

CHAPTER 5: OVERLAY DISTRICTS

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5.01 General Provisions of Overlay Districts

Purpose. *The Overlay Districts in Chapter 5 are established to provide special regulations in designated areas of Loudoun County.*

- A. **Applicability.** Overlay districts in Chapter 5 are zoning districts that overlap and overlay applicable underlying zoning districts, and also may overlap other applicable overlay districts, so that any land subject to an overlay district also is subject to the underlying zoning district, as well as any other overlay district that the land is located within.
- B. **Establishment of Overlay Districts.** Overlay districts are established and amended by the procedures in Chapter 10 unless otherwise stated by the overlay district.
- C. **Overlay District Boundaries.** Refer to Chapter 1 for provisions related to the interpretation of overlay district map features and overlay district boundaries.
- D. **Specific Definitions.** Defined terms used in an overlay district are provided in Chapter 12. Defined terms used specifically in Section 5.03, Floodplain Overlay District, are provided in Section 5.03.01.
- E. **Uses.** Unless otherwise provided, principal and accessory uses in an overlay district are allowed only to the extent such uses are allowed by the underlying zoning district and any other applicable overlay district and are in conformance with all other applicable regulations of the Zoning Ordinance. Overlay districts may regulate accessory uses that do not otherwise appear in Chapter 3.
- F. **Additional Procedures.** Specific additional procedures in overlay districts, including submission requirements, are provided in Chapter 10.

5.02 Airport Impact Overlay District

Purpose. *The purpose of the Airport Impact Overlay District (AIOD) is to:*

- *Acknowledge the unique land use impacts of airports;*
 - *Regulate the siting of noise sensitive uses;*
 - *Ensure that the heights of structures are compatible with airport operations; and*
 - *Complement Federal Aviation Administration (FAA) regulations regarding noise and height.*
- A. **Applicability.**

1. **District Boundaries.** The following sources were used as a basis for delineating the Ldn aircraft noise contours:
 - a. Washington Dulles International Airport: Washington Dulles International Airport Aircraft Noise Contour Map Update, May 2019; and
 - b. Leesburg Municipal Airport: Environmental Assessment Report. October 1985U.
 2. **Aircraft Noise Impact Areas.** The AIOD is composed of 3 aircraft noise impact areas:
 - a. Within 1 mile of Ldn 60. The area outside of but within 1 mile of the Ldn 60 noise contour;
 - b. Ldn 60 – 65. The Ldn 60 noise contour and the area between the Ldn 60 noise contour and Ldn 65 noise contour; and
 - c. Ldn 65 or higher. The Ldn 65 noise contour and the area within the Ldn 65 noise contour.
- B. **Use Limitations.** In addition to the use limitations and regulations for the district over which the AIOD is located, the following use limitations apply to residential uses and structures located within the AIOD.
1. **Within 1 mile of Ldn 60. Disclosure Statement.** A disclosure statement must be provided in accordance with Section 5.02.C.
 2. **Ldn 60 – 65.**
 - a. **Notification.** A notification must be provided in accordance with Section 5.02.C.
 - b. **Acoustical Treatment.** The applicant must incorporate acoustical treatment into all residential uses and structures to ensure that interior noise levels within living spaces (not including garages, sunrooms, or porches) do not exceed an average sound level of Ldn 45 db(A). Compliance with this must be based upon a certification from a Licensed Professional Engineer (P.E.) or Architect licensed in the Commonwealth of Virginia, submitted prior to Zoning Permit approval, that the design and construction methods and materials to be used in the construction of the residential use or structure are such that the foregoing standard will be met, assuming exterior noise levels between Ldn 60 – 65.
 - c. **Avigation Easements.** Prior to the approval of any subdivision plat creating a lot upon which a residential use could be constructed, Zoning Permit for a residential use or structure on an existing lot of record, excluding residential accessory uses and structures, or Site Plan for 1 or more dwellings, the owner(s) of the property subject to such subdivision plat, Zoning Permit, or Site Plan must dedicate an avigation easement to the Metropolitan Washington Airports Authority, indicating the right of flight to pass over the property, as a means to securing the long-term economic viability of Washington Dulles International Airport.
 3. **Ldn 65 or Higher.** Residential uses and structures are not permitted. **Exception.** New residential uses and structures and additions to existing legally established residential uses and structures may be permitted, provided that:
 - a. **Avigation Easements.** Prior to the approval of any subdivision plat creating a lot upon which a residential use or structure could be constructed, Zoning Permit for a residential use on an existing lot of record, excluding residential accessory uses and structures, or Site Plan for one or more dwellings, the owner(s) of the property subject to such Subdivision Plat, Zoning Permit, or Site Plan must dedicate an avigation easement to the Metropolitan Washington Airports Authority, indicating the right of flight to pass over the property, as a means to securing the long-term economic viability of Washington Dulles International Airport;
 - b. **Acoustical Treatment.** The applicant must incorporate acoustical treatment into all residential uses and structures to ensure that interior noise levels within living spaces (not including garages, sunrooms, or porches) do not exceed an average sound level of Ldn 45 db(A). Compliance with this must be based upon a certification from a Licensed Professional Engineer (P.E.) or Architect licensed in the Commonwealth of Virginia, submitted prior to Zoning Permit approval, that the design and

construction methods and materials to be used in the construction of the residential use or structure are such that the foregoing standard will be met, assuming exterior noise levels between Ldn 65–70;

- c. **Notification.** Notification must be provided in accordance with Section 5.02.C.; and
- d. **Lot Creation.** The lot upon which such residential use is established or proposed was recorded or had Subdivision Plat approval prior to June 16, 1993 (original adoption date) or notwithstanding Section 1.02.L., such residential use was designated on a proffered rezoning approved prior to January 17, 2023 as being located outside of the Ldn 65 or higher aircraft noise impact area, and subsequently became located within the Ldn 65 or higher aircraft noise impact area as a result of the adoption of ZMAP-2021-0011 and ZOAM-2021-0002; and

- 4. **Building Heights.** Notwithstanding Section 7.01.06.B.2., no building or other structure will be located in a manner or built to a height that constitutes a hazard to aerial navigation. Where a structure is proposed in a location or to be built to a height that may be hazardous to air traffic, such structure must not be erected without certification from the FAA that it will not constitute a hazard to air traffic.

- C. **Notification Required.** Notification in language approved by the Zoning Administrator, must be conspicuously placed on all subdivision plats and Site Plans applicable to any lot or development within the AIOD, that clearly identifies any lot that is located within the AIOD and any aircraft noise impact area of the AIOD (i.e., Section 5.02.A.2.a., 5.02.A.2.b., or 5.02.A.2.c. within which the lot is located, and states that such lot is located within an area that will be impacted by aircraft overflights and aircraft noise. Such notification also must be provided in writing by the applicant and every subsequent owner of such lot to all prospective purchasers of, and included in all brochures and promotional documents, including any illustrative Site Plan(s) on display within any sales related office(s), and all deeds of conveyance applicable to, such lot. At the time they are created, Owners Association Declarations must clearly state that the community is located near an airport, may be impacted by overflight noise, and subject to the regulations of the Airport Impact Overlay District of the Loudoun County Zoning Ordinance. In addition, Owners Associations may include a statement in their resale disclosure packets as follows: “Homes in this community are located near an airport and subject to aircraft overflights and noise due to aircraft. Contact Loudoun County Government to verify whether your home is located within the Airport Impact Overlay District and the regulations that apply.”

5.03 Floodplain Overlay District

Purpose. *The purpose of the Floodplain Overlay District is to conserve the natural state of watercourses and watersheds and to prevent the:*

- *Loss of life and property;*
- *Creation of health and safety hazards;*
- *Disruption of commerce and governmental services; and*
- *Extraordinary and unnecessary expenditure of public funds for flood protection and relief, and the impairment of the tax base by:*
 - *Regulating uses, activities, and development which, alone or in combination with other existing or future uses, activities, and development, will cause unacceptable increases in flood heights, velocities, and frequencies;*
 - *Restricting or prohibiting certain uses, activities, and development from locating within areas subject to flooding;*
 - *Requiring all those uses, activities, and developments that do occur in areas susceptible to flooding to be protected and/or flood-proofed against flooding and flood damage; and*
 - *Preventing individuals from using land and erecting structures which are unsuited for intended purposes because of flood hazards.*

- A. **Applicability.** These provisions apply to all privately and publicly owned lands within the jurisdiction of the County of Loudoun and identified as being located within the Floodplain Overlay District (FOD). Only those uses set forth in Section 5.03.E. and 5.03.F. will be permitted or Special Exception uses within the FOD, and land so encumbered may be used in a manner permitted in the underlying Zoning District only if and to the extent such use is also permitted in the FOD. The degree of flood protection sought by Section 5.03 is considered reasonable for regulatory purposes and is based on acceptable engineering methods of study but does not imply total flood protection. Larger floods may occur on rare occasions. Flood heights may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. Section 5.03 does not imply that property outside the FOD or land uses permitted within the FOD will be free from flooding or flood damages. Section 5.03 must not create liability on the part of Loudoun County or any officer or employee thereof for any flood damages that result from reliance on Section 5.03 or any administrative decision lawfully made thereunder.
- B. **Authority.** Authority for these provisions includes:
1. Code of Virginia §§ 10.1-600, et seq., Flood Damage Reduction Act;
 2. Code of Virginia §§ 15.2-2200 through 15.2-2329, Planning, Subdivision of Land and Zoning;
 3. Code of Virginia §§ 10.1-500, et seq., Soil Conservation Districts;
 4. Code of Virginia §§ 62.1-44.15:51, et seq., Erosion and Sediment Control;
 5. Code of Virginia § 28.2-1001, Potomac River Basin Compact;
 6. National Flood Insurance Act of 1968, 42 U.S.C. 4001, et seq., as amended by the National Flood Insurance Reform Act of 1994 and the Flood Insurance Reform Act of 2004; and
 7. Code of Federal Regulations § 59.1-70.9, Title 44.
- C. **Definitions.** The key words and phrases defined in Section 5.03.01 apply when used in Section 5.03.
- D. **Administration.**
1. **Designation of Floodplain Administrator.** The Zoning Administrator, or his/her designee, must administer and implement these regulations and is referred to herein as the Floodplain Administrator.
 2. **Duties and Responsibilities of the Floodplain Administrator.**
 - a. Review all applications for development located within the FOD.
 - b. Interpret FOD boundaries in accordance with Section 11.02 and provide available base flood elevation and flood hazard information.
 - c. Review applications for development to determine whether proposed activities will be reasonably safe from flooding and meet the requirements of Section 5.03.
 - d. Review applications for reconstruction, rehabilitation, addition, or other improvement of a structure to determine whether such proposed activities constitute substantial improvements.
 - e. Review applications for development to determine whether all necessary permits have been obtained from the Federal, State, or local agencies from which prior or concurrent approval is required; in particular, permits from state agencies for any construction, reconstruction, repair, or altering of a dam, reservoir, or waterway obstruction (including bridges, culverts, structures), any altering of a watercourse, or any change of the course, current, or cross section of a stream or body of water, including any change to the 100-year frequency floodplain of free-flowing non-tidal waters of the State.
 - f. Verify that applicants proposing to alter a watercourse have notified affected adjacent towns, cities, county or state government, the Department of Conservation and Recreation (Division of Dam Safety and Floodplain Management), and other appropriate agencies (Virginia Department of Environmental Quality, United States Army Corps of Engineers) and have submitted copies of such notifications to the Federal Emergency Management Agency (FEMA).

- g. Inspect or cause to be inspected, structures, and other development for which permits have been issued to determine compliance with Section 5.03 or to determine if non-compliance has occurred or violations have been committed.
- h. Review submitted FEMA Elevation Certificate applications and require incomplete or deficient applications to be corrected.
- i. Submit to FEMA, or require applicants to submit to FEMA, data and information necessary to maintain Flood Insurance Rate Maps (FIRMs), including Floodplain Studies and Floodplain Alterations approved in accordance with the Facilities Standards Manual (FSM), within 6 months after such data and information becomes available if the analyses indicate changes in base flood elevations.
- j. Maintain and permanently retain records that are necessary for the administration of the FOD, including:
 - 1. Flood Insurance Studies, Flood Insurance Rate Maps (including historic studies and maps and current effective studies and maps), and Letters of Map Change; and
 - 2. Documentation supporting approval or denial of development permits, Elevation Certificates, documentation of the elevation (in relation to the datum on the FIRM) to which structures have been floodproofed, other required design certifications, variations pursuant to Section 5.03.K, and records of enforcement actions taken to correct violations of these regulations; and
- k. Enforce the provisions of these regulations, investigate violations, issue notices of violations or stop work orders, and require permit holders to take corrective action.
- l. Advise the Board of Supervisors regarding the intent of these regulations and, for each application for a variation pursuant to Section 5.03.K., prepare a staff report and recommendation.
- m. Administer the requirements related to proposed work on existing structures:
 - 1. Make determinations as to whether buildings and structures that are located in FOD (Major Floodplain only) and that are damaged by any cause have been substantially damaged; and
 - 2. Make reasonable efforts to notify owners of substantially damaged structures of the need to obtain a permit to repair, rehabilitate, or reconstruct such damaged structures; and prohibit the non-compliant repair of substantially damaged buildings except for temporary emergency protective measures necessary to secure a property or stabilize a structure to prevent additional damage; and
- n. Undertake, as determined appropriate by the Floodplain Administrator due to the circumstances, other actions which may include but are not limited to: issuing press releases, public service announcements, and other public information materials related to development permit requests and repair of damaged structures; coordinating with other Federal, State, and local agencies to assist with substantial damage determinations; providing owners of damaged structures information related to the proper repair of damaged structures in FOD; and provide property owners with information necessary to file claims for Increased Cost of Compliance coverage under the National Flood Insurance Program (NFIP) flood insurance policies.
- o. Notify FEMA when the corporate boundaries of the County have been modified and:
 - 1. Provide a map that clearly delineates the new corporate boundaries or the new area for which the authority to regulate pursuant to Section 5.03 has either been assumed or relinquished through annexation or otherwise; and
 - 2. For any new area for which the authority to regulate pursuant to this Section 5.03 has been assumed, prepare necessary amendments to the Zoning Map and appropriate requirements, and submit such amendments to the Board of Supervisors for adoption. A copy of the amended regulations must be provided to Department of Conservation and Recreation (Division of Dam Safety and Floodplain Management) and FEMA; and

- p. Upon the request of FEMA, complete and submit information regarding the number of structures in the FOD (Major Floodplain only), number of approved permits for development in the FOD (Major Floodplain only), number of approved variations pursuant to Section 5.03.K. Any variations that are approved must be noted in the annual or biennial report submitted to FEMA's Federal Insurance Administrator.
- q. Review all legislative land development applications.
- 3. **Delineation of the FOD.** The original basis for the delineation of the FOD must be the floodplain as shown on the Flood Insurance Study (FIS) and the Flood Insurance Rate Map (FIRM) for the County of Loudoun prepared by FEMA, Federal Insurance Administration, dated February 17, 2017. The boundaries of the floodplain and FOD may change based on information submitted in accordance with this Chapter, and/or subsequent revisions or amendments to the FIS and FIRM approved by FEMA.
- E. **Permitted Uses.** The following uses are permitted within the FOD provided such uses conform with Section 5.03. Uses allowed in the underlying district must be prohibited to the extent such uses are not permitted or Special Exception uses in the FOD. Where any uses, structures, or improvements will result in development within the FOD, an application for a Floodplain Alteration must be submitted in accordance with Section 5.03.H.2. and the FSM.
 - 1. Permitted uses in FOD (Major Floodplain). Such uses must not cause any increases in base flood elevation of the FOD (Major Floodplain) unless otherwise provided below.
 - a. Agriculture, horticulture, forestry, and fisheries, not requiring the erection of structures, except that incidental structures must be permitted in accordance with this Section. An increase in base flood elevation may be permitted provided a Conditional Letter of Map Revision (CLOMR) is obtained from FEMA prior to approval of the requisite Floodplain Alteration application for such use.
 - b. Passive and Active Recreation Uses, except swimming pools, provided that the area of impervious surfaces within the FOD (Major Floodplain) does not exceed 3% of the area of FOD (Major Floodplain) located within the subject parcel and the boundary of the FOD (Major Floodplain) does not change.
 - c. Stormwater management improvements as follows:
 - 1. Rooftop disconnection. Associated soil amendments must be located outside of areas of existing tree cover and must not require the clearing of existing tree cover;
 - 2. Sheet flow to conservation area;
 - 3. Sheet flow to vegetated filter and associated soil amendments located outside of areas of existing tree cover and not requiring the clearing of existing tree cover;
 - 4. Grass channel and associated soil amendments;
 - 5. Soil amendments located outside of areas of existing tree cover and not requiring the clearing of existing tree cover; and
 - 6. Other stormwater management improvements provided that such improvements must only serve permitted or approved Special Exception uses in the FOD and must only serve those portions of such uses that are located within the FOD.
 - d. Utility lines in the floodplain and road crossings. An increase in base flood elevation on site may be permitted provided a CLOMR is obtained from FEMA prior to approval of the requisite Floodplain Alteration application for such use. Road crossings must be designed and constructed in accordance with the standards and regulations of the Virginia Department of Transportation (VDOT) and/or the FSM, whichever must apply.
 - e. Public roads shown on the Comprehensive Plan or included in a Capital Improvement Program project. An increase in base flood elevation may be permitted provided a CLOMR is obtained from FEMA prior to approval of the requisite Floodplain Alteration application for such use.

- f. Public roads, private roads, and driveways.
- g. Repair, reconstruction, or improvement of existing residences, so long as the footprint of the existing residence is not increased within the FOD and provided that such repair, reconstruction, or improvement, whether located within or outside of the FOD, is not a substantial improvement. If such repair, reconstruction or improvement is a substantial improvement then conformance with Section 5.03.I. must be required.
- h. Parking areas accessory to permitted or approved Special Exception uses in the FOD. All such parking areas must be equipped with best management practices in accordance with Chapter 5 of the FSM and Chapter 1096 of the Codified Ordinances.
- i. Incidental structures, not exceeding 840 square feet of floor area, associated with permitted or approved Special Exception uses in the FOD, and temporary structures associated with Special Events in the FOD. Incidental structures include storage sheds, maintenance sheds, backstops, bath houses and locker rooms. Provided, however, bulk storage of gasoline, chemicals, fuels, or similar substances are prohibited in the FOD; and further provided that any new construction must comply with FEMA standards.
- j. Temporary storage of material or equipment necessary in the construction of permitted or Special Exception uses in the FOD.
- k. Alterations of the floodplain associated with any permitted or approved Special Exception uses in the FOD. Such alterations must not relocate or alter the natural active channel except for road crossings permitted under Section 5.03.E.1.d. or Section 5.03.E.1.m., to protect existing habitable structures subject to periodic flooding, or for stream restoration permitted under Section 5.03.E.1.p. Applications for alterations of the floodplain must be in accordance with Section 5.03.H.2. To the extent that the boundaries of the FOD change as a result of an approved Floodplain Alteration, any areas no longer within the FOD may be used for any use in the underlying Zoning District, subject to the provisions of the Zoning District regulations and conditions of any approved Special Exception.
- l. Restoration and rehabilitation of historic structures.
- m. Road crossings that result in an increase in the base flood elevation off-site provided that:
 - 1. A CLOMR is obtained from FEMA prior to approval of the requisite Floodplain Alteration application for such use;
 - 2. The road crossing must be a feature shown on the Comprehensive Plan or included in a Capital Improvements Program project;
 - 3. The road crossing must be designed and constructed in accordance with the standards and regulations of the Virginia Department of Transportation and/or the FSM, whichever must apply;
 - 4. The resulting increase in the base flood elevation must not affect existing buildings and structures; and
 - 5. Affected off-site property owners may at any time mitigate impacts on their land as a result of an increase in the base flood elevation by:
 - a. Submitting a Floodplain Alteration to reclaim that portion of their land subject to the increase in base flood elevation as a result of the road crossing, provided there is no increase in the base flood elevation; and/or
 - b. Requesting a modification of the building setback or parking setback requirements on specific lots or parcels of land affected by the increase in the base flood elevation by Special Exception approved by the Board of Supervisors, in accordance with Section 10.11.01 and 5.03.G. of the Zoning Ordinance.
- n. Public water utility drinking water supply reservoirs, including, without limitation, reclaimed quarries.

