to an existing point of access retained in the deeded rights of property abutting a Category II highway, including relocation of the point of access within the limits of the property, if such modification or change would benefit the operation and safety of the highway, or bring the access level of the highway into greater conformance with the State Highway Access Management Manual, or be in the interest of public health, safety, and welfare.

3.3.2.6. No additional access shall be provided for the splitting or dividing of existing parcels under common ownership or control. All access to newly created properties shall be provided internally from the existing access.

3.3.2.7. Opposing traffic movements on Category II highways should be physically separated by grade separations or medians.

3.4. Category III

3.4.1. Function

3.4.1.1. Highways in this category are designed and intended to provide mobility at moderate to high speeds, volumes, and distances for interregional, intercity, and intra-city travel. This category typically includes rural arterials, most urban arterials, and some urban collectors.

3.4.2. Operational Standards
3.4.2.1. On rural highway sections, signalized intersections should be based on one mile spacing. One-half mile spacing may be allowed when there is no reasonable alternative access to the general street system. On urban highway sections, signalized intersections should be based on one-half mile spacing. One-quarter mile may be allowed when there is no reasonable alternative access to the general street system.

3.4.2.2. Category III highways should provide for a minimum posted speed of 45 mph in areas without signals and a minimum of 35 mph in areas with signals. A proposal for access may not presume a lower posted speed or request a lower posted speed to accommodate the access request.

3.4.2.3. Direct private access shall not be permitted if the property has other reasonable alternative access to the general, public street system or opportunity to obtain such access. If the Department determines that access at an alternative location causes unacceptable safety or traffic operation problems for overall traffic flow, direct access may be allowed.

3.4.2.4. Direct private access provided pursuant to Section 3.4.2.3 shall be for right turns only. Left turn movement may be permitted if (1) the left turn does not have potential for signalization, and (2) the Department determines that the left turn does not cause a current or projected congestion or safety problem or lower the level of service, and (3) alternatives to the left turn would cause roadway and intersection operation and safety problems, and (4) the left turn does not interfere with operation of street system or access to adjacent properties. Left turn movements shall not be permitted if a median is already established and the opening of the median would not provide, in the determination of the Department, any significant operational or safety benefits to the general public or would be counter to the purpose of the median construction and the continued function of the highway at the category assigned to it.

3.4.2.5. No additional access shall be provided for the splitting or dividing of existing parcels under common ownership or control. All access to newly created properties shall be provided internally from the existing access.

3.5. Category IV

3.5.1. Function

3.5.1.1. Highways in this category are designed and intended to provide access and mobility at moderate to high speeds and volumes for moderate to short distances in rural areas and low to moderate speeds and volumes in urban areas for intercity, intra-city, and intra-community travel. This category typically includes most rural collectors, some low to moderate speed urban arterials, and most urban collectors.

3.5.2. Operational Standards

3.5.2.1. On rural highway sections, signalized intersections should be based on one mile spacing. One-half mile spacing may be allowed when there is no
reasonable alternative access to the general street system. On urban highway sections, signalized intersections should be based on one-half mile spacing. One-quarter mile may be allowed when there is no reasonable alternative access to the general street system.

3.5.2.2. Category IV highways are designed and intended to provide for a minimum posted speed of 35 to 55 mph in undeveloped areas and 25 to 45 mph in developed areas. A proposal for access may not presume a lower posted speed or request a lower posted speed to accommodate the access request.

3.5.2.3. One direct private access shall be permitted per parcel or contiguous parcels under common ownership. Additional access may be permitted if the Department determines that an additional access (1) would not adversely affect the safety and operation of the highway and (2) is necessary for the safe and efficient use of the property, and (3) would not adversely affect access to adjacent properties.

3.5.2.4. Where a parcel or property has primary access to the general street system or access to an internal street system in the case of a subdivision street, any proposed access to the state highway shall be treated as a request for additional access.

3.5.2.5. Direct private access provided pursuant to Section 3.5.2.3 shall allow for all current and projected turn movements provided they meet all safety, design, and operational standards. A turn movement may be restricted if the Department determines that it causes unacceptable traffic and safety problems on the general street system. Left turn movements shall not be permitted if a median is already established and the opening of the median would not provide, in the determination of the Department, any significant operational or safety benefits to the general public or would be counter to the purpose of the median construction and the continued function of the highway at the category assigned to it.

3.5.2.6. No additional access shall be provided for the splitting or dividing of existing parcels under common ownership or control. All access to newly created properties shall be provided internally from the existing access.

3.6. Category V

3.6.1. Function

3.6.1.1. This category applies to roads and streets designed and intended to provide local land access. Typically, this category would not include any state highways. However, when the Department is constructing a new road such as a frontage road to provide local access in conjunction with a project upgrading access control on an adjacent state highway, the Department will apply these operational standards.

3.6.2. Operational Standards

3.6.2.1. One direct private access shall be permitted per parcel. Additional
access may be allowed if the Department determines the additional access causes no safety or operational problems.

3.6.2.2. Direct private access provided pursuant to Section 3.6.2.1 shall allow for all turn movements subject to safety standards.
### Ohio State Highway Access Category Table

<table>
<thead>
<tr>
<th>Cat</th>
<th>Traffic Function</th>
<th>Design Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>High speed, high volume, long distance through traffic for interstate, intrastate, intercity travel; all Interstate and Freeway type facilities are included in this category.</td>
<td>Multi-lane; median; access at interchange; no direct private access allowed.</td>
</tr>
<tr>
<td>II</td>
<td>Relatively high speed, high volume, long distance through traffic for interstate, interregional, intercity, and some intra-city travel. Typically includes Expressways and facilities in an early stage of design, intended to become Category I as funding and priorities allow.</td>
<td>Access at interchange or public street intersection; no direct private access allowed unless property retains deeded rights and then for RT. LT may be allowed if (1) the access does not have potential for signal, and (2) travel circuitry exceeds two miles, and (3) the Department determines that the LT can meet all safety, design and operational standards. This is the highest category allowing at-grade intersections.</td>
</tr>
<tr>
<td>III</td>
<td>Moderate to high speeds, volumes, and distances for interregional, intercity, and intra-city travel. Typically includes rural arterials, high speed urban arterials, and some urban collectors.</td>
<td>No direct private access if property has other reasonable alternative access or opportunity to obtain such access; when allowed, generally for RT only. LT may be allowed if (1) the LT does not have potential for signal, and if (2) the Department determines that the LT does not cause congestion or safety problem or lower the level of service, and (3) alternatives to the LT would cause roadway and intersection operation and safety problems, and (4) the LT does not interfere with operation of street system or access to adjacent properties.</td>
</tr>
<tr>
<td>IV</td>
<td>Balanced service for access and mobility at moderate to high speeds and volumes in rural areas for moderate to short distances and low to moderate speeds and volumes in urban areas providing intercity, intra-city, and intra-community travel. Typically includes rural collectors, low to moderate speed</td>
<td>One direct access allowed per parcel; additional access may be allowed if the Department determines it meets access safety, design, and operational standards. All turn movements may be allowed if the Department determines they meet safety, design, and operational standards.</td>
</tr>
<tr>
<td>V</td>
<td>Low volume rural highways, rural and urban streets and roads. Typically includes routes providing local land access, including frontage roads.</td>
<td>All turning movements allowed subject only to safety considerations.</td>
</tr>
</tbody>
</table>
4. Design Standards and Specifications

4.1. Purpose

4.1.1. Section 4 defines the design standards and specifications the Department uses in conjunction with the Access Categories to protect the functional integrity of state highways, to maintain and preserve traffic mobility, to provide efficient and necessary access, and to protect the public health, safety, and welfare.