- o. Maintenance of the design conditions of an approved Floodplain Alteration.
 - p. Stream Restoration designed in accordance with the FSM and approved by the County. An increase in base flood elevation may be permitted provided a CLOMR is obtained from FEMA prior to approval of the requisite Floodplain Alteration application for such use.
 - q. Wetland Mitigation. An increase in base flood elevation may be permitted provided a CLOMR is obtained from FEMA prior to approval of the requisite Floodplain Alteration application for such use.
 - r. Flood mitigation practices carried out in order to minimize and reduce flood risk in accordance with the Code of Federal Regulations, Title 44. Section 78.1, et seq.
 - s. Special Events, pursuant to [10.11.08](#), without land disturbing activity.
2. Permitted uses in floodplains in FOD (Minor Floodplain), with or without an increase in base flood elevation:
- a. Uses allowed under Section 5.03.E.1, except that increases in the base flood elevation in the FOD (Minor Floodplain) must be permitted.
 - b. Alteration of the floodplain whether or not associated with a permitted or approved Special Exception use in the FOD. To the extent that the boundaries of the FOD change as a result of the Floodplain Alteration, any areas no longer within the FOD may be used for any use in the underlying Zoning District, subject to the provisions of the Zoning District regulations and conditions of any approved Special Exception.
 - c. Stormwater management improvements whether or not associated with permitted or approved Special Exception uses in the FOD.
 - d. Ponds designed by the Natural Resources Conservation Service, a Licensed Professional Engineer, or a Class B Land Surveyor.
 - e. Basketball or tennis courts, and swimming pools.
 - f. Parking areas less than 5,000 square feet not otherwise permitted. Such parking areas must not be subject to 100-year flooding greater than 1 foot in depth, must be equipped with best management practices in accordance with Chapter 5 of the FSM and Chapter 1096 of the Codified Ordinances, and must not result in any change in existing grade.
- F. **Special Exception Uses.** The following uses and structures may be permitted in the FOD (Major Floodplain or Minor Floodplain) by the Board of Supervisors by Special Exception, subject to Section [10.11.01](#) and Section [5.03.G.](#), provided that such uses conform with Section [5.03](#) and such uses must not cause any increase in the base flood elevation of the FOD (Major Floodplain) unless otherwise provided below. Uses allowed in the underlying district must be prohibited to the extent such uses are not permitted or Special Exception uses in the FOD. Where any uses, structures, or improvements will result in development within the FOD, an application for a Floodplain Alteration must be submitted in accordance with Section 5.03.H.2 and the FSM.
- 1. Marinas, boat rentals, docks, piers, wharves, water ski jump facilities.
 - 2. Special Events, pursuant to [3.05.D.](#), with land disturbing activity.
 - 3. Riding stables.
 - 4. Structures required for the operation of a public utility not otherwise permitted by the Zoning Ordinance.
 - 5. Incidental structures, greater than 840 square feet of floor area, associated with permitted or approved Special Exception uses in the FOD. Incidental structures include storage sheds, maintenance sheds, backstops, bath houses, and locker rooms. Provided, however, bulk storage of gasoline, chemicals, fuels, or similar substances are prohibited in the FOD; and further provided that any new construction must comply with FEMA standards.
 - 6. Passive and Active Recreation Uses, except swimming pools, provided that the area of impervious surfaces within the FOD (Major Floodplain) does not exceed 10% of the area of FOD (Major Floodplain) located within the subject parcel, that cause the boundary of the FOD (Major Floodplain) to change, and/or that

cause an increase in base flood elevation. Such increase in base flood elevation may be permitted provided a CLOMR is obtained from FEMA prior to approval of the requisite Floodplain Alteration application for such use.

G. **Standards For A Special Exception.** In considering applications for a Special Exception, the Board of Supervisors must be satisfied that the following standards and those of Section 10.11.01 have been met:

1. The proposed use will not increase the danger to life and property due to increased flood heights or velocities;
2. The proposed use will not increase the danger that materials may be swept downstream to the injury of others;
3. The proposed water supply and sanitation systems are designed to prevent disease, contamination, and unsanitary conditions;
4. The proposed use or structure must be located and designed to limit its susceptibility to flood damage, and available alternative locations, not subject to flooding, for the proposed use must be considered;
5. The proposed use is compatible with existing and planned development;
6. The proposed use is in harmony with the Comprehensive Plan; and
7. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site must not cause significant damage.

H. **Development Procedures.**

1. **Floodplain Information to be Submitted with Land Development Applications.** All new subdivision proposals and other proposed development greater than 50 lots or 5 acres, whichever is the lesser, on any parcel of land which includes FOD within its boundaries, must include with such proposals base flood elevation data in accordance with Chapter 5 of the FSM. The submission of such base flood elevation data must be considered a request for a cartographic interpretation pursuant to Section 1.05, to interpret the exact location of the boundaries of the FOD based on such data.
2. **Floodplain Alteration.** Any proposed development in the FOD requires approval of a Declaration of No Impact to Floodplain or Floodplain Alteration in accordance with Chapter 5 of the FSM. Any required Floodplain Alteration must conform with the following:
 - a. **Procedures for Floodplain Alterations.** Applications for Floodplain Alterations must be in accordance with Chapters 5 and 8 of the FSM and conform with the following procedures:
 1. An approved CLOMR from FEMA must be provided prior to approval of a Floodplain Alteration that proposes any increase in the base flood elevation within the FOD (Major Floodplain); and
 2. Floodplain Alterations that would result in changes to the boundaries of the FOD are subject to the following:
 - a. The application for such Floodplain Alteration must be considered a request for a cartographic interpretation pursuant to Section 10.02 to interpret the exact location of the boundaries of the FOD upon approval of the Floodplain Alteration; and
 - b. Prior to approval of a Floodplain Alteration that would result in any increase in the base flood elevation off-site or other changes to the boundaries of the FOD off-site, an instrument describing the change in the base flood elevation executed by each affected property owner must be recorded among the land records of Loudoun County, Virginia.
 - b. **Engineering and Environmental Criteria for Floodplain Alterations.** All proposed alterations to the floodplain must meet the following criteria:
 1. Alterations to the floodplain must not create erosive water velocity on-site or off-site (where erosive water velocity is based on analysis of the surface material and permissible velocities for specific cross sections affected by the proposed alteration), and the mean velocity of stream flow

at the downstream end of the site after alteration must be no greater than the mean velocity of the stream flow under existing conditions.

2. Alterations to the floodplain must be in conformance with Chapter 1220 of the Codified Ordinances of Loudoun County and the Erosion and Sediment Control Law, Code of Virginia § 62.1-44.15:51, et seq.
 3. The flood carrying capacity within the altered floodplain must be maintained.
3. **Zoning Permit Required.** All development occurring within the FOD (Major Floodplain), including placement of manufactured homes, must be undertaken only upon the approval of a Zoning Permit. In addition to the requirements of Section 11.04.B.5., the application for such Zoning Permit must include the following:
- a. Topographic information showing existing and proposed ground elevations;
 - b. For a structure to be flood-proofed (non-residential only), the elevation to which the structure will be flood-proofed;
 - c. The elevation of the lowest floor (including basement);
 - d. The base flood elevation; and
 - e. Copies of all necessary permits from Federal, State, or local agencies from which prior or concurrent approval is required.

I. Development Standards.

1. **General.** The following provisions apply to development located in the FOD (Major Floodplain):
 - a. **Residential Construction.** New construction or substantial improvement of any residential structure (including manufactured homes) must have the lowest floor, including basement, elevated to or above (1 foot freeboard recommended) the base flood elevation;
 - b. **Nonresidential Construction.** New construction or substantial improvement of any commercial, industrial, or non-residential building (including manufactured homes) must have the lowest floor, including basement, elevated to or above the base flood elevation. Non-residential buildings may be flood-proofed in lieu of being elevated provided that all areas of the building components lower than 1 foot above the base flood elevation are watertight with walls impermeable to the passage of water and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A licensed professional engineer or architect must certify that the standards of this subsection are satisfied. Such certification, including the base flood elevation to which such structures are floodproofed, must be retained by Floodplain Administrator;
 - c. All new construction and substantial improvements (including manufactured homes) must be in accordance with sections of this Zoning Ordinance, the FSM, and Chapter 1410 of the Codified Ordinances, and anchored to prevent flotation, collapse, or lateral movement of the structure;
 - d. Newly placed manufactured homes and/or substantial improvements to manufactured homes must meet State anchoring requirements for resisting wind forces and must be anchored to prevent flotation, collapse, or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors;
 - e. All new construction and substantial improvements (including manufactured homes) must be constructed with materials and utility equipment resistant to flood damage;
 - f. All new construction or substantial improvements (including manufactured homes) must be constructed by methods and practices that minimize flood damage;
 - g. Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities, including ductwork, must be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;

- h. New and replacement public and individual water supply systems must be designed to minimize or eliminate infiltration of flood waters into the system;
 - i. New and replacement public sewer systems must be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters;
 - j. Individual sewage disposal systems must be located and constructed to avoid impairment to them or contamination from them during flooding;
 - k. Prior to the approval of a Floodplain Alteration for any proposed alteration or relocation of any channel or watercourse, all required permits must be obtained from the U. S. Army Corps of Engineers, the Virginia Department of Environmental Quality, and the Virginia Marine Resources Commission (a joint permit application is available from any of these agencies). The applicant must provide notification of such alteration or relocation to the Department of Conservation and Recreation (Division of Dam Safety and Floodplain Management) and FEMA. If such alteration or relocation results in a change to the floodplain in an adjacent town, city, county, or state, notification must also be provided by the applicant to such jurisdiction; and
 - l. The flood carrying capacity within an altered or relocated portion of any channel or watercourse must be maintained. Under no circumstances must any development adversely affect the water carrying capacity of any channel or watercourse.
2. **Space Below the Lowest Floor.** In FOD (Major Floodplain), fully enclosed areas, of new construction or substantially improved structures, which are below the base flood elevation must meet the following minimum standards:
- a. Such areas must not be designed or used for human habitation. Such areas must only be used for parking of vehicles, building access, or limited storage of maintenance equipment used in connection with the premises. Access to such areas must be the minimum necessary to allow for parking of vehicles (garage door), limited storage of maintenance equipment (standard exterior door), or entry to the living area (stairway or elevator);
 - b. Such areas must be constructed entirely of flood resistant materials below the base flood elevation; and
 - c. Such areas must include measures to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters that are either certified by a licensed professional engineer or architect or that meet the following minimum design criteria:
 - 1. Provide a minimum of 2 openings on different sides of each enclosed area. Foundation enclosures made of flexible skirting are not considered enclosed areas for regulatory purposes, and, therefore, do not require openings. Masonry or wood underpinning, regardless of structural status, are considered as enclosed areas and require such openings;
 - 2. The total net area of all openings must be at least 1 square inch for each square foot of enclosed area subject to flooding;
 - 3. If a structure has more than 1 enclosed area, each area must have openings to allow floodwaters to automatically enter and exit;
 - 4. The bottom of all required openings to such enclosed areas must be no higher than 1 foot above the adjacent grade; and
 - 5. Openings must only be equipped with screens, louvers, or other opening coverings or devices that permit the automatic flow of floodwaters in both directions.
3. **Standards for Recreational Vehicles.** The following provisions apply to recreational vehicles located within the FOD (Major Floodplain):

- a. Any recreational vehicles placed on a site must be fully licensed, on its wheels or jacking system, and attached to the site only by quick disconnect type utilities and security devices, and must have no permanently attached additions; or
 - b. Recreational vehicles placed on a site for 180 days or longer must be deemed to be manufactured homes and must meet all development standards of Section 5.03.I.1-2.
- 4. **Standards for Subdivision Proposals.** The following provisions will be required for any subdivision of a parcel that includes FOD (Major Floodplain):
 - a. All subdivision proposals must be consistent with the need to minimize flood damage;
 - b. All subdivision proposals that have public utilities and facilities, such as sewer, gas, electrical, and water systems, must have such utilities and facilities located and constructed to minimize flood damage; and
 - c. All subdivision proposals must have adequate drainage provided to reduce exposure to flood hazards.
- J. **Density Calculations.** For purposes of calculating the permitted floor area and number of residential units in the underlying Zoning District, the land area in any portion of the FOD must be included as part of the land area for such calculations.
- K. **Variations.**
 - 1. **Authority.** Pursuant to Code of Federal Regulations 44CFR60.6, the Board of Supervisors may approve a variation of the standards of Sections 5.03.I.1-3. for any proposed development within the FOD (Major Floodplain) in the instances as set forth below. Requests for approval of a variation of the standards of Sections 5.03.I.1-3. must be made in accordance with the procedures for a Minor Special Exception application as set forth in Section 11.11.02, except that the issues for consideration must be within the FOD (Major Floodplain) that will cause any increase in the base flood elevation of the FOD (Major Floodplain).
 - a. New construction and substantial improvements to be erected on a lot of 1/2 acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood elevation provided that such new construction or substantial improvement is protected by methods that minimize flood damages during the base flood and creates no additional threats to public safety.
 - b. Repair or rehabilitation of historic structures provided that such repair or rehabilitation must not preclude the structure's continued designation as a historic structure and the variation is the minimum necessary to preserve the historic character and design of the structure.
 - 2. **Application for a Variation of the Standards of Sections 5.03.I.1-3.** Any person owning property or having a possessory or contract interest in property and the consent of the owner, may file an application for variation of the standards of Sections 5.03.I.1, 5.03.I.2., and 5.03.I.3 in regard to such property with the Floodplain Administrator. The application must contain the following information and such additional information as required by Section 11.01.F.:
 - a. The particular standards of Sections 5.03.I.1-3. that prevent the proposed construction on, or use of, the property;
 - b. The existing zoning of the property, including any previously approved modifications, conditions, or proffers;
 - c. The special conditions, circumstances or characteristics of the land, or structure that prevent the use of the land in compliance with the standards of Sections 5.03.I.1-3;
 - d. The particular hardship that would result if the specified standards of Sections 5.03.I.1-3. were to be applied to the property;
 - e. The extent to which it would be necessary to vary the standards of Sections 5.03.I.1-3. in order to permit the proposed construction on, or use of, the property; and

- f. An explanation of how the requested variation conforms to each of the standards set out in Section 5.03.K.4.
3. **Issues for Consideration.** In considering an application for a variation of the standards of Sections 5.03.I.1-3., the following factors must be given reasonable consideration:
 - a. The danger to life and property due to increased flood heights or velocities caused by encroachments;
 - b. The danger that materials may be swept on to other lands or downstream to the injury of others;
 - c. The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination, and unsanitary conditions;
 - d. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owners;
 - e. The importance of the services provided by the proposed facility to the community;
 - f. The requirements of the facility for a waterfront location;
 - g. The availability of alternative locations not subject to flooding for the proposed use;
 - h. The compatibility of the proposed use with existing development and development anticipated in the foreseeable future;
 - i. The relationship of the proposed use to the comprehensive plan and floodplain management program for the area;
 - j. The safety of access by ordinary and emergency vehicles to the property in time of flood;
 - k. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site;
 - l. The historic nature of a structure; and
 - m. Such other factors which are relevant to the purposes of the Zoning Ordinance.
4. **Decision on Application for Variation of the Standards of Sections 5.03.I.1-3.** No such variation of the standards of Sections 5.03.I.1-3. must be approved by the Board of Supervisors unless all of the following findings are made:
 - a. The applicant has demonstrated good and sufficient cause;
 - b. Failure to grant the variation of the standards of Sections 5.03.I.1-3. would result in exceptional hardship to the applicant;
 - c. Granting of such variation of the standards of Sections 5.03.I.1-3. will not result in:
 1. Any increase in base flood elevation of the FOD (Major Floodplain);
 2. Additional threats to public safety;
 3. Extraordinary public expense;
 4. The creation of nuisances;
 5. Fraud or victimization of the public; or
 6. Conflicts with other local laws or ordinances; and
 - d. The variation of the standards of Sections 5.03.I.1-3. is the minimum required to provide relief.
5. **Notice of Approval.** Upon approval of a variation of the standards of Sections 5.03.I.1-3., the Floodplain Administrator must notify the applicant of such approval, in writing, and that development in accordance with the approved variation may increase the risks to life and property and may result in increased premium rates for flood insurance.

5.03.01 FOD Definitions

Alteration: A development action that will change the cross section of the floodplain and will increase either the erosive velocity or height of floodwaters either on-site or off-site. Alterations include, but are not limited to, land disturbing activities.

Base Flood: The flood having a 1% chance of being equaled or exceeded in any given year. Also known as the 100-year flood.

Base Flood Elevation: The water surface elevations of the base flood. The water surface elevation of the base flood is calculated based on the datum specified on Loudoun County's Flood Insurance Rate Map.

Basement: That portion of a building having its floor below ground level on all sides.

Conditional Letter of Map Revision (CLOMR): A formal review and written comment from Federal Emergency Management Agency (FEMA) on a proposed project that would, upon construction, cause an increase in base flood elevation. Upon completion of the construction of such project, a Letter of Map Revision (LOMR) issued by FEMA, determining that the increase was warranted, must be required.

Cross Section: Shape and dimensions of a channel and valley of the floodplain perpendicular to the line of flow.

Development: Any man-made change to improved or unimproved real estate, including, but not limited to, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

Elevated Building: A non-basement building built to have the lowest floor elevated above the ground level by means of solid foundation perimeter walls, pilings, or columns (posts and piers).

Flood or Flooding:

1. A general or temporary condition of partial or complete inundation of normally dry land areas from:
 - a. The overflow of inland waters; or
 - b. The unusual and rapid accumulation or runoff of surface waters from any source; and
 - c. Mudflows which are proximately caused by flooding as defined in paragraph 1.b of this definition and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current; and
2. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature such as a flash flood, or by some similarly unusual and unforeseeable event which results in flooding as defined in paragraph 1.a of this definition.

Flood Insurance Rate Map (FIRM): The official map of Loudoun County on which the Federal Emergency Management Agency (FEMA) has delineated areas in the floodplain subject to inundation of the base flood and the risk premium zones based on the technical data in the Flood Insurance Study. The FIRM that has been made available digitally is called the Digital Flood Insurance Rate Map (DFIRM).