4.2. Use of this Section

4.2.1. When an application for access meets the requirements of Section 3, the standards and specifications defined in this section shall be used to locate, design, and construct the access except as may be modified by a TIS. If an access application meets the criteria in Section 3 but is unable to meet the standards and specifications in Section 4, the access permit should be denied unless a variance is authorized in accordance with Section 2.8.

4.3. Data Requirements

4.3.1. The most recent editions of the reference works cited in Section 1.3 shall be used for the design standards applied in this Section 4.

4.3.2. For purposes of analysis under the standards of this section, the DHV estimates for any access shall be based on the anticipated total build out of the development to be served by the access and a twenty year projection of highway volumes.

4.3.3. Typically, analysis of a proposed access will be based on weekday DHV for the AM or PM design hour (whichever is greater) or both. In special circumstances, weekend traffic volumes may be requested for developments that generate significantly larger traffic volumes on the weekend rather than the weekday. The determination will be made by the district Traffic Impact Study Review Team. Reference Section 5.4.

4.3.4. Speed refers to the posted legal speed at the access location at the time of permit application.

4.3.5. All average daily traffic or ADT and DHV directional distribution shall be allocated in a fashion acceptable to the reviewing authority.

4.3.6. When land use for the access connection generates 100 or more trip ends for the peak hour or when the Department considers it necessary or desirable to determine the safe, efficient operation of the access connection, a Traffic Impact Study (TIS) as outlined in Section 5 shall be required.
4.4. Access Category Charts

The following charts graphically represent the standards and specifications applied to various design features for each of the Access Categories. For all access categories, where two roads of different access levels intersect, the restrictions of the higher level roadway will apply along the other roadway for a specified distance from the intersection as follows:

- Intersecting a Category I or II roadway -
  - At ramp intersections - 1000 ft/300 m
  - At terminal intersections - 1000 ft/300 m
- Intersecting a Category III roadway - 500 ft/150 m
- Intersecting a Category IV roadway - 250 ft/75 m

The areas at the intersections with Category I or II roadways are usually limited access rights-of-way, and breaking the access restriction requires the approval of the Director and, if applicable, FHWA.

The higher restrictions on roads intersecting a Category III or IV roadway should be in effect only if the major road is classified as a "High Emphasis" section.

The following volumes shall be used to define driveway access usage for the purposes of the Access Category Charts.

- A Minimum Use Driveway is a driveway with 5 trip ends or less in the peak hour such as single family residence driveways, a field approach, or field access.
- A Low Volume Driveway is a driveway with more than 5 but less than 100 trip ends in the peak hour such as a general office building with less than 100 employees, a new car dealership, or a day-care center.
- A Medium Volume Driveway is a driveway with 100 but less than 200 trip ends in the peak hour such as a drive-through bank or a convenience market with gas pumps.
- A High Volume Driveway is a driveway with 200 or more trip ends in the peak hour such as a fast-food restaurant with drive-through or a discount store.
### 4.4.1. Access Category I

<table>
<thead>
<tr>
<th>Access Feature</th>
<th>Intch</th>
<th>Intersect</th>
<th>HV Dr</th>
<th>MV Dr</th>
<th>LV Dr</th>
<th>MU Dr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permitted</td>
<td>Yes</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Spacing</td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Traffic Control</td>
<td>Ramps</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<td>Traffic Movement</td>
<td>Full</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Right Turn Lane</td>
<td>Ex Decel</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Left Turn Lane</td>
<td>Ex Decel</td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Right Accel. Lane</td>
<td>Ent Accel</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Left Accel. Lane</td>
<td>Ent Accel</td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**KEY**

- Intchg = Interchange
- Intersect = Intersection
- HV Dr = High Volume Driveway
- MV Dr = Medium Volume Driveway
- LV Dr = Low Volume Driveway
- MU Dr = Minimum Use Driveway
- N/A = Not Applicable
- N/U = Not Used
- Full = Full Movement
- Ex Decel = Exit Deceleration
- Ent Accel = Entrance Acceleration
- Req = Required

(A) The following are recommended spacings for interchanges:

- two miles (3.0 km) in urban areas;
- four miles (6.0 km) in suburban areas;
- eight miles (12.0 km) in rural areas;
- one mile (1.6 km) minimum in all cases.
## 4.4.2. Access Category II

<table>
<thead>
<tr>
<th>Access Feature</th>
<th>Intch</th>
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<th>HV Dr</th>
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<th>LV Dr</th>
<th>MU Dr</th>
</tr>
</thead>
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<tr>
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<td>Yes</td>
<td>N/A (R)</td>
<td>N/A (D)</td>
<td>N/A (D)</td>
<td>N/A (Q) (V)</td>
</tr>
<tr>
<td>Spacing</td>
<td>(A)</td>
<td>1 mi (B)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Traffic Control</td>
<td>Ramps</td>
<td>Signal (C)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Traffic Movement</td>
<td>Full</td>
<td>Full</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A (Q) (V)</td>
</tr>
<tr>
<td>Right Turn Lane</td>
<td>Ex Decel</td>
<td>Req</td>
<td>Req</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Left Turn Lane</td>
<td>Ex Decel</td>
<td>Req</td>
<td>Req</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Right Accel. Lane</td>
<td>Ent Accel</td>
<td>N/U</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Left Accel. Lane</td>
<td>Ent Accel</td>
<td>N/U</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### KEY

- **Intchg** = Interchange
- **Intersect** = Intersection
- **HV Dr** = High Volume Driveway
- **MV Dr** = Medium Volume Driveway
- **LV Dr** = Low Volume Driveway
- **MU Dr** = Minimum Use Driveway
- **N/A** = Not Applicable
- **N/U** = Not Used
- **Full** = Full Movement
- **Ex Decel** = Exit Deceleration
- **Ent Accel** = Entrance Acceleration
- **Req** = Required

(A) The following are recommended spacings for interchanges:

- two miles (3.0km) in urban areas;
- four miles (6.0km) in suburban areas;
- eight miles (12.0km) in rural areas;
- one mile (1.6km) minimum in all cases.

(B) ½ mile (0.8km) minimum allowed when there is no reasonable alternative access to the general street system.

(C) The need for signals is to be determined by warrant analysis using the OMUTCD.

(D) Medium Volume and Low Volume drives shall normally not be permitted. When a property retains a deeded point of access whose use will generate more than 5 but less than 200 trip ends in the peak hour, the Department should give strong consideration to acquiring the property's rights of access in order to maintain the operational standards of a Category II highway. If the Department decides that acquisition is not a feasible option, Medium Volume and Low Volume drives on a Category II highway will be subject to the same conditions as Category III, either High or Low Emphasis, as determined by the Department.

(Q) No direct private access shall be permitted unless the property retains deeded rights and has no other reasonable
alternative access to the general street system. In such cases, access shall be limited to right-in, right-out only. Left turn movement may be permitted if (1) the access does not have the potential for signalization, and (2) travel circuity in one direction exceeds two miles (3.2km), and (3) the Department determines that the left turn movement can meet all safety, design, and operational standards.

(R) High Volume Drives shall normally not be permitted unless the access connection meets criteria for public intersections, and then only with the approval of the Director and FHWA

(V) Left turn movements shall not be permitted if a median is already established and the opening of the median would not provide, in the determination of the Department, any significant operational or safety benefits to the general public or would be counter to the purpose of the median construction and the continued function of the highway at the category assigned to it.
### 4.4.3. Access Category III

<table>
<thead>
<tr>
<th>Access Feature</th>
<th>Intchg</th>
<th>Intersect</th>
<th>HV Dr</th>
<th>MV Dr</th>
<th>LV Dr</th>
<th>MU Dr</th>
<th>MV Dr</th>
<th>LV Dr</th>
<th>MU Dr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permitted*</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>(I)</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Spacing</td>
<td>(A)</td>
<td>(B)</td>
<td>½ mi (H)</td>
<td>SSD (W)</td>
<td>(I)</td>
<td>SSD (W)</td>
<td>SSD (W)</td>
<td>SSD (W)</td>
<td>SSD (W)</td>
</tr>
<tr>
<td>Traffic Control</td>
<td>Ramps</td>
<td>Signal</td>
<td>Signal</td>
<td>Stop</td>
<td>(I)</td>
<td>Stop</td>
<td>Stop</td>
<td>Stop</td>
<td>Stop</td>
</tr>
<tr>
<td>Traffic Movement</td>
<td>Full</td>
<td>Full</td>
<td>Full</td>
<td>Ri Ro</td>
<td>(I)</td>
<td>Ri Ro (S)</td>
<td>Full (V)</td>
<td>Full (V)</td>
<td>Full (V)</td>
</tr>
<tr>
<td>Right Turn Lane</td>
<td>Ex Decel</td>
<td>(K)</td>
<td>(K)</td>
<td>(K)</td>
<td>(I)</td>
<td>N/A</td>
<td>(K)</td>
<td>(K)</td>
<td>N/A</td>
</tr>
<tr>
<td>Left Turn Lane</td>
<td>Ex Decel</td>
<td>(K)</td>
<td>(K)</td>
<td>N/A</td>
<td>(I)</td>
<td>N/A</td>
<td>(K)</td>
<td>(K)</td>
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</tr>
<tr>
<td>Right Accel. Lane</td>
<td>Ent Accel</td>
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<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
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</tr>
<tr>
<td>Left Accel. Lane</td>
<td>Ent Accel</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
</tr>
</tbody>
</table>

* For driveways refer to Section 3.4.2.3

**KEY**

- Intchg = Interchange
- Intersect = Intersection
- HV Dr = High Volume Driveway
- MV Dr = Medium Volume Driveway
- LV Dr = Low Volume Driveway
- MU Dr = Minimum Use Driveway
- Ri, Ro = Right in, Right out
- N/U = Not Used
- Ex Decel = Exit Deceleration
- Ent Accel = Entrance Acceleration
- Req = Required
- SSD = Stopping Sight Distance

(A) The following are recommended spacings for interchanges:

- two miles (3.0km) in urban areas;
- four miles (6.0km) in suburban areas;
- eight miles (12.0km) in rural areas;
- one mile (1.6km) minimum in all cases.

(B) One mile (1.6 km) spacing is recommended on rural highway sections, and one-half mile (0.8km) spacing is allowed when there is no reasonable alternative access to the general street system. One-half mile spacing is recommended on urban highway sections, and one-quarter mile spacing is allowed when there is no reasonable alternative access to the general street system.

(C) The need for signals is to be determined by warrant analysis using the OMUTCD. High Volume drives
in High Emphasis Areas that do not meet signal warrants shall be subject to the same restrictions as Medium Volume drives in High Emphasis Areas and shall be restricted to Ri,Ro movements from the driveway. High Volume drives in Low Emphasis Areas that do not meet signal warrants may be denied full movement and restricted to Ri,Ro if traffic volumes and conditions on the highway would make the full movement operation unsafe.

(E) "High Emphasis Access Management" is defined as the application of a higher set of access standards and criteria to a section of highway classified as either a Category III or Category IV in order to provide that section more protection. High Emphasis Access Management will be applied to those highway sections classified as Access Categories III and IV that are in areas identified by the Department as requiring a higher level of protection and access management based on the factors in Section 2.2.2, and may include locations within one mile of corporation limits or in any area which has been zoned for commercial or high density residential development.

(F) "Low Emphasis Access Management" standards and criteria will apply to all highway sections classified as Category III and Category IV roadways and not included in areas as described in Note E. When any of the conditions in Note E become applicable, the highway section will be reclassified as a "High Emphasis Access Management" area.

(H) If one-half mile (0.8km) spacing cannot be achieved, then the restrictions of the Medium Volume Drives will apply.

(I) Low Volume drives are discouraged on high speed (greater than 50mph or 88 kph) roadways identified as High Emphasis Areas. Where there is an opportunity to do so on high speed roadways, Low Volume drives should be consolidated and combined using appropriate means such as service roads, cross easements, and joint access to reduce the number of access points. Low Volume drives generating trips ends in the low end of the range (more than 5 but less than 50 trip ends in the peak hour) defined in Section 4.4 may be treated as Minimum Use driveways. Low Volume drives generating trip ends in the high end of the range (from 50 but less than 100 trip ends in the peak hour) defined in Section 4.4 may be treated as Medium Volume drives.

(K) The need for auxiliary turn lanes will be determined using the Auxiliary Lane Graphs in Section 4.5. Their design, if required, will be based on Figures 401-7 and 401-8 of the Location and Design Manual.

(S) No direct private access will be permitted if the property has other reasonable access or opportunity to obtain such access. If allowed, the access will generally be restricted to right-in, right-out only. A left turn movement may be permitted if (1) the left turn movement does not have the potential for signalization, and (2) if the Department determines that the left turn movement does not cause congestion or safety problems or lower the level of service, and (3) alternatives to the left turn would cause roadway and intersection operation and safety problems, and (4) does not interfere with operation of the street system or access to adjacent properties.