Flood Insurance Study (FIS): A report by Federal Emergency Management Agency (FEMA) that examines, evaluates, and determines flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation, and determination of mudflow and/or flood-related erosion hazards.

Floodplain: Any land area susceptible to being inundated by water from the base flood and having a drainage area greater than 100 acres. For purposes of regulation under this Zoning Ordinance, a distinction is made between the Major Floodplain and Minor Floodplain. Major Floodplain corresponds to Zones AE and A as shown on the FIRM, as may be subsequently revised or amended by Federal Emergency Management Agency (FEMA) and is considered to be the Special Flood Hazard Area by FEMA. All watersheds draining greater than 640 acres must be considered Major Floodplain. Minor Floodplain must correspond to watersheds of 640 acres or less that are not designated as Zone AE or A.

Floodproofing: Any combination of structural and non-structural additions, changes, or adjustments to structures that reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, or structures and their contents.

Floodway: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without any cumulative increase the base flood elevation. Floodways are included within, and regulated as, Floodplain Overlay District (FOD), Major Floodplain. Floodways are not shown on the FIRM but are included within the Special Flood Hazard Area designated on the FIRM, which is regulated as FOD (Major Floodplain).

Freeboard: A factor of safety expressed in feet above a flood level for purposes of floodplain management. “Freeboard” compensates for the many unknown factors that contribute to flood heights greater than the height calculated for Base Flood, such as wave action, bridge openings, and the hydrological effect of urbanization in the watershed.

Historic Structure: Any structure that is:

- A. Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- B. Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- C. Individually listed on the Virginia Landmarks Register; or
- D. Individually listed on the Loudoun County Register of Heritage Resources.

Lowest Floor: The lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area is not considered a building’s lowest floor; provided, that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of Code of Federal Regulations 44CFR § 60.3.

Manufactured Home: A structure constructed and subject to federal regulation, which is transportable in one or more sections; is built on a permanent chassis; is designed to be used as a single-family dwelling, with or without a permanent foundation, when connected to utilities. The term “manufactured home” also includes recreational vehicles placed on a site for greater than 180 consecutive days whether connected to utilities or not.

New Construction: Structures for which the start of construction commenced on or after January 5, 1978. All such structures must comply with the Loudoun County regulations in effect at the time of construction. Any improvement(s) to a structure must comply with the Loudoun County regulations in effect at the time of construction of the improvement(s).

Recreational Vehicle: A vehicle that is:

- 1. Built on a single chassis;
- 2. 400 square feet or less when measured at the largest horizontal projection;

3. Designed to be self-propelled or permanently towable by a light duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational camping, travel, or seasonal use.

Road, Crossing of the Floodplain, or Road Crossing: Any public road, private road, or driveway traversing a floodplain generally perpendicular to the flow of the drainageway.

Special Flood Hazard Area (SFHA): The land in the floodplain subject to a 1% or greater chance of being flooded in any given year. This area corresponds to where the National Flood Insurance Program's (NFIP's) floodplain management regulations must be enforced and includes Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE, and V as shown on the FIRM.

Start of Construction: Means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, substantial improvement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of **accessory structures**, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of the construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Stormwater Management Improvements: Surface or subsurface drainage improvements, storm sewers, detention and retention ponds, and other such improvements as required by the Facilities Standards Manual (FSM), the Loudoun County Stormwater Management Ordinance, Chapter 1096 of the Codified Ordinances of Loudoun County, or the Loudoun County Erosion and Sediment Control Ordinance and Plan, Chapter 1220 of the Codified Ordinances of Loudoun County.

Stream Corridor: Includes the stream and extends in cross section from the channel's Ordinary High-Water Mark towards the upland (perpendicular to the direction of streamflow) to a point on the landscape where channel-related surface and/or soil moisture no longer influence the plant community.

Stream Restoration: Converting an unstable, altered, or degraded stream corridor, including adjacent riparian area and flood-prone areas, to its natural stable condition considering recent and future watershed conditions.

Structure: An assembly of materials forming a construction for occupancy or use including, among others, buildings, stadiums, gospel and circus tents, platforms, staging's, observation towers, telecommunications towers, radio and TV broadcasting towers, water tanks, trestles, piers, open sheds, coal bins, shelters, walls, power line towers, pipelines, railroad tracks, manufactured homes, and gas or liquid storage tanks that are principally above ground.

Substantial Damage: Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred.

Substantial Improvement: Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure before the start of construction of the improvement. This term includes structures which have incurred flood related damages on 2 occasions in which the cost of the repair on the average equaled or exceeded 25% of the market value of the structure at the time of each such flood event or substantial damage regardless of the actual repair work performed. The term does not, however, include either:

- A. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or
- B. Any altering, repair, or rehabilitation of a historic structure, provided that the altering, repair, or rehabilitation will not preclude the structure's continued designation as a historic structure. Historic structures undergoing altering, repair, or rehabilitation that would constitute a substantial improvement as defined above, must comply with all requirements of Section 5.03 that do not preclude the structure's continued designation as a historic structure. Documentation that a specific requirement of Section 5.03 will cause removal of the structure from the National Register of Historic Places or the Virginia Landmarks Register must be obtained from the Secretary of the Interior or the State Historic Preservation Officer. Any exemption from the requirements of Section 5.03 will be the minimum necessary to preserve the historic character and design of the structure.

Utility Lines in the Floodplain: Storm sewers, sanitary sewers, water lines, and similar lines running generally parallel and perpendicular to the flow of the drainageway; and other public utility lines traversing a floodplain generally perpendicular to the flow of the drainageway.

Violation: The failure of a structure or other development to be fully compliant with this Section 5.03. A structure or other development without a Federal Emergency Management Agency (FEMA) approved Elevation Certificate, other certifications, or other evidence of compliance required in this Section 5.03 must be presumed to be in violation until such time as that documentation is provided.

Watercourse: A lake, river, creek, stream, wash, channel, or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial damage resulting from flooding may occur.

5.04 Mountainside Overlay District

Purpose. *The purpose of the Mountainside Overlay District is to regulate land use and development on the mountainsides of Loudoun County, to provide for low density residential development in mountainside areas and to achieve the following goals:*

- *Ensure mountainside development will not result in substantial damage to significant natural resource areas, wildlife habitats, or native vegetation areas;*
- *Ensure that mountainside development is compatible with the slope of the land;*
- *Ensure proper design is used in grading and in the development of structures, roadways, and drainage improvements;*
- *Ensure mountainside conditions are properly identified and incorporated into the planning and development process;*
- *Prevent erosion and minimize clearing and grading;*
- *Protect tree cover and native vegetation;*
- *Ensure all development is compatible with the existing topography and soils conditions; and*
- *Protect mountainside areas to preserve opportunities for passive recreational uses within these areas, such as the Appalachian Trail and other public park sites.*

A. Applicability.

1. The Mountainside Overlay District (MOD) is defined by the presence of certain natural features such as elevation, forests, steep slopes, unstable soils, and groundwater recharge areas that are commonly associated with these areas as shown on the MOD map:

- a. **Somewhat Sensitive Areas.** Areas with potentially slight or limited environmental and/or public safety impacts from development;
- b. **Sensitive Areas.** Areas with moderate environmental and/or public safety impacts from development; and
- c. **Highly Sensitive Areas.** Areas with potentially severe environmental and/or public safety impacts from development.

B. Uses and Activities.

1. **Activities Not Subject to Mountainside Feature Protections and Development Standards.** The following Covered Activities are allowed within the MOD in accordance with the following:
 - a. **Bona Fide Agriculture.** Bona Fide Agriculture (not including any structure) pursuant to Section 4.08.01 is not subject to the Mountainside Feature Protections of Section 5.04.C. or Development Standards of Sections 5.04.D. and 5.04.G. Structures, and Agriculture that is not Bona Fide Agriculture, are subject to Mountainside Feature Protections and Development Standards in Section 5.04;
 - b. **Public Roads.** Public roads shown on the Comprehensive Plan or included in a Capital Improvement Program project are not subject to the Mountainside Feature Protections of Section 5.04.C. or Development Standards of Sections 5.04.D. and 5.04.G. All other roads are subject to Mountainside Feature Protections and Development Standards in Section 5.04.D. and 5.04.G. Public roads shown on the Comprehensive Plan or included in a Capital Improvement Program project must obtain a locational clearance approved by the Zoning Administrator and the Department of Building and Development; and
 - c. **Public Water and Public Sewer.** Public Water and Public Sewer are not subject to the Mountainside Feature Protections of Section 5.04.C. or Development Standards of Sections 5.04.D. and 5.04.G. Public Water and Public Sewer must obtain a locational clearance approved by the Zoning Administrator and the Department of Building and Development.
2. **Covered Activities Subject to Mountainside Feature Protections and Development Standards.** All Covered Activities are subject to the Mountainside Feature Protections in Section 5.04.C. and Development Standards in Sections 5.04.D. and 5.04.G. (including any applicable additional Special Exception approvals required pursuant to Section 5.04.D., except in accordance with the following limitations:
 - a. **Permitted Expansion of an Existing Single-Family Detached Dwelling in a Highly Sensitive Area.** The expansion of any existing single-family detached dwelling that existed within a Highly Sensitive Area prior to October 4, 1995, is not required to obtain a Special Exception approval pursuant to Reference 9 of Table 5.04-4. and must be in accordance with the following standards:
 1. The expansion is subject to the Development standards of Sections 5.04.D. and 5.04.G.;
 2. The expansion must not increase the total floor area or height of the single-family detached dwelling, as existed on October 4, 1995, by more than 50%; and
 3. The expansion is not permitted into a Mountainside Feature Protections; and
 - b. **Permitted Uses and Activities within the Mountainside Feature Protections.** The following Covered Activities are permitted within the Mountainside Feature Protections required under Section 5.04.C., pursuant to the Development Standards of Sections 5.04.D. and 5.04.G.:
 1. Fences and associated clearing to the minimum extent necessary for the installation and maintenance of the fence. Fences must not obstruct surface water flow;
 2. Publicly accessible trails and other passive recreation facilities, including facilities for pedestrian, bike or other non-motorized uses, provided that such facilities are designed with permeable materials;

3. Remedial revegetation and site restoration using Native Plants in accordance with the FSM and restored to pre-land disturbing activity conditions except that the removal of invasive plant species is required in accordance with the reforestation standards in the Facilities Standards Manual (FSM); and
4. On any existing lot of record as of the adoption date of the Zoning Ordinance containing a Mountainside Feature Protections pursuant to Section 5.04.C., up to 1 single-family dwelling, an accessory unpaved or permeable surfaced and maintained Driveway, including a parking area or detached garage, a drainfield for such dwelling, and/or accessory structures pursuant to Section 7.01.04.C.4. are permitted to encroach into the required Mountainside Feature Protections; and

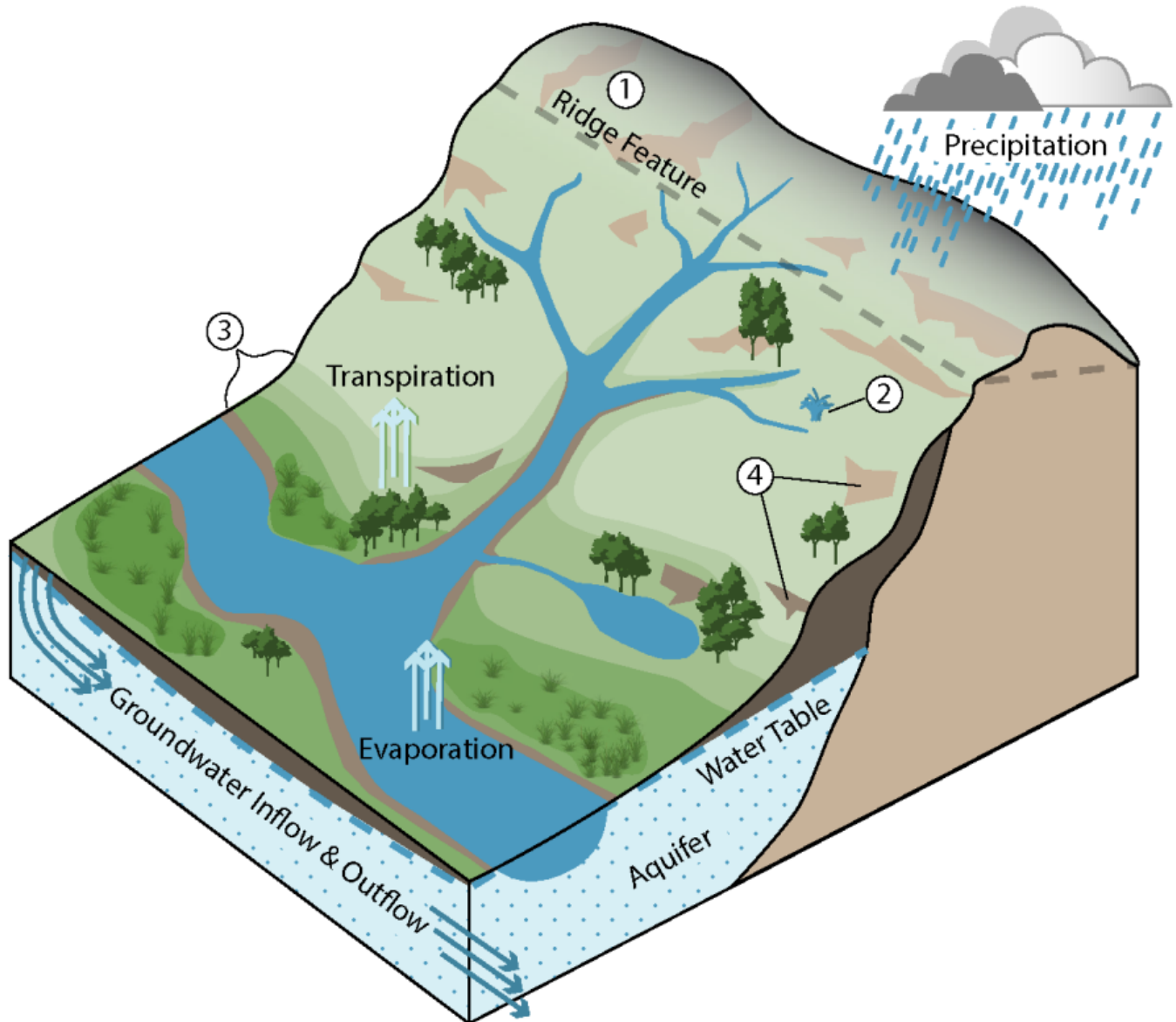
3. **Prohibited Covered Activities.** [Extractive Industries](#) are prohibited within the MOD.

C. Mountainside Feature Protections.

1. Covered activities are subject to the following requirements (refer to Figure 5.04-1):
 - a. **Ridge Feature Protection.** Except as permitted by Section 5.04.B., Covered Activities are not permitted within a Ridge Feature; and
 - b. **Spring Feature Protection.** Except as permitted by Section 5.04.B., Covered Activities must be setback at least 300 feet from a Spring Feature.

Figure 5.04-1 Mountainside Features

Figure 5.04-1 Mountainside Features



1. Ridge Feature, Section 5.04 Mountainside Overlay District

2. Spring, Section 5.04 Mountainside Overlay District

3. River and Stream Corridor Resource Regulations, Chapter 6 Natural and Environmental

4. Steep Slopes Regulations, Chapter 6 Natural and Environmental Resources

2. **Subdivision of Land within Mountainside Feature Protections.** Any subdivision of land subject to any of the Mountainside Feature Protections set forth in Section 5.04.D. must provide a locational clearance demonstrating a Buildable Area exclusive of any Mountainside Feature Protections on any lot.
- D. **Development Standards.** Covered Activities must comply with the following standards. Calculations must be provided consistent with the Sample MOD Clearing and Land Disturbing Area Tabulation in Section 5.04.I.
 1. **Tree Cover Clearing Limitations and Land Disturbing Activity Limitations.** Land disturbing activities are permitted subject to Tree Cover Clearing and Land Disturbing Activity Limitations in Somewhat Sensitive Areas pursuant to Table 5.04-1, in Sensitive Areas pursuant Table 5.04-2, and in Highly Sensitive Areas pursuant to Table 5.04-3.

Table 5.04-1. Tree Cover Clearing and Land Disturbing Activity Limitations Somewhat Sensitive Areas	
Area	Permitted ^{1, 2}
Slopes of less than 15% (forested)	In forested areas, selective clearing of Tree Cover to the extent necessary to locate the use, of up to 25%.
Slopes of 15% to 25% (forested)	In forested areas, selective clearing of Tree Cover, to the extent necessary to locate the use, of up to 25%.
Slopes of 15% to 25% (unforested)	In unforested areas, land disturbing activities are reduced by 50% and are permitted only if the applicant demonstrates that no suitable alternative locations exist on areas with existing slopes less than 15% or outside of the MOD.
TABLE NOTES: 1. Tree Cover is based on the Tree Cover Inventory as defined in the FSM. 2. No additional clearing of Tree Cover is permitted.	

Table 5.04-2. Tree Cover Clearing and Land Disturbing Activity Limitations Sensitive Areas	
Area	Permitted ^{1, 2}
Slopes of less than 15% (forested)	In forested areas, selective clearing of Tree Cover to the extent necessary to locate the use, of up to 25%.
Slopes of 15% to 25% (forested)	In forested areas, selective clearing of Tree Cover, to the extent necessary to locate the use, of up to 25%.
Slopes of less than 15% (unforested)	In unforested areas, land disturbing activities are reduced by 25% and are permitted only if the applicant demonstrates that no suitable alternative locations exist on areas outside of the MOD.
Slopes of 15% to 25% (unforested)	In unforested areas, land disturbing activities are reduced by 75% and are permitted only if the applicant demonstrates that no suitable alternative locations exist on areas with existing slopes less than 15% or outside of the MOD.
TABLE NOTES: 1. Tree Cover is based on the Tree Cover Inventory as defined in the FSM. 2. No additional clearing of Tree Cover is permitted.	

Table 5.04-3. Tree Cover Clearing and Land Disturbing Activity Limitations Highly Sensitive Areas	
Area	Permitted ^{1, 2}
Slopes of less than 15% (forested)	In forested areas, selective clearing of Tree Cover to the extent necessary to locate the use, of up to 15%.
Slopes of 15% to 25% (forested)	In forested areas, selective clearing of Tree Cover, to the extent necessary to locate the use, of up to 15%.
Slopes of less than 15% (unforested)	In unforested areas, land disturbing activities are reduced by 25% and are permitted only if the applicant demonstrates that no suitable alternative locations exist on areas outside of the MOD.
Slopes of 15% to 25% (unforested)	In unforested areas, land disturbing activities are reduced by 75% and are permitted only if the applicant demonstrates that no suitable alternative locations exist on areas with existing slopes less than 15% or outside of the MOD.
TABLE NOTES: 1. Tree Cover is based on the Tree Cover Inventory as defined in the FSM. 2. No additional clearing of Tree Cover is permitted.	