(V) Left turn movements shall not be permitted if a median is already established and the opening of the median would not provide, in the determination of the Department, any significant operational or safety benefits to the general public or would be counter to the purpose of the median construction and the continued function of the highway at the category assigned to it.

(W) Driveway spacing will be determined using values from the following table and as best determined by existing conditions or limitations.
<table>
<thead>
<tr>
<th>Posted Speed</th>
<th>Minimum Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 mph</td>
<td>155'/50 m</td>
</tr>
<tr>
<td>30 mph</td>
<td>200'/65 m</td>
</tr>
<tr>
<td>35 mph</td>
<td>250'/80 m</td>
</tr>
<tr>
<td>40 mph</td>
<td>305'/95 m</td>
</tr>
<tr>
<td>45 mph</td>
<td>360'/110 m</td>
</tr>
<tr>
<td>50 mph</td>
<td>425'/130 m</td>
</tr>
<tr>
<td>55 mph</td>
<td>495'/150 m</td>
</tr>
<tr>
<td>60 mph</td>
<td>570'/175 m</td>
</tr>
<tr>
<td>65 mph</td>
<td>645'/200 m</td>
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</tbody>
</table>
4.4.4. Access Category IV

<table>
<thead>
<tr>
<th>Access Feature</th>
<th>Intchg</th>
<th>Intersect</th>
<th>HV Dr</th>
<th>MV Dr</th>
<th>LV Dr</th>
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<th>MV Dr</th>
<th>LV Dr</th>
<th>MU Dr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permitted*</td>
<td>N/U</td>
<td>Yes</td>
<td>Yes (W)</td>
<td>Yes (W)</td>
<td>(I) (W)</td>
<td>Yes (W)</td>
<td>Yes (W)</td>
<td>Yes (W)</td>
<td>Yes (W)</td>
</tr>
<tr>
<td>Spacing</td>
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<td>(B)</td>
<td>1/4 mi</td>
<td>(N)</td>
<td>(N)</td>
<td>(N)</td>
<td>(N)</td>
<td>(N)</td>
<td>(N)</td>
</tr>
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<td>Traffic Control</td>
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<td>Signal (C)</td>
<td>Signal (C)</td>
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<td>Stop</td>
<td>Stop</td>
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<tr>
<td>Traffic Movement</td>
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<td>Full (V)</td>
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<td>(K)</td>
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<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
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<tr>
<td>Left Accel. Lane</td>
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<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
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</tr>
</tbody>
</table>

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- Intersect = Intersection
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- LV Dr = Low Volume Driveway
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- N/A = Not Applicable
- N/U = Not Used
- Full = Full Movement
- Ex Decel= Exit Deceleration
- Ent Accel = Entrance Acceleration
- Req = Required

(B) One mile (1.6 km) spacing is recommended on rural highway sections, and one-half mile spacing is allowed when there is no reasonable alternative access to the general street system. One-half mile spacing is recommended on urban highway sections, and one-quarter mile spacing is allowed when there is no reasonable alternative access to the general street system.

(C) The need for signals is to be determined by warrant analysis using the OMUTCD. High Volume drives that do not meet signal warrants may be denied full traffic movement from the driveway and turn movements restricted to Ri, Ro if traffic volumes and conditions on the highway would make the full movement operation unsafe.

(E) "High Emphasis Access Management" is defined as the application of a higher set of access standards and criteria to a section of highway classified as either a Category III or Category IV in order to provide that section more protection. High Emphasis Access Management will be applied to those highway sections classified as Access Category III and Category IV that are in areas identified by the Department as requiring a higher level of protection and access management based on the factors in Section 2.2.2, and may include locations within 1 mile of corporation limits or in any area which has been zoned for commercial or high density residential development.
(F) “Low Emphasis Access Management” standards and criteria will apply to all highway sections classified as Category III and Category IV roadways and not included in areas as described in Note E. When any of the conditions in Note E become applicable, the highway section will be reclassified as a High Emphasis area.

(G) If ¼ mile (0.4 km) spacing cannot be achieved, then the restrictions of the Medium Volume Drives will apply.

(I) Low Volume drives are discouraged on high speed (greater than 50mph or 88 kph) roadways identified as High Emphasis Areas. Where there is an opportunity to do so on high speed roadways, Low Volume drives should be consolidated and combined using appropriate means such as service roads, cross easements, and joint access to reduce the number of access points. Low Volume drives generating trips ends in the low end of the range (more than 5 but less than 50 trip ends in the peak hour) defined in Section 4.4 may be treated as Minimum Use driveways. Low Volume drives generating trip ends in the high end of the range (from 50 and but less than 100 trip ends in the peak hour) defined in Section 4.4 may be treated as Medium Volume drives.

(K) The need for auxiliary turn lanes will be determined using the Auxiliary Lane Graphs in Section 4.5. Their design, if required, will be based on Figures 401-7 and 401-8 of the Location and Design Manual.

(L) Left turn out access will not be allowed on multi-lane roadways where the turning vehicle must cross more than 3 lanes of through traffic (not including a two-way left turn lane).

(N) Driveway spacing will be determined using values from the following table and as best determined by existing conditions or limitations.

<table>
<thead>
<tr>
<th>Posted Speed</th>
<th>Minimum Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 mph</td>
<td>155'/50 m</td>
</tr>
<tr>
<td>30 mph</td>
<td>200'/65 m</td>
</tr>
<tr>
<td>35 mph</td>
<td>250'/80 m</td>
</tr>
<tr>
<td>40 mph</td>
<td>305'/95 m</td>
</tr>
<tr>
<td>45 mph</td>
<td>360'/110 m</td>
</tr>
<tr>
<td>50 mph</td>
<td>425'/130 m</td>
</tr>
<tr>
<td>55 mph</td>
<td>495'/150 m</td>
</tr>
<tr>
<td>60 mph</td>
<td>570'/175 m</td>
</tr>
<tr>
<td>65 mph</td>
<td>645'/200 m</td>
</tr>
</tbody>
</table>

(T) Left turn movements may be prohibited if, in the opinion of the Department, such movements cannot meet safety, design, and operational standards.

(V) Left turn movements shall not be permitted if a median is already established and the opening of the median would not provide, in the determination of the Department, any significant operational or safety benefits to the general public or would be counter to the purpose of the median construction and the continued function of the highway at the category assigned to it.

(W) One direct private access shall be permitted per parcel or contiguous parcels under common ownership. Additional access maybe permitted if the Department determines that an additional access (1) would not adversely affect the safety and operation of the highway, and (2) is necessary for the safe and efficient use of the property, and (3) would not adversely affect access to adjacent properties.
4.4.5. Access Category V

Local or Frontage Road access standards are presented as a guideline for local agencies. Normally, the Department will not be involved in establishing or enforcing access control on local roads. When a new frontage road to handle local access is constructed in conjunction with a roadway project where access control is being upgraded on a nearby route, these standards will be followed for design purposes.