2. **General.**

Table 5.04-4. General Development Standards		
	Standard	
In All MOD Areas (Somewhat Sensitive, Sensitive, and Highly Sensitive)		
1	Grading Permit	A grading permit is required that demonstrates methods to minimize erosion.
2	Land Disturbing Activity Reduction in Major Groundwater Recharge Areas	The limits of land disturbing activities are reduced by 50% in the following soil conditions associated with major groundwater recharge areas: soil mapping units 27, 50, 52, 55, and 89.
3	Land Disturbing Activity Minimization in Soil Mapping Units 59 or 88	No land disturbing activity is permitted on soil mapping units 59 or 88 except for Local Access Roads and Driveways when no alternatives exist.
4	Remedial Revegetation, and Site Restoration	Any land disturbing activity located outside of the limits of disturbance approved for a permitted use must be revegetated with Native Plant vegetation in accordance with the FSM and restored to pre-land disturbing activity conditions to the maximum extent possible.
5	Scaled Exhibit	Prior to any land disturbing activity, the applicant must provide a scaled exhibit that shows the existing and proposed slope contour and ground cover and how the disturbed area will be restored. If the exhibit is associated with an application, the exhibit must be the same size and scale as the associated application.
6	Special Exception for Subdivision	The subdivision of land into 3 or more lots requires Special Exception approval.
7	Tree Cover Clearing Minimization in Very Steep Slopes	No Tree Cover clearing of existing slopes greater than 25%, including any clearing for roads and drives, except when no alternatives exist.
8	Tree Cover Inventory	A Tree Cover Inventory is required pursuant to the FSM.
9	Type 1 Preliminary Soils Review	Prior to any land disturbing activity on existing slopes of 25% or more, or in soil mapping units 27, 59, 88 or 89, the applicant must provide a Type I Preliminary Soils Review in accordance with the FSM concurrent with Zoning Permit or Grading Permit application, whichever comes first.
In Highly Sensitive Areas		
10	Geotechnical Study	When no alternatives exist to land disturbing activity on soil mapping units 59 or 88, a Geotechnical study must be approved by the Department of Building & Development.
11	Grade, Drainage, and Culvert Design of Private Roads and Driveways	The centerline grade of private roads and Driveways must not exceed 14%. Under drainage and culvert design must conform to the requirements of the FSM.
12	Special Exception for all Covered Activities	Special Exception approval is required for all Covered Activities in Highly Sensitive Areas.

- No Grading Permit for Limited Residential or Agricultural Accessory Structures:** In unforested areas of slopes of 0% to 15% that are also located within somewhat sensitive areas, no grading permit is required for structures of 600 square feet or less for the following types of structures associated with a residential or agricultural use: sheds, greenhouses, chicken coops, and similar small structures requiring no land disturbing activity
- Modification of Specific Development Standards for Residential Uses.** Standards for Sensitive, Somewhat Sensitive, and Highly Sensitive Areas set out in Tables 5.04-1, 5.04-2, 5.04-3, and References 10 and 11 of Table 5.04-4 may be modified by Special Exception Review procedures set forth in Section 10.11.01 if the applicant demonstrates that no alternatives exist on areas with slopes less than 15% or areas outside of the MOD and if the application satisfies the public purpose of those standards to an equivalent degree.
- Development Standards for Nonresidential Covered Activities.** In addition to the Development Standards in Section 5.04.D., all nonresidential Covered Activities must comply with the following standards. Calculations must be provided consistent with the Sample MOD Clearing and Land Disturbing Area Tabulation in Section 5.04.I.

Table 5.04-5. Development Standards for Nonresidential Covered Activities		
	Standard	
1	Geotechnical Study	All grading and land disturbing activity must be addressed in a geotechnical study prepared in accordance with the FSM.
2	Permeable Surfaces	50% of required parking must be of a permeable material and any overflow or special event parking ¹ must use and maintain surfaces or paving materials that are permeable to stormwater.
3	Preservation of Existing Forested Area	Covered Activities must demonstrate that a minimum of 30% of existing forested areas are retained and Tree Canopy Coverage is provided on site.
4	Protective Measures and Other Mitigation	Where the resources and/or habitat cannot be feasibly avoided as described in the standards in Table 5.04-5, References 5 and 6, the Owner must consult with the County and Other Review Agencies to develop protective measures and alternative mitigation efforts for implementation.
5	Tree Cover Inventory, Tree Conservation Plan, Invasive Species Management Plan	Existing vegetation must be preserved to the maximum extent possible, and the following must be submitted in accordance with the FSM:
6	Virginia Natural Heritage Resources	Virginia Natural Heritage Resources must be identified on a site, and any proposed Covered Activities must demonstrate no disturbance or impact to any Natural Heritage Resources as verified by the Virginia Department of Conservation and Recreation.
7	Virginia Wildlife and Habitat	Wildlife and habitat listed in the Northern Virginia Planning Region of the Virginia Wildlife Action Plan must be identified on a site, and any proposed Covered Activities must demonstrate no disturbance or impact to any wildlife or habitat as verified by the Virginia Department of Wildlife Resources.
TABLE NOTES: ¹ Overflow or special event parking is temporary vehicle parking that is accessory to an approved use, located in an area other than the designated parking area depicted on an approved Site Plan or other County-approved plan, and used when the designated parking area has no available parking.		

- E. **Additional MOD Procedures.** Refer to Section 10.01.F.3.d. for additional MOD procedures and submission requirements.
- F. **Sample MOD Clearing and Land Disturbing Area Tabulation.** Calculations pursuant to the Development Standards in Sections 5.04.D. and 5.04.G. must be provided consistent with the following sample tabulation format.

Table 5.04-6. Sample MOD Clearing and Land Disturbing Area Tabulation					
	Limits of Land Disturbing Activities ^{1,2}				
Area (Acres)	Slopes Less than 15%	Slopes 15% to 25%	Slopes Greater than 25%	Area (Acres)	Total Area (Acres)
Somewhat Sensitive MOD					
Unforested Area	4.67	5.89	0.16	10.72	13.70
Forested Area	1.22	1.62	0.14	2.98	
Total Unforested Area to Be Disturbed	0.75	0.33	0.00	1.08	1.48
Total Forested Area to be Disturbed	0.25	0.15	0.00	0.40	
Total Disturbance Allowed - Unforested	4.67	2.95	0.00	7.62	8.33
Total Disturbance Allowed - Forested	0.31	0.41	0.00	0.72	
Sensitive MOD					
Unforested Area	3.56	6.23	5.27	15.06	22.94
Forested Area	1.73	2.54	3.61	7.88	
Total Unforested Area to Be Disturbed	0.76	0.23	0.00	0.99	1.19
Total Forested Area to be Disturbed	0.12	0.08	0.00	0.20	

Table 5.04-6. Sample MOD Clearing and Land Disturbing Area Tabulation

	Limits of Land Disturbing Activities ^{1,2}				
Area (Acres)	Slopes Less than 15%	Slopes 15% to 25%	Slopes Greater than 25%	Area (Acres)	Total Area (Acres)
Total Disturbance Allowed - Unforested	2.67	1.56	0.00	4.23	5.30
Total Disturbance Allowed - Forested	0.43	0.64	0.00	1.07	
Highly Sensitive MOD					
Unforested Area	1.68	2.15	0.27	0.74	3.14
Forested Area	0.47	1.02	0.69	2.40	
Total Unforested Area to Be Disturbed	0.74	0.00	0.00	0.74	0.80
Total Forested Area to be Disturbed	0.06	0.00	0.00	0.06	
Total Disturbance Allowed - Unforested	1.26	0.54	0.00	1.80	2.02
Total Disturbance Allowed - Forested	0.07	0.15	0.00	0.2	

TABLE NOTES:

¹The above limits of land disturbing activity are reduced by 50% in the following soil conditions: 27, 50, 52, 55 and 89.

²No land disturbing activity is permitted on soil mapping units 59 or 88 except for local access roads and driveways when no alternatives exist.

³Specific figures provided in this sample tabulation are provided for illustrative purposes only.

5.05 Limestone Overlay District

Purpose. The purpose of the Limestone Overlay District is to preserve and protect the unique geologic characteristics and the groundwater quality in its limestone area. The provisions of Section 5.05 are intended to regulate land use and development in areas underlain by limestone and in areas with Karst features and Karst terrain to:

- Protect the health, safety, and welfare of the public, resulting from subsidence or other earth movement;
- Protect groundwater and surface water resources from contamination; and
- Reduce the potential for property damage resulting from subsidence or other earth movement.

A. Authority. Authority for these provisions includes:

1. Code of Virginia, Planning, Subdivision of Land and Zoning, Chapter 22 of Title 15.2;
2. Code of Virginia, Soil and Water Conservation, Chapter 5 of Title 10.1;
3. Code of Virginia, Environmental Quality, Chapter 11.1 of Title 10.1;
4. Code of Virginia, State Water Control, Chapter 3.1 of Title 62.1; and
5. Uniform Statewide Building Code.

B. Applicability.

1. **Covered Activities.** Section 5.05 applies to Covered Activities within the Limestone Overlay District (LOD).
2. **Covered Activities Not Subject to Limestone Overlay District Setbacks and Development Standards.** The following Covered Activities are permitted within the LOD subject to the following regulations, and are not subject to LOD Setbacks and Development Standards:
 - a. **Bona Fide Agriculture.** Bona Fide Agriculture (not including any structure), pursuant to Section 4.08.01. **Exception.** As specified in Section 5.05.B.2.d., Structures, and Agriculture that is not Bona Fide Agriculture is subject to LOD Setbacks and Development Standards;
 - b. **Gardens.** Gardens, except that no cutting, filling, or berming is permitted to create such garden;
 - c. **Paving of Existing Driveways.** The paving of any driveway that existed on February 17, 2010, except that any proposed paving requires a locational clearance approved by the Department of Building and Development; and

- d. **Structures or Land Disturbance of 600 Square Feet or Less.** Any land disturbing activities or structures involving the disturbance of 600 square feet or less of land, subject to the following:
 1. Land disturbing activities are not permitted within 20 feet of a Karst/Sensitive Environmental Feature;
 2. No structures, even if 600 square feet or less, are permitted within the Karst/Sensitive Environmental Feature Setback;
 3. Section 5.05.B.2.d. does not apply to swimming pools, principal dwellings, and accessory dwellings, or to structures or land disturbing activities whose purpose is to change water flow; and
 4. Section 5.05.B.2.d. does not apply to wells, except in cases involving the replacement of a dry well serving an existing inhabited structure.

C. Identification of Karst/Sensitive Environmental Features and Required Setbacks.

1. **Geophysical Study.** For all Covered Activities on properties located within the LOD, the applicant must submit a Geophysical Study in accordance with Chapter 6 of the Facilities Standards Manual (FSM). The Geophysical Study must identify the following Karst/Sensitive Environmental Features associated with limestone bedrock:
 - a. Sinkholes, Swallets, or Closed depressions;
 - b. Rock outcrops;
 - c. Underground solution channels within 45 feet of the surface;
 - d. Cave openings;
 - e. Springs; and
 - f. Perennial Sinking Streams.
2. **Geotechnical Report.** A Geotechnical Report in accordance with Chapter 6 of the FSM is required to verify the location, extent, and conditions of any of the Karst/Sensitive Environmental Features listed in Section 5.05.C.1. whenever recommended by the Geophysical Study.
3. **Karst/Sensitive Environmental Feature Setbacks.** Each Karst/Sensitive Environmental Feature within the LOD including, without limitation, those identified by any required Geophysical Study, or any Preliminary Soils Review as required by the Facilities Standards Manual, must be identified on the land development application and is subject to the setbacks specified in Table 5.05-1.

Table 5.05-1. Karst/Sensitive Environmental Feature Setbacks

	Karst/Sensitive Environmental Feature	Minimum Setback ¹
1	Cave Opening	100 ft
2	First emergence of a spring	100 ft
3	First emergence of a spring that is on a slope greater than 15% and is downslope from the land disturbing activities, development, or impervious surface coverage	200 ft
4	Perennial Sinking Stream	100 ft
5	Rock Outcrop (setback required for drilling any well)	10 ft
6	Sinkhole, swallet, or closed depression	100 ft
7	Underground solution channels within 45 feet of the surface	50 ft
8	Any other identified Karst/Sensitive Environmental Feature	50 ft

TABLE KEY:

ft = feet

TABLE NOTES:

¹ The minimum setback is measured outward from the outermost edge of the Karst/Sensitive Environmental Feature as described in Table 5.05-1.

4. **Reduction of the Karst/Sensitive Environmental Feature Setbacks.** The Karst/Sensitive Environmental Feature Setback may be reduced by up to 50% if the Geophysical Study concludes that the risks of collapse and groundwater contamination are non-existent or insignificant for the proposed location and use. However, no reduction is permitted for the Karst/Sensitive Environmental Feature Setback associated with the following:

- a. Any Perennial Sinking Stream;
- b. Any spring;
- c. Any sinkhole, swallet, closed depression, or cave opening that receives either a perennial or intermittent sinking stream; and
- d. Any rock outcrop (for drilling any well).

F. Uses and Activities.

1. **Prohibited Pollution Sources.** The following Covered Activities are prohibited within the LOD:
 - a. Facilities or uses that generate or manufacture hazardous substances;
 - b. Storage of hazardous substances in an aggregate amount greater than 55 gallons (or the dry weight equivalent) on site at any one time, excluding heating oil or gasoline within above ground storage tanks;
 - c. Automotive Use Category uses identified in Section 3.02;
 - d. Underground storage tanks, except for propane tanks and water cisterns shown on an approved Geophysical Study;
 - e. Waste-related Use Category uses identified in Section 3.02; and
 - f. Convenience store (with gasoline sales).
2. **Permitted Uses and Activities Within Karst/Sensitive Environmental Feature Setbacks.** The following Covered Activities are permitted within Karst/Sensitive Environmental Feature Setbacks subject to required LOD Development Standards under Section 5.05.E. and Mitigation Measures under Section 5.05.F.
 - a. Fences that do not obstruct surface water flow.
 - b. Publicly accessible trails and other passive recreation facilities, including facilities for pedestrian, bike or other non-motorized uses, provided that such facilities are designed with permeable materials and setback a minimum of 25 feet from each Karst/Sensitive Environmental Feature.
 - c. Restoration and vegetation, including the removal of invasive plant species in accordance with the reforestation standards in the Facilities Standards Manual.
 - d. Residential structures are prohibited within Karst/Sensitive Environmental Feature Setbacks. **Exception.** Any lot existing on February 17, 2010, where there is no feasible development site available outside of the Karst/Sensitive Environmental Feature Setback, a single principal dwelling, an accessory unpaved or permeable surfaced and maintained Driveway, including a parking area or detached garage, and/or a drainfield for such principal dwelling, if otherwise permitted under this Zoning Ordinance, may be permitted if, prior to the approval of a Zoning Permit, the following requirements are met:
 1. A Geophysical Study is provided for the proposed principal dwelling and/or drainfield;
 2. All recommendations of the Geophysical Study are complied with;
 3. Such principal dwelling and/or drainfield, is sited on the lot as far from the Karst/Sensitive Environmental Feature as feasible;
 4. If the Geophysical Study shows that subsidence poses a serious risk to public health or safety or to the safety of residents or users of the proposed principal dwelling and/or drainfield, the

design of the proposed principal dwelling and/or drainfield must be certified, both structurally and geotechnically, by a professional engineer; and

5. No other structures are permitted within the Karst/Sensitive Environmental Feature Setback.

3. **Permitted Uses and Activities Outside of Karst/Sensitive Environmental Feature Setbacks.** For Covered Activities see Section 5.01.E. All such Covered Activities are subject to Development Standards in Section 5.05.E. and Mitigation Measures in Section 5.05.F.

4. **Permitted Changes to Legally Existing Covered Activities within the LOD.** The expansion, alteration, or reconstruction of existing structures, and impervious surfaces that legally existed on February 17, 2010, is permitted and is not subject to the Development Standards under Section 5.05.E. or Mitigation Measures under Section 5.05.F., provided that:

- a. Such alteration does not increase the total footprint of a structure, or increase total impervious surface area (exclusive of existing structures), as it existed on February 17, 2010, by more than 25% or 2,000 square feet, whichever is greater;
- b. Any such expansion, alteration, or reconstruction does not encroach into a Karst/Sensitive Environmental Feature Setback;
- c. If the existing structure, or impervious surface is located within a Karst/Sensitive Environmental Feature Setback, then such expansion, alteration, or reconstruction must not get closer to the Karst/Sensitive Environmental Feature than the closest point of the existing structure, or impervious surface as it existed on February 17, 2010;
- d. If expansion away from a Karst/Sensitive Environmental Feature is not feasible, then such expansion may get closer to the Karst/Sensitive Environmental Feature if such expansion is in conformance with Section 5.05.D.2.4;
- e. A locational clearance for the expansion or alteration is approved by the Department of Building and Development; and
- f. A locational clearance is not required for the reconstruction of a structure, or impervious surface in the exact location it occupied on February 17, 2010.

G. **Creation of New Lots within the LOD.** Prior to approval of any buildable lot created after February 17, 2010, the applicant must demonstrate on a scaled plat, plan, or exhibit that there is a sufficient area on the lot outside of the Karst/Sensitive Environmental Feature Setbacks for intended uses, to include sewage disposal and well sites, where applicable, unless an approved sewage disposal site already exists that is subject to Section 1066.17 of the Codified Ordinances and/or an approved well site already exists that is subject to Section 1040.19 of the Codified Ordinances.

H. **Development Standards for the LOD** unless otherwise specified in the LOD.

1. **Structures in Potential Subsidence Areas.** Structures are prohibited in all areas where a Geophysical Study indicates that potential subsidence may occur that would cause property damage, physical injury, or harm to the public or future residents, unless there are no alternative locations within a given lot of record, and a subsequent Geotechnical Report indicates that such potential harm can be mitigated. In such cases the structures must be constructed in accordance with all mitigation techniques recommended by the Geotechnical Report.
2. **Site Grading.** A grading permit is required for all land disturbing activities. Site grading, including any fill or berm placement, must maintain natural drainage patterns. A Geophysical Study is required for all berms and filling operations.
 - a. If no alternative exists other than to impact natural drainage patterns, then drainage must be designed to avoid damage to Karst/Sensitive Environmental Features as identified in the required Geophysical Study, and in any subsequently required Geotechnical Report, by mimicking pre-development volumes.

- b. For decks, if the required Geophysical Study does not identify any Karst/Sensitive Environmental Features, a grading permit will not be required if written documentation is provided that the footers for the deck can be hand-dug.
3. **Surface Water Run-Off.**
- a. Non-point source pollution load of surface runoff from land disturbing activity that is naturally conveyed to a Karst/Sensitive Environmental Feature identified in Table 5.05-1 must meet the stormwater quantity and quality standards specified in Chapter 5 of the FSM prior to entering such feature(s).
 - b. Surface water runoff must not be redirected or concentrated to enter a Karst/Sensitive Environmental Feature identified in Table 5.05-1.
 - c. Post-development flow of surface water runoff to a Karst/Sensitive Environmental Feature identified in Table 5.05-1 that receives a sinking stream must be the same as pre-development flow of surface water runoff to such Karst/Sensitive Environmental Feature.
4. **Limits of Disturbance and Revegetation.** Disturbed areas must be limited to what is necessary to locate the use, and any disturbed areas that are not covered by paving, stone, or other solid materials must be revegetated.
5. **Water Supply.** Water supply is subject to Section 6.200 of the FSM, the Virginia Department of Health Private Well Regulations and/or the Virginia Department of Health Waterworks Regulations as applicable, and the following standards:
- a. Wells are allowed in the LOD for individual lots and subdivisions with fewer than 15 lots, and for subdivisions in which each lot of the subdivision contains 10 or more acres of land. Installation of wells is subject to Chapter 1040 of the Codified Ordinances and Section 1245.10 of the Loudoun County Subdivision and Development Ordinance (LSDO); and
 - b. Community water supply systems are required for all subdivisions of 15 or more lots approved after February 17, 2010, except for subdivisions in which each lot of the subdivision contains 10 or more acres of land. If a community water supply system is required for the subdivision, all lots must be served by the community water supply system.
6. **Sewage Disposal.** Sewage is subject to the following: Individual sewage disposal Systems are allowed in the LOD for individual lots and subdivisions with fewer than 15 lots, and for subdivisions in which each lot of the subdivision contains 10 or more acres of land. Individual sewage disposal systems are subject to Chapter 1066 of the Codified Ordinances, and Chapter 1067 of the Codified Ordinances if applicable, Section 1245.10 of the LSDO, and must comply with requirements of the Virginia Department of Health – Division of Sewage and Water Services and the Loudoun County Health Department.
7. **Public Sewer or Wastewater Systems.** Public sewer or community wastewater systems designed in accordance with applicable Loudoun Water standards are required for all subdivision of 15 or more lots approved after February 17, 2010, except for subdivisions in which each lot of the subdivision contains 10 or more acres of land or if the applicant demonstrates to the County that other types of systems are available that will achieve and maintain the same or superior treatment results. Community wastewater systems in the LOD are subject to the following standards:
- a. Public sewer or community wastewater systems must be located outside of Karst/Sensitive Environmental Feature Setbacks if sufficient Buildable Area exists on the property; or
 - b. Where insufficient Buildable Area exists on the property outside of the Karst/Sensitive Environmental Feature Setbacks the following standards must be met:
 - 1. As much of the proposed public sewer or community wastewater system must be located outside the Karst/Sensitive Environmental Feature Setbacks as possible; and

2. The applicant must demonstrate through a Geophysical Report and Detailed Soils Site Investigation Report acceptable to the County that the public sewer or community wastewater system will:
 - a. Not result in a change in the levels of pre-development run-off within the Karst/Sensitive Environmental Setbacks area;
 - b. Enhance soils filtration; and
 - c. Not have an adverse environmental impact on underlying aquifers and groundwater; and
- c. All public sewer or community wastewater systems must be capable of producing secondary effluent, or better, as identified in the Sewage Handling and Disposal Regulations of Virginia.
- I. **Golf Course Use.** Any golf course use within the LOD must meet the following standards:
 1. A Water Management Plan must be approved by the Department of Building and Development; and
 2. A Nutrient Management Plan must be approved by the Loudoun County Soil and Water Conservation District and the Department of Building and Development.
- J. **Stormwater Management Improvements.** Stormwater management improvements constructed within the LOD must meet the following standards:
 1. Must not be located within Karst/Sensitive Environmental Feature Setbacks;
 2. Must provide a Geophysical Study; and
 3. Stormwater management ponds, sediment traps, and sediment basins must be lined with impervious materials in accordance with Chapter 5 of the FSM.
- K. **Irrigation Systems.** Irrigation systems are prohibited unless the water for such system is supplied from a source that is not dependent on groundwater, such as, but not limited to, cisterns and stormwater management ponds. Community water supply systems that obtain water through community wells are not an acceptable source of water for irrigation systems.
- L. **Explosives and Blasting.** Blasting within LOD is subject to Section 6.157 of the FSM.
- M. **Notice to Property Owners.** The following or similar language must be contained in all deeds of conveyance and on all subdivision plats and Site Plans applicable to land in the LOD:
 1. "In addition to the requirements of any underlying zoning district(s) and any other applicable overlay districts, this property also is subject to the requirements of the Limestone Overlay District (LOD). Please contact the Zoning Administrator for more information."
 2. "Maintenance of Individual Sewage Disposal Systems must be done in accordance with all State and County requirements to help prevent potential groundwater contamination."
- N. **Mitigation Measures for the LOD.** In addition to compliance with the development standards in Section 5.05.F., Covered Activities must employ measures necessary to mitigate any potential adverse impacts to the County's subsurface water resources or Karst/Sensitive Environmental Features associated with limestone bedrock, as identified in the required Geophysical Study as set forth in Section 5.05.D., and any subsequently required Geotechnical Report, or in any other study required by the Zoning Ordinance, LSDO, or FSM.
 1. **General.** Mitigation measures must be directly related to proposed land disturbing activities and its potential adverse impact on the County's water resources or Karst/Sensitive Environmental Features associated with limestone bedrock identified on the subject property.
 2. **Mitigation Measures.** If mitigation measures are recommended by a study required by the Zoning Ordinance, LSDO, or FSM to protect against ground surface collapse, surface or groundwater pollution, and/or spring contamination, the County must require such measures to mitigate the identified adverse impacts. Such measures may include, but are not limited to, the following list. This provision must not be construed to limit the County's ability to impose mitigating conditions in its review of Special Exception

applications, nor its ability to accept mitigating proffers in its review of Zoning Map Amendment applications.

- a. **Ineligibility for Density Increases.** The applicant may not be eligible for density increases otherwise permitted for cluster subdivisions under the Zoning Ordinance.
 - b. **Use of a Cluster Subdivision.** Where not otherwise required by this Zoning Ordinance, the County may require that new lots be created through a cluster subdivision.
 - c. **Landscaping and Reductions in Impervious Surface Coverage.** The County may require:
 1. Reductions in the maximum impervious surface coverage allowed;
 2. Reductions in the area devoted to landscaped lawns; and
 3. Use of xeriscape (i.e., use of native plant materials and landscape materials that have lower water and nutrient requirements).
 - d. **Storage Tank Testing and Containment.** The County may require leak testing and secondary containment for above ground storage tanks other than propane or water tanks.
 - e. **Conservation of Native Plants.** The County may require retention of existing Native Plant vegetation to the maximum extent feasible, and in accordance with Tree Conservation Standards in Chapter 7 of the FSM.
 - f. **Groundwater Protection.** The County may require the applicant to establish a regular system of groundwater monitoring by a qualified professional for the proposed development and such other measures as may be recommended by other County Ordinances.
 - g. **Prohibition of Additional Specific Pollution Sources.** The County may prohibit specific pollution sources, as defined in Chapter 5 of the FSM as "stormwater hotspots," and other uses and activities with high risk of releasing pollutants, if the applicant does not propose effective mitigation measures acceptable to the County, provide evidence that such pollution sources will be monitored, and that facility design standards will be followed.
- O. **Additional LOD Procedures.** Refer to Section 10.01.F.3.c. for additional LOD procedures and submission requirements.

5.06 Quarry Notification Overlay District

Purpose. *The purpose of the Quarry Notification Overlay District is to acknowledge the unique land use impact of a quarry on neighboring land uses and the need to notify the owners of the presence of a neighboring quarry.*

- A. **Applicability and District Boundaries.** The Quarry Notification Overlay District (QNOD) boundaries are based on the presence of quarrying operations at any location in the County. The QNOD includes all parcels within 3,000 feet of any property approved for quarrying operations whether or not blasting operations occur on such property.
- B. **Use Limitations.** In addition to the use limitations and regulations for the zoning district over which the QNOD is located, the following use limitation applies: **Full Disclosure Statement.** For all residential and/or nonresidential structures constructed within the QNOD, the owner must disclose in writing to all prospective purchasers that they are located within an area that may be impacted by quarry operations and blasting. Such notification will be accomplished by inclusion of this information in all of the following:
 1. Deeds of conveyance;
 2. Subdivision plats and Site Plans;
 3. Owners Association documents;
 4. Illustrative Site Plan(s) on display within any sales related office(s);
 5. Promotional documents;

6. Brochures; and
7. Sales contracts.

5.07 Village Conservation Overlay District

Purpose. *The purpose of the Village Conservation Overlay District is to:*

- *Implement the Rural Historic Village Place Type of the General Plan;*
- *Recognize that each Rural Historic Village has a unique character linked to its historic development pattern, spatial organization, and location within Loudoun County, and sense of place that should be preserved and enhanced;*
- *Support the retention and reinforcement of historic development patterns, character, and visual identity of individual villages;*
- *Protect the small, compact, pedestrian-scale, rural communities characterized by low-density residential development situated on smaller lots interspersed with limited commercial uses and encourage extension of this development pattern when new construction occurs;*
- *Protect and reinforce the commercial core of villages that provides for the daily needs of village residents, surrounding rural residents, and visitors;*
- *Ensure new commercial and residential construction is designed to complement surrounding properties and maintain the existing development pattern within each Village by:*
 - *Respecting each village's historic precedents for lot size, building setbacks, spacing, and orientation to the road; and*
 - *Considering the context of each village's historic buildings by designing new buildings that are compatible in siting, size, scale, massing, materials, design details, and roof forms; and*
- *Maintain areas of open space and natural areas on the perimeter of the villages to retain a hard edge and visual separation of the Rural Historic Villages from the surrounding agricultural landscape; and*
- *Preserve existing trees and vegetation, which define building lots and contribute to the streetscape.*

A. **Applicability.** The Village Conservation Overlay District (VCOD) is established as an overlay district, meaning that it is a district overlaid upon other districts. Land within the VCOD may be used as permitted in the underlying zoning district, subject to the VCOD Development Standards of this overlay district.

B. **District Boundaries.** The VCOD boundaries are as established on the adopted zoning map and affect the following villages:

1. Aldie;
2. Ashburn;
3. Bluemont;
4. Bowmantown (also known as Aldie Mountain);
5. Lincoln;
6. Loudoun Heights;
7. Lucketts;
8. Neersville;
9. Paeonian Springs;
10. Philomont;
11. St. Louis;
12. Taylorstown; and

13. Waterford.

- C. **Expansion of VCOD Boundaries.** Expansion of the VCOD is only permitted in areas designated as the Rural Historic Village Place Type in the General Plan.
- D. **VCOD Development Standards.** The following development standards apply to all new construction, including additions to an existing building and accessory buildings, and new subdivisions within the VCOD. When the following development standards conflict with other provisions of the Zoning Ordinance, the following apply unless otherwise noted.
1. **Building Height.** Proposed buildings must have a building height that does not exceed 25% of the average height of principal buildings on the same side of the road within 150 feet of both sides of the lot or lots being developed that have the same number of stories that are provided by the proposed building to meet Section 5.07.D.2.a. The building height is not permitted to exceed the maximum building height permitted in the underlying zoning district.
 2. **Building Features.** Proposed buildings should be consistent with the following building design elements of existing buildings within 300 feet of the lot or lots being developed:
 - a. Building stories;
 - b. Roof type;
 - c. Front or side (if visible from the road) porch type and location; and
 - d. Building orientation.
 3. **Building Area.** The gross square footage of proposed buildings must be within 50% of the average gross square footage of principal buildings on the same side of the road within 150 feet of both sides of the lot or lots being developed.
 4. **Average Front Yard.** Notwithstanding the front yard requirements for the underlying zoning district, the depth of a front yard on a lot on which a principal building or an addition to an existing principal building is proposed must have a front yard depth that is within 25% of the average distance between principal buildings and front lot lines of lots on the same side of the road and within 150 feet of both sides of the lot being developed. For nonconforming front yards with principal buildings that encroach into right-of-way, a 0-foot front yard will be used in the average front yard depth calculation.
 5. **Average Side Yard.** The depth of the side yard on a lot on which a principal building or an addition to an existing principal building is proposed must have a side yard depth that is within 50% of the average distance between principal buildings and side lot lines on the same side of the road and within 150 feet of both sides of the lot being developed. Side yards are not permitted to be less than the minimum side yard permitted in the underlying zoning district.
 6. **Average Rear Yard.** Notwithstanding the rear yard requirements for the underlying zoning district, the depth of the rear yard on a lot on which a principal building or an addition to an existing principal building is proposed must have a rear yard depth that is within 50% of the average distance between principal buildings and rear lot lines of lots on the same side of the road and within 150 feet of both sides of the lot being developed.
 7. **Lot Coverage.** The maximum lot coverage for existing lots less than 1 acre in size may be increased by up to 25% of the maximum lot coverage permitted in the underlying zoning district for the purpose of constructing an addition to an existing principal building or an accessory building.
 8. **Maximum Lot Size.** The size of any new lot is not permitted to be greater than the largest existing lot along the same road as and within 100 feet of the new lot.
 9. **Variation of Lot Sizes and Dimensions.** In all new subdivisions containing 6 or more lots, a mixture of lot sizes and dimensions must be provided as follows:

- a. No more than 33% of all lots are permitted to be similar in total lot area. For purposes of this Section 5.07.D.9., “similar” lot areas are defined as within 500 square feet of each other;
 - b. The lot width for new lots must be within 51% of the average of the smallest lot width and the largest lot width of existing residential lots within 300 feet of the subject lot or lots to be subdivided and in the VCOD. **Exception.** If the subject lot or lots to be subdivided is not within 300 feet of an existing residential lot in the VCOD, the lot width requirement does not apply;
 - c. Average side yard requirements pursuant to Section 5.07.D.5. and average rear yard requirements pursuant to Section 5.07.D.6. do not apply;
 - d. Larger and wider lots are encouraged on corners; and
 - e. Smaller lots are encouraged adjacent to parks and open spaces.
10. **Garages** Garages constructed in the VCOD must meet the following requirements:
- a. Front-loaded garages are subject to a set back at least 20 feet behind the front plane of all principal buildings. **Exception.** When a lot on the same side of the road and within 150 feet of the subject lot has a garage with a setback less than 20 feet from the front plane of all principal buildings on such lot, the minimum garage setback may be equal to the garage setback on such lot;
 - b. Garages must be detached from the principal building; and
 - c. The maximum width and height of a garage door opening is the width and height needed to accommodate two automobiles.
11. **Connections to Existing Roads.** Within the VCOD, the connections to the existing road network for any new development must be provided pursuant to Section 7.07.02 and as follows:
- a. If feasible, the new road must be designed in a way that does not terminate before connecting or intersection with another road;
 - b. The road network for new developments of 6 or more lots must connect to existing roads where feasible and continue the predominate road pattern in the village:
 1. When blocks are the predominate road pattern, the length of new blocks must be within 30% of the average existing length of blocks in the village;
 2. Blocks designed to include a mid-block through-alley may be a maximum of 2 times the average existing length of blocks without a mid-block through-alley in the village; and
 - c. The road network for new developments must incorporate and connect to road connections provided by previously approved adjacent developments.
12. **Sidewalks.** Sidewalks may be provided for the lot, or lots being developed in accordance with the Facilities Standards Manual (FSM).
13. **Street Trees.** Street trees must be provided in accordance with Section 7.04.02.E.

5.08 Historic Overlay District

Purpose. The purpose of the Historic Overlay District is to:

- Protect the historic character and resources of established Historic Overlay Districts in the County;
- Foster civic pride and preserve an appreciation for the historic values on which the County and the Nation were founded;
- Maintain and improve property values;
- Protect and enhance the County's attraction to tourists and visitors;
- Provide for the education and general welfare of the people of the County;

- *Protect against destruction of or encroachment upon historic areas;*
 - *Promote the general welfare through the preservation and protection of historic places and areas of historic interest in the County; and*
 - *Otherwise accomplish the general purposes of the Zoning Ordinance, the General Plan, and the provisions of the Code of Virginia Chapter 22 of Title 15.2.*
- A. **Authority.** Historic Overlay Districts (HODs) are regulated in accordance with the Code of Virginia §§ 15.2-2306 and 15.2-2283.
- B. **Applicability.** The requirements of Section 5.08 apply to each parcel located in HODs established pursuant to Section 10.10.08. HODs are also subject to:
1. Sections 11.04 and 10.10.08; and
 2. The individual Historic District Guidelines established for each HOD, which are hereby incorporated into, and adopted as part of, the Zoning Ordinance.
- C. **Certificate of Appropriateness—Administrative for Minor Actions.** The Zoning Administrator has the authority to approve Certificates of Appropriateness—Administrative for the following minor actions:
1. Minor amendments to a previously approved Certificate of Appropriateness where the work authorized by the previously approved Certificate of Appropriateness has not been completed and the proposed amendment is in substantial conformance with the previously approved Certificate of Appropriateness;
 2. Removal of non-contributing material;
 3. Minor alteration of a non-contributing structure;
 4. Construction of accessory structures that are 250 square feet or less;
 5. Replacement of windows and/or doors;
 6. Installation or replacement of storm windows and storm doors;
 7. Replacement of siding;
 8. Replacement of roofs;
 9. Minor alteration to small architectural details, to include, without limitation, shutters, lighting fixtures, gutters, and downspouts;
 10. Screening of utilities, trash cans, and dumpsters; and
 11. Demolition of non-contributing accessory structures and site elements.
- D. **Certificate of Appropriateness.** The Historic District Review Committee (HDRC) has the authority to approve Certificates of Appropriateness for the following purposes:
1. **Erection, Reconstruction, Alteration, Moving, or Restoration.** No structure, including walls, fences and gates, and signs pursuant to Chapter 8, and no paved area, including pedestrian walkways, parking lots, and parking areas, is permitted to be erected, installed, reconstructed, altered, moved, removed, replaced, or restored within an HOD unless and until the HDRC has approved a Certificate of Appropriateness, except as otherwise provided below.
 - a. **Exemption.** Ordinary repairs and/or maintenance of an exterior feature that do not involve a significant change in design, material, or outer appearance do not require HDRC approval of a Certificate of Appropriateness.
 - b. **Exception.** A structure or paved area does not require HDRC approval of a Certificate of Appropriateness if:
 1. The Zoning Administrator determines, in conjunction with the application for a Zoning Permit, that the proposed work would not have a clear and substantial detrimental impact on the

character of the HOD, and would be architecturally compatible with the historic landmarks, buildings or structures therein;

2. The work to be completed is to a structure primarily used for agricultural, horticultural, or animal husbandry purposes; and
3. The structure is located on a parcel that meets one of the following:
 - a. Classified by the Office of the County Assessor under the land use tax assessment program as Agriculture;
 - b. Subject to a farm plan approved by the Loudoun County Soil and Water Conservation District; and
 - c. “bona fide farm structure” must mean a structure primarily used for agricultural, horticultural, or animal husbandry purposes as defined in this Zoning Ordinance, and that is located on a parcel that is subject to a farm plan approved by the Loudoun County Soil and Water Conservation District; or that is classified by the Office of the County Assessor under the land use tax assessment program as Agriculture.

2. **Razing or Demolition.** No permit to raze or demolish a structure, including fences, walls, and signs, within an HOD will be approved unless and until the HDRC has approved a Certificate of Appropriateness. **Exception.** Buildings, structures, fences, wall, or signs within an HOD may be razed or demolished without a Certificate of Appropriateness in accordance with Sections 5.08.C., 5.08.H., or 5.08.I.

3. **Minimum Yard and Setback Reductions in HODs.** The Zoning Administrator will grant a reduction of the minimum yard or setback applicable to a structure in an HOD if the following criteria are met:
 - a. The HDRC must approve a Certificate of Appropriateness that includes the reduction of the minimum yard and/or setback requirements and make a finding that such yard and/or setback reduction is consistent with the existing streetscape and adopted Historic District Guidelines for the HOD; and
 - b. The reduction of the yard and/or setback requirement does not violate sight distance regulations of Section 7.07.04 and of the Virginia Department of Transportation.