<table>
<thead>
<tr>
<th>Access Feature</th>
<th>Intchg</th>
<th>Intersect</th>
<th>HV Dr</th>
<th>MV Dr</th>
<th>LV Dr</th>
<th>MU Dr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permitted</td>
<td>N/U</td>
<td>Yes</td>
<td>Yes (W)</td>
<td>Yes (W)</td>
<td>Yes (W)</td>
<td>Yes (W)</td>
</tr>
<tr>
<td>Spacing</td>
<td>N/U</td>
<td>¼ mi/0.4 km</td>
<td>¼ mi/0.4 km</td>
<td>SSD</td>
<td>SSD</td>
<td>SSD</td>
</tr>
<tr>
<td>Traffic Control</td>
<td>N/U</td>
<td>Signal (C)</td>
<td>Signal (C)</td>
<td>Stop</td>
<td>Stop</td>
<td>Stop</td>
</tr>
<tr>
<td>Traffic Movement</td>
<td>N/U</td>
<td>Full</td>
<td>Full</td>
<td>Full</td>
<td>Full</td>
<td>Full</td>
</tr>
<tr>
<td>Right Turn Lane</td>
<td>N/U</td>
<td>(K)</td>
<td>(K)</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
</tr>
<tr>
<td>Left Turn Lane</td>
<td>N/U</td>
<td>(K)</td>
<td>(K)</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
</tr>
<tr>
<td>Right Accel. Lane</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
</tr>
<tr>
<td>Left Accel. Lane</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
<td>N/U</td>
</tr>
</tbody>
</table>

**KEY**

Intchg = Interchange
Intersect = Intersection
HV Dr = High Volume Driveway
MV Dr = Medium Volume Driveway
LV Dr = Low Volume Driveway
MU Dr = Minimum Use Driveway
SSD = Stopping Sight Distance
N/A = Not Applicable
N/U = Not Used
Full = Full Movement
Ex Decel= Exit Deceleration
Ent Accel = Entrance Acceleration
Req = Required

(C) The need for signals is to be determined by warrant analysis using the OMUTCD.

(K) Auxiliary turn lanes should be provided when deemed necessary based on capacity analysis procedures. Their design, if required, will be based on Figures 401-7 and 401-8 of the *Location and Design Manual*.

(W) One direct private access shall be permitted per parcel or contiguous parcels under common ownership. Additional access maybe permitted if the Department determines that an additional access (1) would not adversely affect the safety and operation of the highway, and (2) is necessary for the safe and efficient use of the property, and (3) would not adversely affect access to adjacent properties.
4.5. Auxiliary Lane Graphs

The Auxiliary Lane Graphs provided at the end of this section are used to determine when a separate turn lane is needed for unsignalized access points.

Category I

4.5.1. Access to highways classified as Category I is provided only at interchanges. Figures 404-2A, -2B, -3A, -3B, -4A, and -4B in the Location and Design Manual provide details for various designs. Section 404, Volume 1, of the Location and Design Manual provides additional guidance in application.

Category II

4.5.2. When interchanges are provided on Category II highways, the requirements are the same as those for Category I. When at-grade intersections are allowed, deceleration lanes for vehicles turning into the access are required in order to separate the turning vehicles from the through traffic stream. Section 401.7 and Figures 401-5 through 401-10 of the Location and Design Manual provide design guidance for installation of these lanes.

4.5.3. Acceleration lanes are not provided for at-grade intersections.

Category III and IV

4.5.4. Turn Lane Warrants

Left Turn Lane Warrants: Two-lane Highways

Two graphs are provided for Left Turn Warrants on two-lane highways: one for high-speed conditions (>40 mph or 70 kph posted speed) and one for low-speed conditions (<=40 mph or 70 kph posted speed).

The curve indicates the turn percentage. Actual turn percentage for the case being analyzed should be interpolated using the provided curves as a guide. Any plot points that lie beyond the provided curves should likewise be interpolated to determine if the turn lane is warranted. Please note that for 2-lane highways, the advancing traffic volume includes the left-turn volume.

Left Turn Lane Warrants: Four-lane Highways

Warrants for left turn lanes are based solely on left-turning vehicle volume and the opposing traffic volume. Two curves are provided for divided and undivided four-lane highways. A highway is considered divided as long as median width is adequate to store a left-turning vehicle without impeding the progress of vehicles in the adjacent through lane.

Right Turn Lane Warrants
Separate graphs are provided for right turns for a two-lane and a four-lane highway at 40 mph/70 kph or less and for a two-lane and a four-lane highway over 40 mph/70 kph.

The curve indicates the turn percentage. Actual turn percentage for the case being analyzed should be interpolated using the provided curves as a guide. Any plot points that lie beyond the provided curves should likewise be interpolated to determine if the turn lane is warranted.

**Category V**

4.5.5. Auxiliary lanes for turning vehicles should only be provided when deemed necessary through capacity analysis procedures. When required, their design should be in accordance with Section 401.7 of the *Location & Design Manual*. Acceleration lanes are not used.
2-Lane Highway Left Turn Lane Warrant

(<=40 mph or 70 kph Posted Speed)

[Graph showing the relationship between advancing traffic, opposing traffic, and left turn percentage required.

Legend:
- Left Turn Lane Required
- Left Turn Lane Not Required

Notes:
**Includes Left Turns
**There is no minimum number of turns

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State Highway Access Management Manual

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2-Lane Highway Left Turn Lane Warrant
(>40 mph or 70 kph Posted Speed)

Advancing Traffic* (d/hv)

0 100 200 300 400 500 600 700 800 900 1000 1100 1200

Opposing Traffic (d/hv)

0% 1% 2% 5% 10% 15% 30%

Left Turn Lane Not Required

Left Turn Lane Required

*Includes Left Turns
2-Lane Highway Right Turn Lane Warrant

\[ \leq 40 \text{ mph or } 70 \text{ kph Posted Speed} \]
2-Lane Highway Right Turn Lane Warrant
> 40 mph or 70 kph Posted Speed

* Includes Right Turns

Right Turn Lane
Required

Right Turn Lane
Not Required

Advancing Traffic* (dhv)

Right Turning Traffic (dhv)
4 Lane Highway Right Turn Lane Warrant
(<=40 mph or 70 kph Posted Speed)
4 Lane Highway Right Turn Lane Warrant
(>40 mph or 70 kph Posted Speed)

Right Turning Traffic (dhv)

Advancing Traffic Volume (dhv)

Right Turn Lane Required

Right Turn Lane Not Required
4.6. Driveway Geometry

A driveway is a point of access connecting an adjacent property to the public roadway. Driveway design is dependent upon several factors. The driveway type will determine what type of vehicles are to be considered in the design which, in turn, affects the access width along with the radius and/or flare dimensions. The volume of traffic using the drive will determine the number of lanes required and whether right or left turns into and out of the access are required. Restrictions on right or left turns will also affect the design.

4.6.1. Driveway Types

4.6.1.1. Residential - A driveway providing access to a single family residence or duplex.

4.6.1.2. Residential, Multiple - A driveway providing common access to more than one family residence or duplex, or to an apartment building containing not more than four dwelling units.