- E. **Application and Procedures.** All Certificate of Appropriateness and Certificate of Appropriateness—Administrative requests must follow the application and procedures requirements of Section 10.12.

- F. **Required Maintenance and Demolition by Neglect.** The owner of any structure, including fences, walls, and signs, located within an HOD must:

4. Maintain structures in accordance with Chapter 1410 of the Codified Ordinances of Loudoun County; and
5. Prevent any deterioration or decay to structures, including fences, walls, and signs, that may result in a loss of its structural integrity, cause any unsafe or hazardous condition, or produce a detrimental effect upon the character of the HOD or the life and character of the structure. Such deterioration includes, without limitation, the following:
 - a. Deterioration of any exterior architectural feature;
 - b. Deterioration of any exterior wall or other structural support;
 - c. Deterioration of any roof or element of the roof support system;
 - d. Deterioration of any chimney;
 - e. Deterioration or crumbling of exterior stucco, plaster, or mortar;
 - f. Ineffective waterproofing of, or lack of a protective coating on any exterior wall, roof, and foundation, to include, without limitation, broken windows and doors; and
 - g. Poorly maintained landscaping or plant overgrowth, to include, without limitation, any dead overhanging tree or limb, root, or invasive tendrilled climbing vine, causing, or which may cause, damage or deterioration.

- G. The County may institute appropriate procedures for the acquisition of any structure that remains in a substantially deteriorated or deteriorating condition following notice to the owner thereof that the owner is in violation of Section 5.08.D.
- H. **Right to Raze or Demolish.** The owner of any historic landmark, structure located within an HOD is, as a matter of right, entitled to raze or demolish such historic landmark, structure provided that the following conditions are met.
1. The owner has submitted an application for a Certificate of Appropriateness to raze or demolish such historic landmark, structure in accordance with Section 10.12.
 2. The owner has, for a period of time set forth in Table 5.08-1 and at a price reasonably related to its fair market value, made a bona fide offer to sell such historic landmark, structure and the land pertaining thereto to any person, firm, corporation, government, or agency thereof, or political subdivision or agency thereof, which gives reasonable assurance that it will preserve and restore the historic landmark, structure and the land pertaining thereto.
 3. No bona fide contract, binding upon all parties thereto, has been executed for the sale of any such historic landmark, structure, and the land pertaining thereto, prior to the expiration of the applicable time period as set forth in Table 5.08-1.
 - a. Any appeal that may be taken to the Court, in accordance with Section 5.08.F. of this Zoning Ordinance will not affect the right of the owner to make a bona fide offer to sell.
 - b. No offers to sell are permitted to be made more than 1 year after a final decision by the HDRC, but thereafter the owner may renew their request to the HDRC to approve the razing or demolition of the historic landmark, structure.

Table 5.08-1. Offering Price/Sell Period	
Offering Price	To Sell Period
Less than \$25,000	3 months
\$25,000 or more but less than \$40,000	4 months
\$40,000 or more but less than \$55,000	5 months
\$55,000 or more but less than \$75,000	6 months
\$75,000 or more but less than \$90,000	7 months
\$90,000 or more	12 months

4. **Bona Fide Offer to Sell and Procedures for Filing Notice of Offer.** Before making a bona fide offer to sell as provided for in this Section, an owner must first file a notice with the Zoning Administrator.
 - a. The notice must include the following:
 1. Property identification;
 2. Offering price;
 3. Date the offer of sale is to begin;
 4. Name and address of the listing real estate agent, if any; and
 5. Reasonable assurances that the historic landmark, or structure will be preserved.
 - b. No time period set forth in the time schedule contained in Table 5.08-1 will begin to run until said notice has been filed.
 - c. Within 5 days of receipt of a notice, copies of the notice must be delivered to the HDRC.
5. **Question as to Price.** Questioning whether a historic landmark, structure has been offered for sale at a price reasonably related to its fair market value is permitted in accordance with the following process:

- a. A written petition signed by at least 5 persons owning real estate in the vicinity of property offered for sale must be filed with the HDRC on or before 15 days after the offer of sale has begun or the HDRC may question said price on its own motion;
 - b. Upon receipt of the petition referenced in Section 5.08.H.5.a., or upon its own motion, the HDRC must, at the expense of the County, appoint 3 disinterested real estate appraisers, familiar with property values in Loudoun County, who will forthwith make an appraisal of the historic landmark, or structure in question and file a written report with the HDRC stating whether or not the offer to sell the historic landmark, or structure is at a price reasonably related to its fair market value;
 - c. The concurring opinion of any 2 of the 3 appraisers will be final and binding:
 1. In the event the opinion is that the offer to sell the historic landmark, or structure is at a price reasonably related to its fair market value, the owner may continue to offer the property for sale pursuant to Section 5.08.H; and
 2. In the event the opinion is that the offer to sell the historic landmark, or structure is not at a price reasonably related to its fair market value, the date of the offer to sell first established pursuant to this Section is void, and new notice pursuant to Section 5.08.H.4., listing a price reasonably related to the appraisers' opinion of fair market value, must be re-filed in order for the owner to be considered to have made a bona fide offer to sell in accordance with Section 5.08.H; and
 - d. Notwithstanding an adverse opinion by the appraisers, if an owner has entered into a binding bona fide contract as provided in Section 5.08.H. prior to the date the appraisers have filed their report with the HDRC, the price is deemed reasonably related to the fair market value.
- I. **Hazardous Conditions.** Nothing in this Section prevents razing or demolition without HDRC approval due to unsafe conditions if the following conditions have been met:
1. **Landmarks, or Structures.** The Building Official determines and verifies in writing that the unsafe conditions of a historic landmark, or structure within an HOD would endanger life or property and necessitate razing or demolition in accordance with Chapter 1410 of the Codified Ordinances of Loudoun County; and
 2. **Walls, Fences, and Signs.** The Zoning Administrator determines and verifies in writing that the unsafe conditions of a wall, fence, or sign within an HOD would endanger life or property and necessitate razing or demolition.
- J. **Maintenance of Inventory of Structures.** Following the establishment of a new HOD, the Zoning Administrator will maintain an inventory of the historic landmarks, sites, and structures of particular historic value located within the HOD create pursuant to Section 10.10.08.C.4. Following addition to or removal from an existing HOD, the Zoning Administrator will update the inventory for the HOD.
- K. **Enforcement.** In addition to the remedies provided in Section 10.13, the Zoning Administrator has the authority to order that work be stopped and that all Certificates of Appropriateness, Certificates of Appropriateness—Administrative, or other permits for the work being performed on a structure located within an HOD be revoked, or if no Certificate of Appropriateness, Certificate of Appropriateness—Administrative, or other permit has been approved, to require the approval of the necessary Certificate of Appropriateness or Certificate of Appropriateness—Administrative prior to the continuation of work on said structure.

5.09 Route 28 Corridor (Legacy)

Contents:

5.09.01 Generally

5.09.02 Route 28 Corridor Office

5.09.03 Route 28 Corridor Business

5.09.04 Route 28 Corridor Industrial

5.09.05 Development Standards

5.09.06 Use Table and Supplemental Regulations

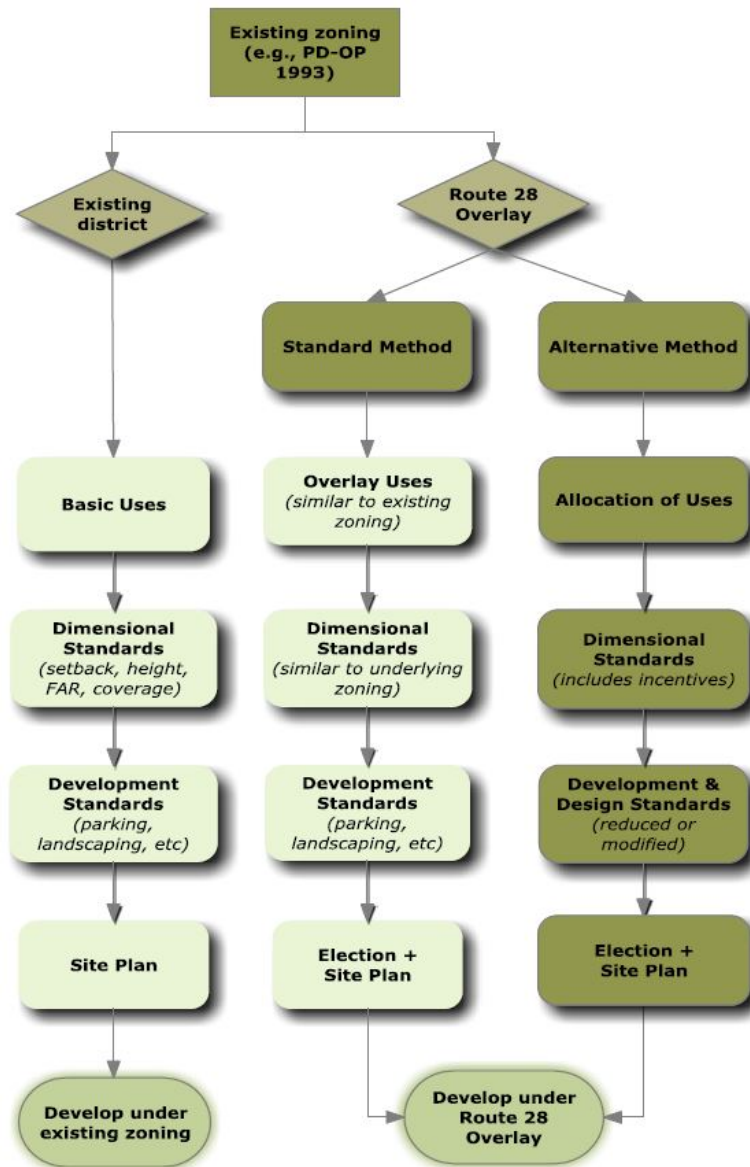
5.09.07 Procedures

5.09.08 Definitions

5.09.01 Generally

- A. Election to develop under the Route 28 Corridor District is not permitted after December 13, 2023. Section [5.09.01](#) only applies to properties for which an election was made to develop in accordance with an optional overlay district before December 13, 2023.
- B. There are 3 optional overlay districts established in these regulations, and the 3 districts are mapped by the County:
 - 1. Route 28 Corridor Office (CO);
 - 2. Route 28 Corridor Business (CB); and
 - 3. Route 28 Corridor Industrial (CI).
- C. The optional overlay districts include 2 types of development.
 - 1. **Standard Method** development includes basic use, building height, setback and floor area ratio (FAR) standards. This type of development is very similar to development in most of the County's underlying zoning district regulations, including the existing PD-OP, PD-IP, PD-RDP, and PD-GI zoning district that comprise most of the land area within the optional overlay districts. The standard method offers higher development potential and contemporary development standards that are not possible under the existing zoning districts.
 - 2. **Alternative Method** development allows higher FAR and lot coverage, along with process streamlining and other regulatory incentives, along with design controls and amenities that do not apply to standard method development.
- D. Because these are optional overlay districts, the existing zoning districts remain on the map when a property owner proceeds under these regulations. This means that property owners are free to develop under their underlying zoning district regulations without regard to the optional overlay district regulations. This gives property owners in the CO, CB and CI Optional Overlay Districts 3 options.
 - 1. Develop under their existing zoning district regulations. In this case, the optional overlay district regulations do not apply.
 - 2. Develop under the optional overlay district regulations, using a standard method of development.
 - 3. Develop under the optional overlay district regulations, using an alternative method of development.
- E. **Zoning Options in the Route 28 Corridor Optional Overlay Districts.** The property owner's choices, and the implications of those choices, are illustrated in Figure [5.09.01-1](#). Property owners may proceed to Site Plan approval under their existing zoning, and subject to all of the use, dimensional and development standards of their existing zoning districts. Or property owners may elect to develop per the optional overlay district regulations and file a Site Plan under the optional overlay district using the standard method, which triggers standards that are similar to the existing zoning regulations in the districts. Property owners may elect to develop per the optional overlay district regulations and proceed under the optional overlay district using the alternative method. This gives the property owner an initial FAR bonus, along with the ability to build significantly more floor area by undertaking incentive items listed in the optional overlay district regulations.

Figure 5.09.01-1. Zoning Options in the Route 28 Corridor Optional Overlay Districts



F. Most of the property within the Route 28 Corridor Optional Overlay Districts is subject to the Route 28 Transportation Improvement District legislation, which generally prohibits the County from eliminating, reducing, or restricting commercial or industrial classifications and related criteria on property for which a special tax is imposed, or making them less permissive. Before proceeding under this Section 5.09, the property owner must file an election to waive the protections of the Route 28 Tax District legislation. Development then proceeds under the Zoning Ordinance.

5.09.01.01 Districts & Standards/Alternative Methods Established (Legacy)

Purpose. Section 5.09.01.01 establishes 3 optional overlay districts to implement the Route 28 Corridor Plan (March 15, 2011) ("Route 28 Plan"). These districts are intended to provide incentive zoning as a tool to coordinate new development with the Route 28 Plan's goals and objectives to:

- Provide premier locations for regional, national, and international businesses with a high-quality image that offer employees vibrant centers of activity and highly integrated pedestrian and transit-friendly employment developments;
- Provide development along corridors that are employment-based, with residential development that is subordinate to employment uses;
- Provide design standards that create a unified development pattern and distinct places or centers of activity;
- Take advantage of economic assets such as Washington Dulles International Airport;
- Promote multi-modal connectivity; and
- Encourage sustainable development practices.

A. **Districts Established.** Optional overlay districts established for the Route 28 Corridor.

Table 5.09.01.01-1. Optional Overlay Districts	
Optional Overlay Districts	Subdistrict
Route 28 Corridor Office (CO)	<ul style="list-style-type: none"> ▪ Subdistrict 1 (North of Sterling Boulevard) ▪ Subdistrict 2 (South of Sterling Boulevard)
Route 28 Corridor Business (CB)	
Route 28 Corridor Industrial (CI)	

B. **Optional Overlay Districts.** The CO, CB, and CI Optional Overlay districts in Section 5.09.01 are established as optional overlay districts. This means that they are overlaid on other zoning districts. Within these optional overlay districts, property owners have the option to use their property in any manner permitted in the underlying zoning districts, unless property is subject to a Site Plan approved under Section 5.09.07 pursuant to an optional overlay district. Therefore, the optional overlay districts do not apply unless the property owner elects to become subject to the optional overlay district standards and procedures. A property owner with a Route 28 Optional Overlay District has 3 options:

1. Develop under the underlying, existing zoning regulations;
2. Develop under the optional overlay district, using a standard method of development (Section 5.09.01.02); or
3. Develop under the optional overlay district, using an alternative method of development (Section 5.09.01.02).

C. Section 5.09.01, including the zoning district standards and development standards, applies only to development that elects to proceed under a Route 28 Corridor Optional Overlay District. This section does not apply to property within a Route 28 Corridor Optional Overlay District that elects to proceed under an existing, underlying zoning district. (Section 5.09.07.01)

5.09.01.02 Standard and Alternative Methods of Development (Legacy)

- A. The optional overlay districts include 2 types of development: standard method and alternative method. Each is subject to different zoning standards, depending on how the property owner elects to proceed.
- B. Standard method is subject to the base optional overlay district standards and is not subject to the design standards that apply to the alternative method. The standard method standards apply to all development that elects to proceed under a Route 28 Corridor Optional Overlay District (CO District) except for property that is subject to a valid, unexpired Site Plan or Special Exception that has been approved to develop pursuant to an alternative method.

- C. An alternative method is a style of development that is tied to incentives in the Route 28 Corridor Optional Overlay Districts. An alternative method development incorporates design standards (such as frontage types regulated in Sections 5.09.02 and 5.09.03 and amenities (such as parks and civic uses) as described in the optional overlay district regulations. However, an alternative method provides the property owner incentives such as:
1. Election to proceed under a Route 28 Corridor Optional Overlay District without a Zoning Map Amendment;
 2. Longer time periods to build out a project without a zoning approval (such as a Zoning Permit, Site Plan, or Special Exception) expiring (Section 5.09.07.03);
 3. Flexibility, clarity, and predictability in the application of zoning standards such as setbacks, building height, and lot coverage; and
 4. Reductions in development standards requirements related to parking and buffering, elimination of the bulk plane standard, and an increase in floor area ratio and lot coverage.
- D. Section 5.09.01.02 establishes 5 alternative methods of development. Table 5.09.01.02-1 lists the alternative methods and the optional overlay districts where they are permitted.

Table 5.09.01.02-1. Alternative Method				
	Alternative Method	CO	CB	CI
1	Office Cluster Alternative Method	■		
2	Business Campus Alternative Method	○	■	
3	Custom Campus Alternative Method	■	■	
4	Secure Office Campus Alternative Method	○	■	
5	Flex			■
TABLE KEY: ■ = permitted with Site Plan approval ○ = permitted with Special Exception approval				

- E. With the exception of the Campus Alternative Method (Section 5.09.05.10), the standards that apply to each alternative method are established in the regulations for each optional overlay district.

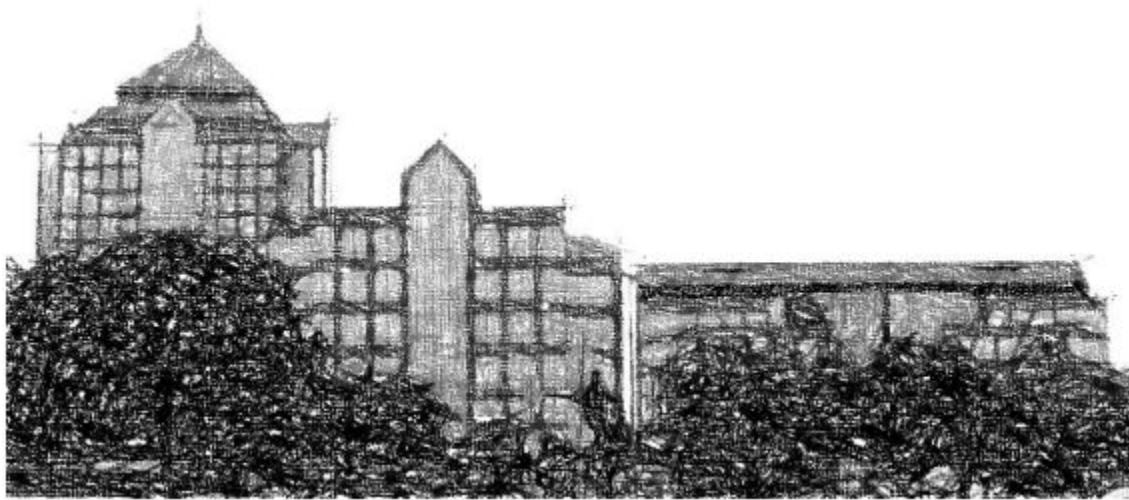
5.09.02 Route 28 Corridor Office

Purpose. The Route 28 Corridor Office Optional Overlay District (CO District) provides for high intensity office and employment development along the Route 28 corridor. The CO District provides for 2 predominant development types:

- Medium to high intensity, pedestrian-oriented office clusters that include supportive retail and service uses; and
- Custom office and research-and-development campuses that combine these uses with limited manufacturing.

The design standards in this district are designed to form a “wall” of mid- to high-density, high-quality office buildings along employment-based corridors.