4.6.1.3. Commercial - A driveway providing access to an office, business, retail or institutional building, or residential facility having five or more dwelling units. These establishments are customarily serviced by trucks as an incidental rather than a principal driveway use. Industrial plant driveways whose primary function is to serve administrative or employee parking lots are considered commercial driveways.

4.6.1.4. Farm/Field - A driveway providing access to an agricultural tract of land.

4.6.1.5. Industrial/Retail - A driveway directly serving substantial numbers of truck movements (equal to or greater than 10 trucks per day) to and from loading docks of an industrial facility, warehouse, or truck terminal. A centralized retail development, such as a community or regional shopping center, may have one or more driveways, specially designed, signed and located to provide access for trucks. These also are classified as industrial driveways.

4.6.2. Driveway Location

4.6.2.1. Driveways shall be located in accordance with applicable sight distance requirements and the spacing requirements of Section 4.4.

4.6.2.2. The effective width will vary with the angle of the driveway and shall be restrictive enough to discourage maneuvers that would cause conflicts. Two-way driveways shall intersect the highway at an intersection angle between 70° and 90°. An angle less than 70° will not be permitted on new two-way driveways. One-way operation driveways (right in only or right out only) shall not have an angle less than 45°.

4.6.2.3. Any access with a gate shall be designed so that the longest vehicle can completely clear the traveled way when the gate is closed and as it is opened. A gate may not be constructed and/or located within the right-of-way of the highway.

4.6.2.4. Driveways shall be located where they will not create an offset intersection opposite an existing street, highway, or major commercial driveway.
4.6.3. Driveway Dimensions

Driveway widths and turning radii are determined by the number and use of lanes on the driveway and the design vehicle chosen for the driveway. The width and radii of the driveway shall permit vehicles to enter and exit with a minimum of interference to through traffic, yet be restrictive enough to discourage erratic maneuvers.

4.6.3.1. The following table lists recommended design vehicles and widths and radii for various types of driveways

**Recommended Basic Driveway Dimension Guidelines (ft/m)**

<table>
<thead>
<tr>
<th></th>
<th>Farm/Field</th>
<th>Residential</th>
<th>Commercial SU-30</th>
<th>Commercial WB-50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal Width</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>One-way</td>
<td>Min</td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>12/3.6</td>
<td>14/4.2</td>
</tr>
<tr>
<td>Two-way</td>
<td>14/4.2</td>
<td>20/6.0</td>
<td>12/3.6</td>
<td>24/7.2</td>
</tr>
<tr>
<td>Right-Turn Radius</td>
<td>25/7.5</td>
<td>35/10.5</td>
<td>15/4.5</td>
<td>25/7.5</td>
</tr>
</tbody>
</table>

* The chart assumes one lane for ingress and one lane for egress. Additional lanes will increase width requirement.

4.6.3.2. Driveway widths shall be measured exclusive of radii, flare sections, or transitions. The distance shall be measured perpendicular to the centerline of the driveway at the throat.

4.6.3.3. When a public street, road, or highway, or any access intended to become a public street, road, or highway intersects with a state highway, the Department's design criteria shall be used within the intersection area which is defined as that portion of the intersection located within sixty feet (18m) of the edge of the mainline pavement. Local government design criteria may be used outside of the defined intersection area.

4.6.3.4. Driveways that enter a public roadway at traffic signals shall have the number of lanes as determined by a capacity analysis.

4.6.3.5. In applying the turning radius values from the chart, it should be noted that the radius used at a given driveway is meaningful only when related to the width of the throat. When choosing a radius, the designer must take into consideration the turning limitations of the design vehicle and the driveway width. To reduce turning conflicts and encroachments on traveled lanes and the opposing driveway lanes, turning templates shall be used to evaluate all turning movements and to ensure adequate radius-throat width combinations. The design vehicle's swept path shall be the minimum.

4.6.3.6. As an example, using the values from the chart, a commercial two-way drive with a 35 foot (10.5m) radius would have a minimum width of 26 feet (7.8m). However, if the radius were decreased, a wider drive width would be required to accommodate the turning path of a SU-30 vehicle.

4.6.3.7. A turning radius of less than 15 feet (4.5m) may be permitted on a
Category V highway.

4.6.3.8. Driveway radii may be reduced on any roadway with on street parking. The turning radius would be measured from the edge of the through lane.

4.6.3.9. Radii drive return treatments (Std. Dwg. BP-4.1, Type 1) are preferred; however, flared drive treatments (Std. Dwg. BP-4.1, Type 2) are acceptable for residential and light commercial driveways.

4.6.4. Driveway Islands

In some situations, it is desirable to control or prohibit certain movements through the use of median islands or channelizing islands. Median islands divide the ingress and egress movements and are used to prevent cross movement of internal traffic near the entrance approach of a driveway (See ODOT Location and Design Manual, Volume 1, Section 803.6 for reference and diagrams). Channelizing islands are used to control and direct turning movements on an intersection approach.

4.6.4.1. Median Islands

A median island is a curbed island which prevents cross movement of internal traffic near the driveway approach. It is necessary to ensure that ingress and egress traffic has the necessary maneuvering space for turns at the intersection.

4.6.4.1.1 Median Islands shall be at least 6 feet wide (1.8 m).

4.6.4.1.2. All median islands shall be offset a minimum of 12 feet (3.6m) from the edge line of the intersecting road. All median islands shall have a minimum length of 100 feet (30 m).

4.6.4.1.3. The nose of a median island shall taper in height from 2” to 6” in 4 feet (1.2 m) or greater.

4.6.4.2. Channelizing Islands

Channelizing islands are used to control and direct traffic movements on an intersection approach. A properly designed channelizing island will designate the correct turning path and define the merge area thus reducing conflicting movements (See Figures 1a - 1d). The geometry shall physically define the permitted movements and block the prohibited movements. Careful consideration should be made in design of the island to accommodate design vehicles likely to use the driveway.

The island diagrams are intended to provide a standard practice for design of such islands on highways under State jurisdiction. While not every possible case was developed here, they do show recommended throat widths for passenger car and truck usages, relationship between the island with curbed and uncurbed highways, three curve radius to maximize the turning radius while minimizing overall width of the drive approach, and islands sized to balance their purpose of discouraging prohibited movements with minimizing space requirements.

The diagrams are also available on the Office of Urban & Corridor Planning
website. **Figure 1a**, entitled "Single Unit Truck & Passenger Car Designs" is intended for use in restricted right-of-way conditions or when truck usage is unlikely or prohibited. **Figure 1b**, entitled "Single Unit Truck & Minimum WB-50 Truck Designs" is intended for normal or general usage where occasional trucks may enter or exit. **Figure 1c**, entitled "WB-50 Truck Design" is intended for predominant or exclusive truck use. **Figure 1d**, entitled "Typical Islands with Permitted Left Turns" is intended to show how the islands can be modified to enable left turn movements from exiting vehicles. The islands can be similarly be modified to permit left-in movements using the same principle.

### 4.6.4.2.1. Channelizing Islands

Channelizing Islands shall be considered on arterials without a median where left turns are being restricted and on one-way streets to discourage wrong way turns.

### 4.6.4.2.2. Channelizing Islands

Channelizing Islands shall be at least 50 square feet (5 sq. m.) and preferably 100 square feet (10 sq. m.).

### 4.6.4.2.3. All Channelizing Islands

All Channelizing Islands shall be offset at least 4 feet (1.2 m) from the edge of the traveled lane to the face of curb or the width of the paved curbed shoulder whichever is greater on high-speed roadways or where the approach roadway is uncurbed. (See Figure 2)

### 4.6.6. Driveway Profile

The profile of a driveway can greatly affect the operation of a driveway. It shall be designed to provide a smooth and safe transition for its users.

#### 4.6.6.1. Maximum Grade

The maximum grade for commercial and industrial driveways shall be 8%; however, grades of 1-3% are preferred for major driveways.

#### 4.6.6.2. Residential Driveways

For residential driveways, a maximum grade of 10% will be allowed with a 3-6% range preferred.

#### 4.6.6.3. Grade Breaks and Vertical Curves

All grade breaks and vertical curves shall accommodate the design vehicles expected to use the driveway.

#### 4.6.6.4. Drive Profiles

Drive profiles on uncurbed roadways shall slope down and away from the pavement edge at the same slope as the graded shoulder.

### 4.6.7. Driveway Cross Slope

Within the clear zone, the side slopes in relation to the driveway shall be consistent with the grading of the facility. Median crossovers on Interstates/Freeways shall use a 10:1 slope. On highways where the roadside ditch would normally intersect the driveway, the pipe inlet/outlet shall be mitered to conform to the slope or else the ditch relocated beyond the clear zone.

### 4.6.8. Driveway Pavement

For residential and field driveways, the minimum build-up shall be in accordance with the **Location and Design Manual**. For commercial and industrial drives the minimum build-up for the entire driveway within the public right-of-way shall conform to the **Location and Design Manual**, Section 805.
Figure 1a. Designs for Channelizing Islands - Single Unit Truck and Passenger Car Designs
Figure 1b. Designs for Channelizing Islands - Single Unit and Minimum WB-50 Truck Designs
Figure 1c. Designs for Channelizing Islands - WB-50 Truck Designs
5. Traffic Impact Study (TIS)

5.1. Need for Traffic Impact Study

5.1.1. The District Office determines the need for a Traffic Impact Study during its initial review of an access request. The District Office may make this decision during a preliminary meeting with the applicant as discussed in Section 2.3.6 or during the review of the permit application as discussed in Section 2.4.7.

5.1.2. An applicant may also initiate a Traffic Impact Study to determine the traffic and operational effects of the access proposal and the nature and extent of improvements needed to mitigate the impacts to the highway.

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.

5.2. Purpose of the Traffic Impact Study

5.2.1. Department's request for a TIS or the applicant's performance of a TIS does not presume the subsequent approval of an access request or issuance of an access permit by the Department.

Issuance of a permit is based on the results of the TIS showing to the Department's satisfaction that the access proposal or its modification will not degrade the traffic operation and function of the highway, that the improvements required by the proposal or its modification are consistent with the Manual, and that they are feasible and implementable.

5.2.2. The objectives of a TIS are to:

- Determine whether or not the access request can meet the standards and requirements of the State Highway Access Management Manual and other applicable regulations.

- Determine the appropriate location, spacing, and design of the access connection(s) necessary to mitigate the traffic and operational impacts on the highway and permissible under the highway's assigned access category and in accordance with applicable requirements and standards.
• Determine the need for any improvements to the adjacent and nearby roadway system to maintain a satisfactory level of service and safety and to protect the function of the highway system while providing appropriate and necessary access to the proposed development.

• Assure that the internal traffic circulation of the proposed development is designed to provide safe and efficient access to and from the adjacent and nearby roadway system consistent with the purpose of the Manual.

5.3. Design Years

The following Design Year guidelines are established.

5.3.1. For any proposed development, the Design Year Horizon shall be twenty years regardless of the size of the proposed development.

5.3.2. Estimates of traffic volumes shall be based on weekday traffic for locations at which weekday employment predominates. Retail development may include weekend traffic volumes in the estimates (Reference Section 4.3.3.)

5.4. Traffic Impact Study Review Team

5.4.1. The District Deputy Director shall appoint a review team to serve as the coordinating and review unit for all Traffic Impact Studies. The review team should include representatives from the Highway Management Administrator’s office and the Transportation Planning and Program Administrator's office and any other Offices as deemed appropriate by the District Deputy Director.

5.4.2. Where the proposed site is located within an MPO limits, the MPO should be represented.

5.4.3. The Office of Traffic Engineering should be consulted and involved in a concurrent review of Traffic Impact Studies involving traffic control signal agreements and plans for traffic control devices. The access permit shall not be approved until all pertinent agreements such as roadway agreements, traffic control signal agreements, and plans for traffic control devices have been properly reviewed and approved by the Department.

5.5. Review Procedures

5.5.1. The District Traffic Impact Study Review Team shall evaluate if the access proposal is permissible under the highway's assigned access category and consistent with the standards and requirements of the State Highway Access Management Manual. If the access usage meets the conditions for a TIS, the Review Team shall analyze the appropriate location, spacing, and design of the access connection(s).
5.5.2. If a preliminary meeting as described in Section 2.3.6 was not held with the applicant, the District Traffic Impact Study Review Team may meet with the applicant and appropriate local officials to review the proposal and determine the need and/or define the scope of a TIS in accordance with Section 5.6.

5.5.3. The District Traffic Impact Study Review Team shall recommend alternative access schemes or modifications to the access proposal consistent with the operational and safety requirements of the highway.

5.5.4. The District Traffic Impact Study Review Team shall determine if any proposed access connections are located within or near a high accident location identified by the Department's Highway Safety Program or within or near any programmed projects and shall evaluate the impacts of all access alternatives in the context of these locations.

5.5.5. The District Traffic Impact Study Review Team shall forward all access alternatives, including the applicant's proposal, to the Office of Technical Services (OTS) who will either review or establish traffic growth rates for the adjacent limited access roadway system. For non-limited access facilities the District may provide or approve growth rates for that roadway system.

5.5.6. After traffic growth rates are obtained or approved, the District Traffic Impact Study Review Team shall give written notification to the applicant that a traffic impact study must be completed before a valid access permit can be approved and issued.

5.6. Traffic Impact Study Requirements

5.6.1. The minimum geographical study area to be analyzed in a TIS may include all site access drives, adjacent roadways, major intersections, and the first existing intersection with a numbered public route in each direction (excluding any facilities to be dedicated as part of the development). Adjustment of this area shall be accommodated as appropriate to the development size, specific site conditions, and/or local and regional issues and policies, as determined by the District TIS Review Team.