Figure 5.09.02-1. Office Development



5.09.02.01 Uses

- A. See Section 5.09.06 (Use Table).
- B. The following alternative methods of development are permitted in this district:
 - 1. Office Cluster pursuant to Site Plan approval (Section 5.09.02.03);
 - 2. Custom Campus pursuant to Site Plan approval (Section 5.09.05.10); and
 - 3. Business Campus or Secure Office Campus pursuant to Special Exception approval (Section 5.09.05.10).
- C. **Retail and service.**
 - 1. Retail and service uses in the Route 28 Corridor Office Optional Overlay District (CO District) will be permitted only on the ground floor of buildings, except as provided in Section 5.09.02.01.C.2.
 - 2. Single-story or multi-story retail and service uses are permitted in the CO District if Section 5.09.02.01.C.2.a. and C.2.b. apply.
 - a. The use must be integrated within the development, as follows:
 - 1. The use is part of an Office Cluster or Campus Alternative Method and is either visually integrated (Section 5.09.02.01.C.2.a.2.) or functionally integrated (Section 5.09.02.01.C.2.a.3.) to the development;
 - 2. The use is visually integrated if:
 - a. It is located in a building that is attached as a wing wall, by a breezeway, or similar architectural feature, or is located on the same block or within 75 feet of a multistory building and connected to that building by a sidewalk or pedestrian path which may be integrated with landscaping; and
 - b. The use includes building materials and architectural features that are similar to or compatible with adjacent multi-story buildings. At least 2 of the following features must match those of adjacent multi-story buildings:
 - A. Frontage types (Section 5.09.05.04);
 - B. Roofline features such as cornices and eaves;
 - C. Window styles and proportions;
 - D. Primary building materials (Section 5.09.05.05); and

- E. Spacing of entryways, projections, and other vertical elements of the façade at the ground level; and
- c. The buildings that include the retail and service uses are not separated from other buildings by parking areas; and
- 3. The use is functionally integrated if:
 - a. It is located within the Interior Zone of an Alternative Method development and occupies no more than 2% of the total development's floor area; or
 - b. It is located within the Street Zone on the same building line as adjacent buildings and does not have a floor area exceeding 5,000 square feet; and
- b. The building must provide pedestrian accessibility through sidewalks or pedestrian paths that connect public or private streets or adjacent buildings to the building's primary entrance.

D. Hotels and Full-Service Hotels.

- 1. For any Alternative Method, Hotels are not required to be located within mixed-use buildings.
- 2. Hotels must provide, at a minimum, restaurant, lounge facilities, meeting space, room service and bell service.
- 3. A Full-Service Hotel located in CO Subdistrict 2 (Section 5.09.01.01.A.) must not exceed 40% of the overall square footage of an Alternative Method development.
- 4. The minimum floor area ratio for a Full-Service Hotel as part of an Alternative Method development in CO Subdistrict 2, must be 0.2.

E. Flex Uses

- 1. Refer to Section 5.09.05.10 for the Flex land use allocation in the Campus Alternative Method.
- 2. At least 20% of the gross floor area of a **Flex Building** (except for a data center) in the CO District must include offices.

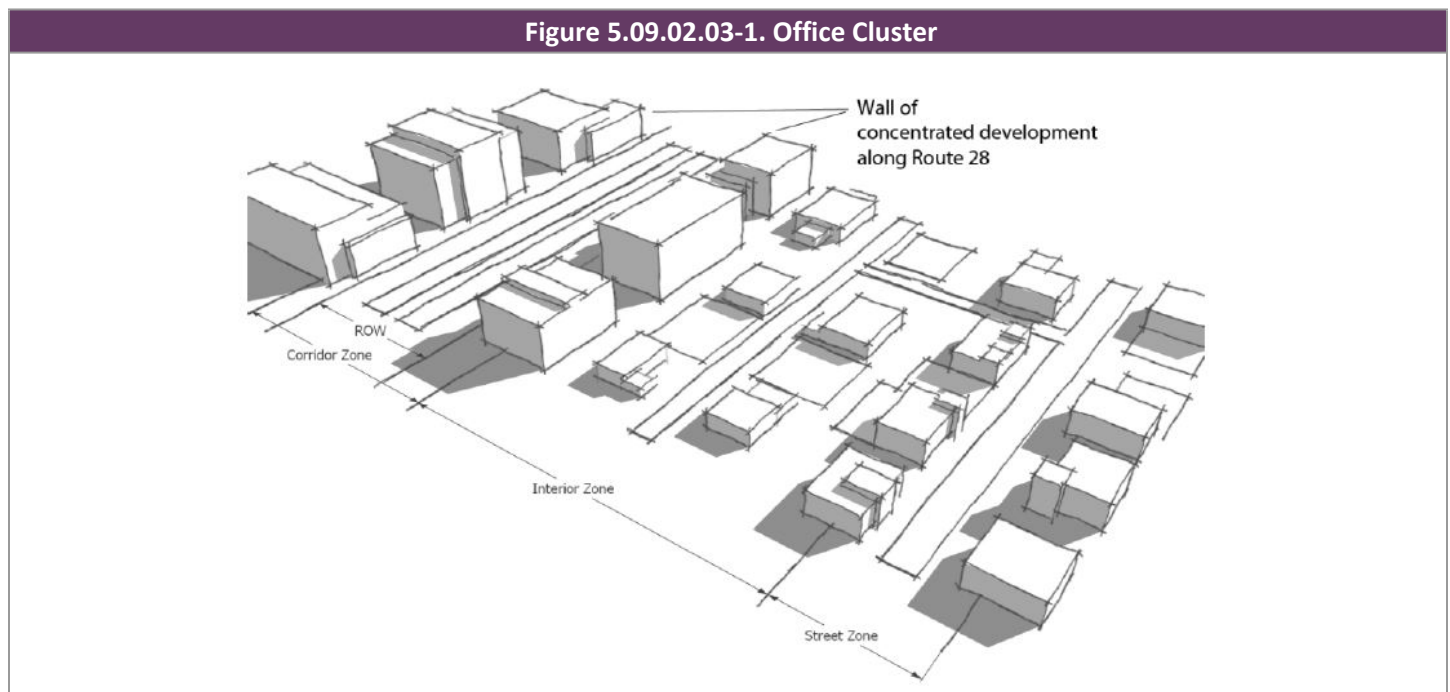
5.09.02.02 Dimensional Standards

The dimensional standards below are divided into those that apply to Standard and Alternative Methods of development.

Table 5.09.02.02-1. Dimensional Standards			
		Standard Method	Alternative Methods
Lot Requirements			
1	Size	One (1) acre minimum, excluding major floodplains.	No minimum
Yard Requirements			
2	Adjacent to Roads	<ul style="list-style-type: none"> ■ Structures, Outdoor Storage, Refuse Collection Loading area: 35 feet (<i>minimum</i>) ■ Parking: 25 feet (<i>minimum</i>) 	Sections 5.09.03 and 5.09.05.10
3	Adjacent to Agricultural & Residential ¹	<ul style="list-style-type: none"> ■ Structures Outdoor Storage, Refuse Collection, Loading area: 50 feet (minimum) ■ Parking: 35 feet (minimum) 	Sections 5.09.03 and 5.09.05.10
4	Adjacent to Other Non-Residential Districts	<ul style="list-style-type: none"> ■ Structures, Parking, Outdoor Storage, Refuse Collection, Loading area: 15 feet (minimum) 	Sections 5.09.03 and 5.09.05.10
5	Between buildings	<ul style="list-style-type: none"> ■ On adjacent lots: 30 feet (<i>minimum</i>) ■ Interior to the lot: 25 feet (<i>minimum</i>) 	Not applicable

Table 5.09.02.02-1. Dimensional Standards			
		Standard Method	Alternative Methods
Building Requirements			
6	Building Height	<ul style="list-style-type: none">60 feet (maximum), or100 feet (maximum) if set back from streets or lot lines that do not constitute boundaries of districts with lower maximum height restrictions, a distance of at least 1 foot for each 1 foot of height that it exceeds the 60 foot limit.	<p>Minimum Height – (Sections 5.09.03 and 5.09.05.10 for additional requirements)</p> <ul style="list-style-type: none">Corridor Zone: Section 5.09.03Street Zone: 2 stories (note: additional height is required in portions of a Major Street Zone for the Campus Alternative Method–Section 5.09.05.10)Interior Zone: not applicable <p>Maximum Height is limited by the applicable FAR (see below) 0.6 minimum to 0.8 maximum subject to Sections 5.09.03 and 5.09.05.10. Increases in FAR up to 1.0 are permitted by applying the Incentive Elements (Section 5.09.05.03).</p>
7	Floor Area Ratio	0.6 maximum	
Lot Coverage			
8	Lot Coverage (for the lot or development site)	0.6 maximum	<p>In the Street and Interior Zones: 0.8 maximum, up to 1.0 maximum by applying the Incentive Elements (Section 5.09.05.03). Lot coverage requirements do not apply to the Corridor Zone.</p> <p>If an Incentive Element is used, lot coverage must be calculated by treating the entire development site as the “lot.”</p>
TABLE NOTES:			
¹ Includes Agricultural and Residential Zoning Districts, and land bays allowing residential uses.			

5.09.02.03 Office Cluster Alternative Method



Description. An office development that is configured around a street grid, with high quality office development concentrated along Route 28. An Office Cluster is divided into 3 subareas.

- The **Corridor Zone**, located within 100 feet of the existing or planned right-of-way of Route 28.
- The **Street Zone**, including all areas outside of the Corridor Zone located within 50 feet of any other public street other than Route 28.
- The **Interior Zone**, including all areas outside of the Corridor Zone or Street Zone.

Table 5.09.02.03-1. Lot and Building Placement Standards

Mix of Uses	Minimum Building Square Feet Required	Maximum Building Square Feet Permitted
The Site Plan must designate uses that comply with the following land use mix ratios.		
Office/Research & Development	60%	100%
Retail Services	0%	10%
Flex	0%	10%

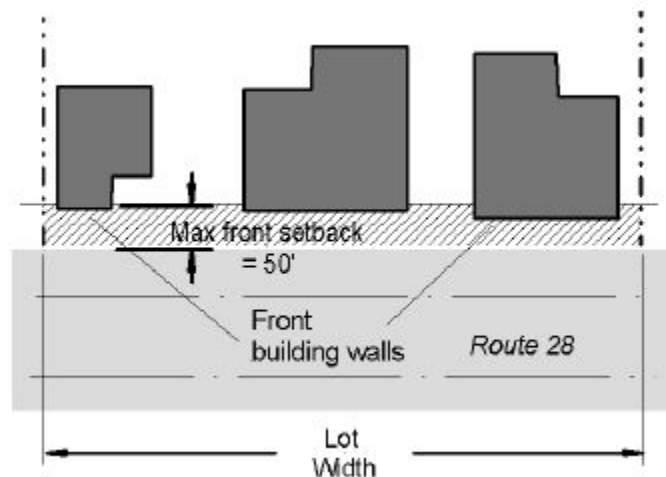
TABLE NOTES:

*Retail and services do not include showrooms that are accessory to flex buildings and located entirely within the flex building.

A. Lot and Building Placement Standards.

1. **Frontage Buildout (minimum).** Building walls must occupy at least 60% of the lot width at the maximum Corridor Setback lines. Front building walls must occupy at least 50% of the lot width at the maximum Street Setback lines.
2. **Corridor Setback.** 50 feet (maximum) from the planned right-of-way. This setback must supersede the building and parking setback requirements of Table 7.04.02-1. Road corridor buffers in accordance with Table 7.04.02-1. must be required. No Pedestrian Through Zone or Planting/Furniture Zone is required.

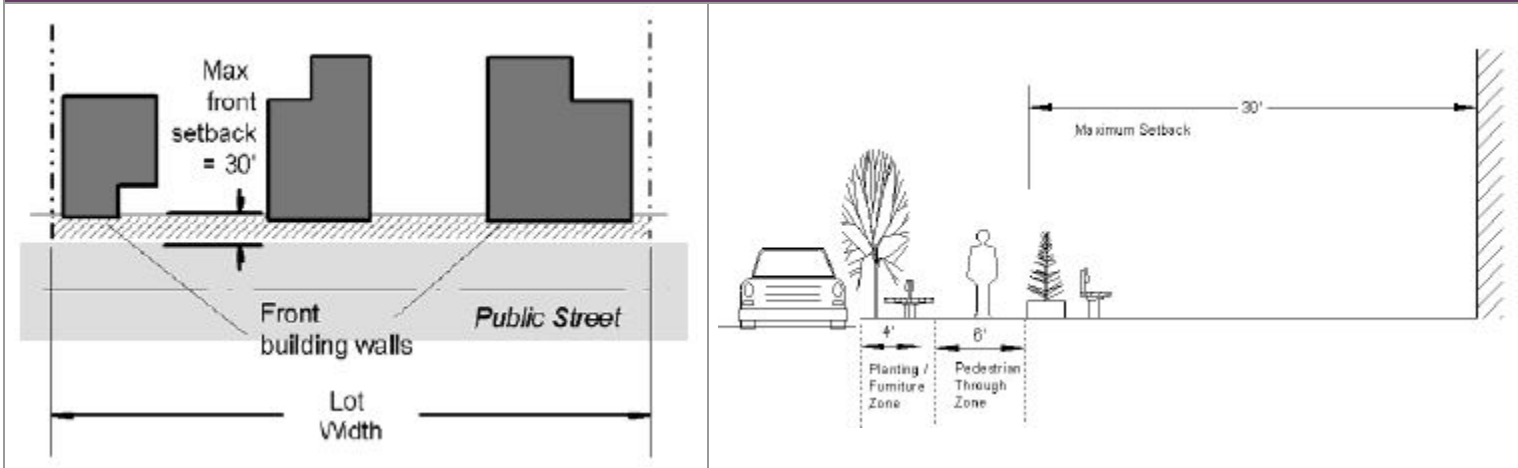
Figure 5.09.02.03-2. Corridor Setback



B. Street Setback.

1. Setback (minimum): 0 feet.
2. Setback (maximum): 30 feet.
3. Pedestrian Through Zone (minimum): 6 feet.
4. Planting/Furniture Zone (minimum): 4 feet.

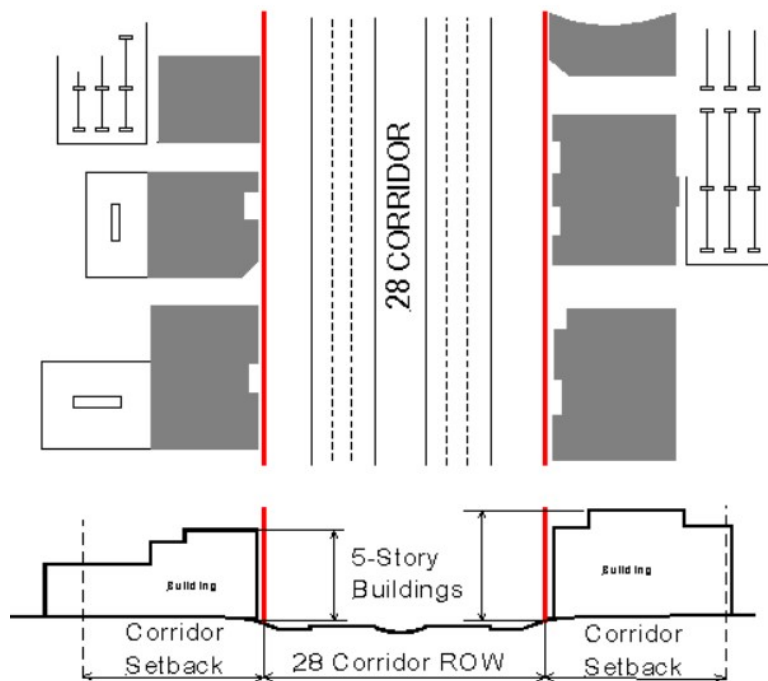
Figure 5.09.02.03-3. Street Setback



C. Height.

1. Minimum and maximum height limits are established by Section 5.09.02.02.
2. At least 50% of the Corridor Zone setback must be occupied by office buildings that are at least 5 stories or 60 feet in height.
3. At least 50% of the Street Zone setback must be occupied by buildings that are at least 4 stories or 48 feet in height.

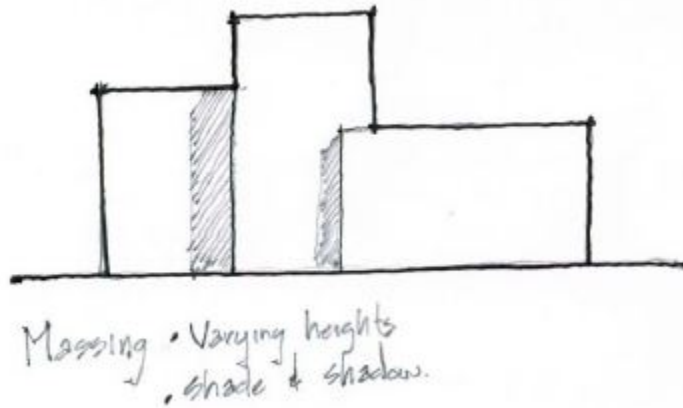
Figure 5.09.02.03-4. Height Disposition



D. Orientation.

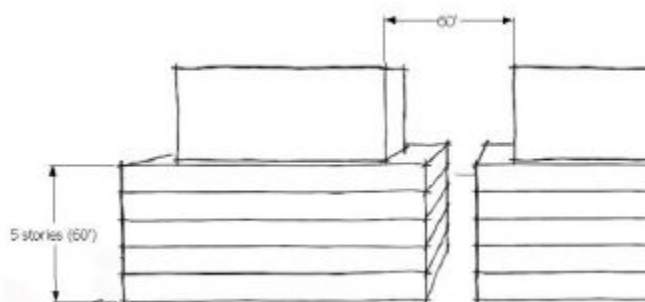
1. In the Corridor Zone, the front building wall may face in any direction unless the building also falls within the Street Zone. However, the building wall facing a corridor must include the required materials.
 2. In the Street Zone, front building walls must face streets or adjacent Plazas, Squares, or Greenways (see classification system in Section 5.09.05.06).
- E. **Frontage Types.** Buildings within the Frontage Buildout of the Street Zone must use the Frontage Types listed in Section 5.09.05.04. Frontage Types are not required in the Corridor Zone.

Figure 5.09.02.03-5. Massing Schematic



- F. **Massing/Façade.** Buildings greater than 12 stories must include façade articulation with design details and features such as building step-backs, to reduce visual massing and mitigate impacts to adjacent properties. In the Street Zone, building planes above the fifth story or 60 feet above average finished grade must be separated by at least 60 feet.

Figure 5.09.02.03-6. Step-back Illustration



- G. **Materials.** Building walls on all sides must comply with Section 5.09.05.05.

5.09.02.04 Campus Alternative Method

See Section 5.09.05.10.

5.09.02.05 Public & Civic Uses/Parks & Open Spaces

- A. Public and Civic Uses are not required. However, if Public and Civic Uses are provided, their percent floor area relative to the total development floor area must be credited toward the percent required for Parks and Open Spaces in Section 5.09.02.05.B. See Section 5.09.05.06 for a description of Public and Civic Uses.
- B. Parks and Open Spaces, in combination with Public and Civic Uses, must occupy at least 15% of the land area of a development site.
- C. The Zoning Administrator may waive up to one-third of the required Parks and Open Spaces and Public and Civic Uses during the Site Plan review process, if contributions in the form of cash-in-lieu are provided toward those uses off-site and within the Route 28 Corridor. This subsection applies only if the County adopts a Public/Civic Facilities Plan that includes Parks and Open Spaces and Public and Civic Uses. (Section 5.09.05.06).