5.6.2. The TIS shall examine "before and after" conditions in order to evaluate traffic impacts associated with the proposed development. The impacts of all access alternatives on highway capacity and throughput shall be calculated for the opening year Build and No-Build conditions and for the design year Build and No-Build conditions using appropriate computer analysis software such as Highway Capacity Software, Transyt-7F, NETSIM, Passer II-90, Synchro, or other software as agreed to and acceptable to the Department.

5.6.3. All analyses shall examine the design hour traffic volume for the adjacent roadway and the peak hour(s) traffic volume of the proposed development. The Design Hour Volume may be determined by multiplying the higher of the a.m. and p.m. peak hour volumes by the appropriate value based on the functional classification of the roadway from the following tables:
Alternately, the DHV may be determined by taking the ratio of the peak hour volume and the ADT from a site-specific count. Use the higher (highest) ratio on the major route past the development. Determine an appropriate K factor from ODOT 30th highest hour report data by functional classification. Divide the K factor by the ratio. Use the resultant value to factor the peak hour volume(s) if the resultant value is greater than one (1). If less than or equal to one (1), use the peak hour volume(s).

5.6.4. Opening day traffic volumes shall be calculated using the most current edition of the ITE Trip Generation Report methodologies. The study shall calculate the Design Year traffic volume in accordance with Section 5.3.

5.6.5. Traffic growth rates per Section 5.5.5 shall be used in the preparation of the study.

5.6.6. The study must determine the existing serviceability of the adjacent roadway system including all intersections within the study area as defined in accordance with Section 5.6.1.

5.6.7. Signal warrant analyses shall be conducted at all multi-movement access points considered in each alternative scheme. Any access which meets signal warrant thresholds but does not otherwise meet spacing requirements and standards as established for the access category may be required to be redesigned, reconstructed, and/or relocated. The study should evaluate the feasibility of coordinating any proposed signals with other existing signals within the study area to achieve desired traffic progression.

5.6.8. The study must evaluate the proposed development’s impacts on the adjacent and nearby highway network as defined by the study area (reference Section 5.6.1). The study should document the incremental capacity and safety impacts on all roadway facilities within the study area for each access alternative, both for opening year and design year traffic. For identified high accident locations, the study should evaluate the expected impact of the development on the accident patterns at those locations.

5.6.9. Operational design criteria shall be in accordance with the latest
applicable Department manuals and specifications.

5.6.10. The study should recommend adoption of the access scheme which provides the safest and most efficient level of service consistent with the purpose, requirements, and design standards of the State Highway Access Management Manual. The recommended access scheme should not aggravate an existing safety problem nor degrade either the existing level of service of the highway or the level established for the Access Category of the highway according to the following:

<table>
<thead>
<tr>
<th>Access Category</th>
<th>Level of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
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5.6.11. A minimum of three (3) copies of the Traffic Impact Study shall be provided to the District Office.

5.6.12. Upon receipt of a Traffic Impact Study, the District Traffic Impact Study Review Team shall forward copies of the study to appropriate review offices and establish a schedule for completing the reviews within the prescribed time frame.

5.7. Review Time Guidelines

5.7.1. It is the Department's goal to review a Traffic Impact Study within sixty working days of the date of receipt of a TIS acceptable to the Department, provided that the following conditions are met:

- The cost of construction is either entirely or primarily funded by the applicant.
- The documents, plans, reports, access schemes, traffic study and other material relating to the proposed access or any modifications thereto are deemed adequate, in the Department's opinion, to allow a complete and thorough assessment of the proposed development's impact on the highway system and comply with all design development criteria of the Ohio Department of Transportation and the Federal Highway Administration, if applicable.

5.7.2. If any of the material described in Section 5.6. is determined to be deficient, the applicant shall be given notification of the problem and the criteria that are not satisfied. The applicant shall have an opportunity to correct the deficiencies and to resubmit the material. Upon receipt of the resubmittal, the Department shall review the material and determine if the deficiencies have been corrected. If the material is judged acceptable, final action shall be completed on the access application within sixty working days. If the resubmitted material is still judged deficient, the procedure established in this section shall be repeated until the modification is acceptable.
5.7.3. After receiving the recommendations of all reviewing authorities and after other applicable requirements of state and/or federal regulations are completed to the Department's satisfaction, and based on the results of the TIS, the District Deputy Director shall either approve the access request as proposed, or require design modifications as appropriate and necessary, or restrict one or more turn movements as necessary to reduce traffic and safety impacts, or deny the access request, consistent with the standards and provisions contained within the **State Highway Access Management Manual** and other applicable Department regulations.

5.8. Access Plan Development

5.8.1. Upon approval of the TIS the District Deputy Director or his appointed representative shall notify the applicant to proceed with the access for site development to implement the recommended access scheme and any other improvements indicated by the TIS.

5.8.2. Construction plans for implementation of the recommended access scheme shall be prepared in accordance with the latest applicable design standards and reviewed by appropriate Department offices for conformance.

5.8.3. The District Office shall initiate any special agreements for work to be performed by the applicant, in accordance with the TIS and the access plan, involving construction, reconstruction, or modification of significant portions of the highway infrastructure such as pavement, embankment, or drainage; and for all other work including installation or modification of a traffic control signal. Agreements shall be reviewed and approved by appropriate Department offices.

5.8.4. If the work involves installing a new or modifying an existing traffic control signal, a signal agreement shall be required for approval.

5.8.5. After review, concurrence, and approval, all agreements must be signed first by the applicant. The authorization of the Director or his appointed representative is then obtained, and finally copies of the signed agreements are provided to the applicant.

5.9. Permit Approval

A valid access permit shall not be issued until the conditions of Sections 2.5.2, 2.5.3, 5.6, and 5.8. are satisfied. No construction shall begin until a valid access permit is issued.
Variance from AM Manual?

Yes

Submit Application & Detailed Plans

No

Variance Request

Variance Approved

30 Days to Accept Application

Variance Approved

No Central Office Review Needed

Variance Denied

Within 60 Days

60 Days+

Plan Review (30 Days) and Decision to Proceed

Central Office Review Needed

Central Office Plan Review (30 - 120 Days)

Permit Decision by District

Recommendation to Issue Permit Forwarded to District

Recommendation to Deny Permit Forwarded to District

Permit Decision by Central Office

Possible Request for Additional Information

Possible Request for Additional Information

Possible Request for Additional Information

Possible Request for Additional Information

Issue Permit (10 days)

Permit Denied

Submit Preliminary Plans to ODOT District Office (County Manager)

Submit Preliminary Plans to ODOT Central Office

 FHWA Review (up to 120 Days)

Access Modifications to L/A Application?

Permit Decision by District

Appendix A, ODOT Access Management

* The time frames shown on this flow diagram are typical of current permit and variance requests but may be modified on a case-by-case basis.

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State Highway Access Management Manual

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