5.09.03 Route 28 Corridor Business

Purpose. The Route 28 Corridor Business Optional Overlay District (CB District) provides for low to mid-density Office and Flex Uses, with limited retail or service uses that support the office and flex uses.

5.09.03.01 Uses

- A. See Section 5.09.06 (Use Table).
- B. This section permits the Campus Alternative Method of development (Section 5.09.05.10).
- C. Flex and Data Center Uses.
 - 1. In a Campus Alternative Method, up to 100% of the Office/Research and Development allocation may be devoted to flex and data center uses.
 - 2. At least 20% of the gross floor area of a Flex Building (except for a data center) in the CB District must include office/research and development.

5.09.03.02 Dimensional and Site Standards

- A. **Dimensional Standards.** The dimensional standards below are divided into those that apply to Standard Method and those that apply to Alternative Methods.

Table 5.09.03.02-1. Dimensional and Site Standards			
		Standard Method	Alternative Method
Lot Requirements			
1	Size	One (1) acre minimum, excluding major floodplains.	No minimum
Yard Requirements			
2	Adjacent to Roads	<ul style="list-style-type: none"> ■ Buildings, Outdoor Storage, Refuse Collection, Loading area: 35 feet (minimum) ■ Parking: 25 feet (minimum) 	Section 5.09.05.10
3	Adjacent to Agricultural & Residential ¹	<ul style="list-style-type: none"> ■ Buildings, Outdoor Storage, Refuse Collection, Loading area: 50 feet (minimum) ■ Parking: 35 feet (minimum) 	Section 5.09.05.10
4	Adjacent to Non-Other Residential Districts	<ul style="list-style-type: none"> ■ Buildings, Parking, Outdoor Storage, Refuse Collection, Loading area: 15 feet (minimum) 	Section 5.09.05.10
5	Between Buildings	<ul style="list-style-type: none"> ■ On adjacent lots: 30 feet(minimum) ■ Interior to the lot: 25 feet (minimum) 	Not applicable

Table 5.09.03.02-1. Dimensional and Site Standards			
		Standard Method	Alternative Method
Lot Requirements			
Building Requirements			
6	Building Height	<ul style="list-style-type: none">60 feet (maximum), or100 feet (maximum) if setback from streets or lot lines that do not constitute boundaries of districts with lower maximum height restrictions, a distance of at least 1 foot for each 1 foot of height that it exceeds the 60 foot limit.	<ul style="list-style-type: none">Average Minimum Height – All buildings within the proposed development must have an average height of at least 2 stories.Buildings that are adjacent to a Major Street Zone must have an average height of at least 4 stories (Section 5.09.05.10).²Maximum Height is limited by the applicable FAR (see below).
7	Floor Area Ratio	0.6 maximum	<ul style="list-style-type: none">Minimum 0.4 to maximum 0.6 subject to Section 5.09.03.02.B.The minimum FAR does not apply to Flex Development.Increases in FAR up to 1.0 are permitted by applying the Incentive Elements in Section 5.09.05.03.
Lot Coverage			
8	Lot Coverage (for the lot or development site)	0.6 maximum	
TABLE NOTES:			
¹ Includes Agricultural and Residential Zoning Districts, and land bays allowing residential uses.			
² "Major Roadways" include George Washington Boulevard Russell Branch Parkway, Waxpool/Church Road (Route 625), Loudoun County Parkway, Moran Road, Sterling Boulevard, Route 7, and Route 606 east of Route 28. For purposes of this subsection, “adjacent” means abutting or within 75 feet of the street right-of-way.			

B. **Site Standards.** The outdoor storage of materials and equipment is prohibited in the CB District.

5.09.03.03 Public and Civic Uses/Parks and Open Spaces

- Public and Civic Uses are not required. However, if Public and Civic Uses are provided, their percent floor area relative to the total development floor area will be credited toward the percent required for Parks and Open Spaces in Section 5.09.03.03.B, below. (Section 5.09.05.06)
- Parks and Open Spaces, in combination with Public and Civic Uses, must occupy at least 15% of the land area of a development site.
- The Zoning Administrator may waive up to one-third of the required Parks and Open Spaces and Public and Civic Uses during the Site Plan review process, if contributions in the form of cash-in-lieu are provided toward those uses off-site and within the Route 28 Corridor.
 - This subsection applies only if the County adopts a Public/Civic Facilities Plan that includes Public and Civic Uses and Parks and Open Spaces.
 - This subsection applies only if the County adopts a Public/Civic Facilities Plan that includes Parks and Open Spaces and Public and Civic Uses. (Section 5.09.05.06)

5.09.04 Route 28 Corridor Industrial

Purpose. The Route 28 Corridor Industrial Optional Overlay District (CI District) provides for industrial, warehousing, distribution, and manufacturing activities that take advantage of access to Washington Dulles International Airport.

5.09.04.01 Uses

- A. See Section 5.09.06 (Use Table).
- B. A Flex use is considered an Alternative Method of development in the CI district if it conforms to the requirements for a Campus (Section 5.09.05.10), except as follows:
 1. The entire development may consist of Industrial, Manufacturing and Flex uses. Up to 10% of floor area may consist of supportive Retail and Service Uses; and
 2. The building orientation, minimum setback, massing/façade, and open space network standards apply. The minimum height, maximum street setback, minimum frontage buildout, frontage type and building materials standards do not apply (Section 5.09.05.10).

5.09.04.02 Dimensional Standards

The dimensional standards below are divided into those that apply to the Standard Method and those that apply to the Alternative Method.

Table 5.09.04.02-1. Dimensional and Site Standards			
		Standard Method	Alternate Method
Lot Requirements			
1	Size	One (1) acre minimum, excluding major floodplains.	No minimum
Yard Requirements			
2	Adjacent to Roads	<ul style="list-style-type: none"> Buildings, Outdoor Storage, Refuse Collection, Loading area: 35 feet (<i>minimum</i>) Parking: 25 feet (<i>minimum</i>) 	Section 5.09.04.01
3	Adjacent to Agricultural & Residential ¹	<ul style="list-style-type: none"> Buildings, Outdoor Storage, Refuse Collection, Loading area: 75 feet (<i>minimum</i>) Parking: 35 feet (<i>minimum</i>) 	Section 5.09.04.01
4	Adjacent to Non-Other Residential Districts	<ul style="list-style-type: none"> Buildings, Parking, Outdoor Storage, Refuse Collection, Loading area: 15 feet (<i>minimum</i>) 	
5	Between Buildings	<ul style="list-style-type: none"> On adjacent lots: 30 feet (<i>minimum</i>) Interior to the lot: 25 feet (<i>minimum</i>) 	Not applicable
Building Requirements			
6	Building Height (subject to FAA standards)	<ul style="list-style-type: none"> 60 feet (maximum), or 100 feet (maximum) if setback from streets or lot lines that do not constitute boundaries of districts with lower maximum height restrictions, a distance of at least 1 foot for each 1 foot of height that it exceeds the 45 foot limit. 	Maximum height is limited by the applicable FAR (see line 7) and may be subject to FAR standards. Minimum height standards do not apply.
7	Floor Area Ratio (FAR)	0.4 maximum	0.6 maximum
Lot Coverage			
8	Lot Coverage (for the lot or development site)	0.6 maximum	<p>In the Street and Interior Zones (Section 5.09.05.10): Maximum 0.8, up to 1.0 by applying the Incentive Elements (Section 5.09.05.03). Lot coverage requirements do not apply to the Corridor Zone.</p> <p><i>If an Incentive Element is used, lot coverage is calculated by treating the entire development site as the "lot."</i></p>

Table 5.09.04.02-1. Dimensional and Site Standards

	Standard Method	Alternate Method
TABLE NOTES: ¹ Includes Agricultural and Residential Zoning Districts, and land bays allowing residential uses.		

5.09.04.03 Open Space

- A. Open Spaces must occupy at least 10% of a proposed development's land area.
- B. Up to 50% of required Open Space is waived if contributions in the form of cash-in-lieu are provided toward those uses off-site and within the Route 28 Corridor. This subsection applies only if the County adopts a Public/Civic Facilities Plan that includes Open Spaces. (Section 5.09.05.06)

5.09.05 Development Standards

5.09.05.01 Applicability

- A. These development standards apply to any property that elects to proceed under a Route 28 Corridor Optional Overlay District. (Section 5.09.01.01.C. for applicability and Section 5.09.07 for "election to waive" procedures.)
- B. If an application is filed under this Section 5.09: Route 28 Corridor:
 - 1. Unless otherwise provided in this Section 5.09, the use, building setback, height, parking, landscaping, and other standards of the Zoning Ordinance apply to any Standard or Alternative Method of development (including, without limitation, Table 7.04.02-1; and
 - 2. After an election is filed (Section 5.09.07.01), the property owner is subject to all requirements of the Zoning Ordinance that are not otherwise regulated by this Section 5.09.
- C. An applicant may pursue a modification(s) for the standards in the CO, CB, or CI Districts other than permitted uses and the required mix of uses, in accordance with Section 10.11.01.A.3. of this Zoning Ordinance. In addition to the criteria for a modification established in Section 10.11.01.A.3., these additional criteria apply:
 - 1. The parcel is too small to completely implement the standard;
 - 2. The property owner provides an alternative standard that, to the extent possible, meets the intent of the design standards; and
 - 3. The property owner demonstrates that the project as modified is compatible and integrated with adjacent developments.

5.09.05.02 General Standards

- A. **Applicability.** This subsection applies to:
 - 1. Any Standard or Alternative Method of development; and
 - 2. Any other development within a Route 28 Corridor District that requires subdivision plat, Site Plan, or Special Exception approval.
- B. **Outdoor Storage / Refuse Collection / Loading Area.** Areas used for outdoor storage, refuse collection, and loading area must be:
 - 1. Screened by a building wall; or
 - 2. Screened by a wall consisting of brick, masonry, or primary materials that are compatible with those used by the principal buildings on the site.
- C. **Transportation and Pedestrian Amenities.**
 - 1. All development proposals must conform to a generally rectilinear grid system of streets.

2. Development proposals must include access points to the adjacent properties that allow for a continuation of the existing street network.
- D. **Utility Lines.** All new utility distribution lines must be placed underground.
- E. **Landscaping (Alternative Method Only).** Under any Alternative Method of development, for individual lots that are developed in accordance with a Site Plan or Concept Development Plan the buffer requirements of Section 7.04.03 and the parking area landscaping and screening requirements of Section 7.04.06 do not apply between non-residential uses located within the Route 28 Corridor Plan area. Only the road corridor buffer requirements of Table 7.04.02-1 for specifically listed roads, other arterial roads, and other major collector roads apply.

5.09.05.03 Incentive Elements

- A. **Generally.** The Alternative Method of development for each Optional Overlay District in this section allows an increase in floor area ratio (FAR), lot coverage, and other elements by applying Incentive Elements. This section establishes a schedule of Incentive Elements that describes the incentive conditions and the FAR, lot coverage and bonuses associated with each element.
- B. **Incentive Elements.** An application for Site Plan or Special Exception approval is eligible for increased FAR or other incentives by applying the following Incentive Elements. For each Incentive Element, a property owner may select only one incentive from Columns 2 and 3.

Table 5.09.06.03-1. Incentive Elements				
	Incentive	FAR Bonus	Lot Coverage Bonus	Other Incentive
Filing an election to waive the existing 1972, 1993, or Revised 1993 Zoning Ordinance (Section 5.09.07.01)				
1	From an existing 1972, 1993, or Revised 1993 PD-OP, PD-IP, PD-RDP Zoning District.	0.15	0.1	
2	From any other existing 1972, 1993, or Revised 1993 Zoning District except PD-MUB.	0.1	0.1	
Transfer of Existing Industrial Property				
3	Terminating an existing industrial use in a CO or CB District. “Terminating” means approving a discretionary approval or Site Plan for an Alternative Method development demonstrating demolition or redevelopment of the existing industrial use with the uses permitted in the Alternative Method Development.	0.02	0.15	
Lot Assembly (requires a minimum of 5 acres)				
4	Properties that combine their applications as a single plan.	0.1	0.05	An additional incentive equal to 25% of the initial coverage and 50% of the initial FAR bonus applies to each additional 5 acres combined into a single plan or ownership.
5	Properties are combined into a single ownership for purpose of development or subdivision.			
Sustainability (Section 5.09.05.09)				
7	Percent of treated runoff captured as described in Section 4-2709(C): <ul style="list-style-type: none">35% runoff retained onsite28% runoff retained onsite20% runoff retained onsite	0.2 0.15 0.1	0.12 0.1 0.08	
Structured Parking				

Table 5.09.06.03-1. Incentive Elements

	Incentive	FAR Bonus	Lot Coverage Bonus	Other Incentive
8	For every 100 spaces placed in structured above-grade parking.	0.1	0.05	5% reduction in required parking spaces in addition to any reduction in Section 4-2707(A).
9	For every 100 spaces placed in structured below-grade parking.	0.2	0.1	10% reduction in required parking spaces in addition to any reduction in Section 4-2707(A).

5.09.05.04 Frontage Types

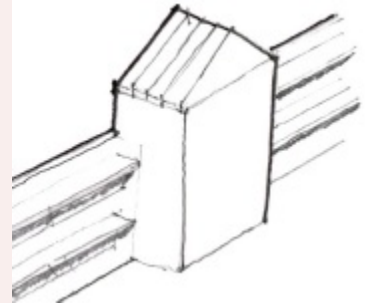
The following frontage types apply to the Alternative Methods described in Sections 5.09.02, 5.09.03, and 5.09.05.10. In order to count as a required frontage, the frontage must include a principal public access entry for the building.

Figure 5.09.05.04-1. Frontage Types

Projected Entry

An entry that:

- Extends exterior from the front wall plane; and
- Has a width that is evident as a building entrance.

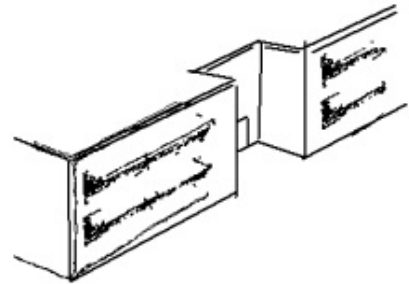


Recessed Entry

An entry that:

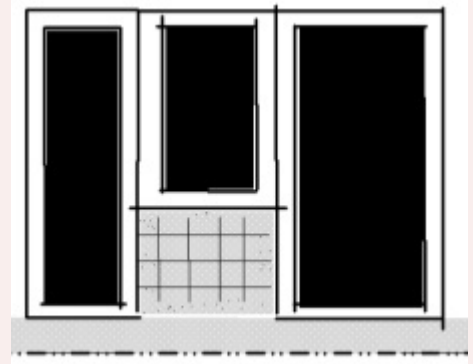
- Recesses into the front of the building plane;
- Extends vertically at least 15 feet or to the top of the front elevation; and
- Has a continuous width of at least 12 feet at all points along the required vertical dimension.

A Recessed Entry must be integrated with the building's roof plane.



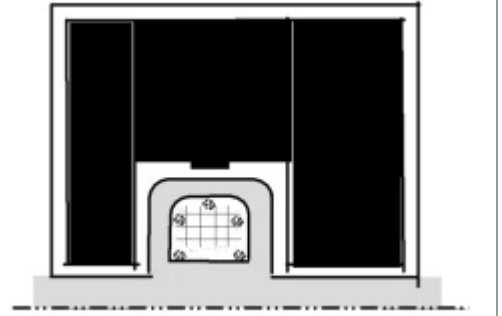
Courtyard

A pedestrian promenade, whether covered by a roof or not, within or between any structure or buildings upon which the Principal Entry is located. A "Courtyard" does not include a parking area. The Principal Entry of the buildings that surround the courtyard must open directly on the courtyard space or a sidewalk or pedestrian pathway that directly abuts the courtyard space. The courtyard may be located at, above or below grade level. However, an above or below grade courtyard must be accessible by steps and/or sloped surfaces or ramps, and not require vertical lifts to meet accessibility needs. The access points must lead directly to building entrances. The courtyard must be bounded on at least 3 sides by the walls of a building and may not be completely enclosed by building walls. A courtyard located on the corner of two streets or internal drives will have 2 sides.



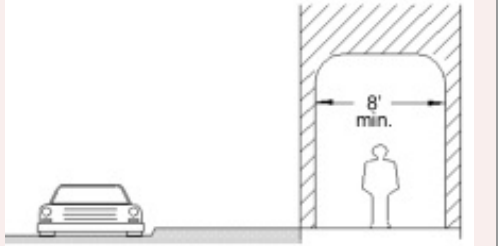
Forecourt

The façade is aligned close to the frontage line, with a central portion set back. Landscaped courts and driveways are permitted within the setback. A fence or wall at the property line may be used to define the private space of the court. The court may also be raised from the sidewalk, creating a small retaining wall at the property line with entry steps and/or sloped surfaces or ramps, and not require vertical lifts to meet accessibility needs.



Arcade

An arcade is a covered porch supported by evenly spaced columns or similar vertical elements, and that is attached to the front building façade. The upper portion of the Arcade may include either the floor of an upper floor that projects from the façade, or a colonnade that supports a roof. Arcades must align with the grade of the adjoining public sidewalk and may encroach on the sidewalk space. Arcades may include a balcony that overlaps the sidewalk. Arcades must have at least 8 feet clearance in all directions.

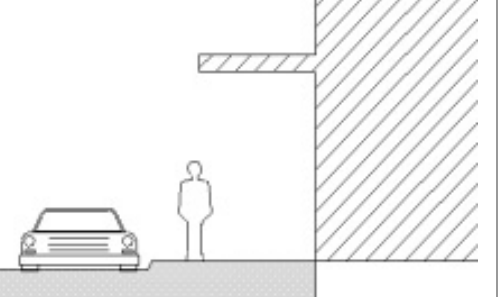


Shop Front

The front fa

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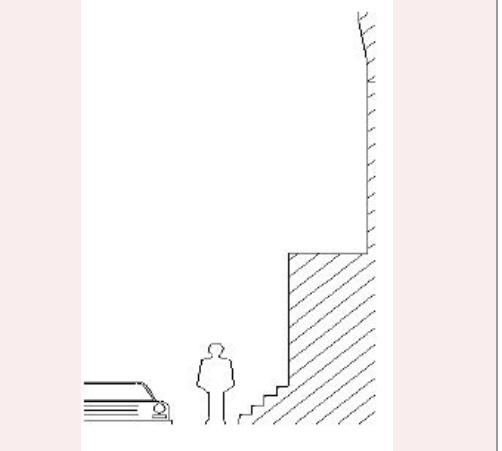
ade has an entrance at sidewalk grade next to windows that allow pedestrians to view the interior space. A cantilevered awning or shed roof may cover the shopfront over the sidewalk.



Stoop

The façade is placed close to the frontage line with the ground story elevated at least 18 inches from the sidewalk. A porch may cover the stoop.

This type is suitable for ground floor residential uses at short setbacks by creating privacy for the windows.



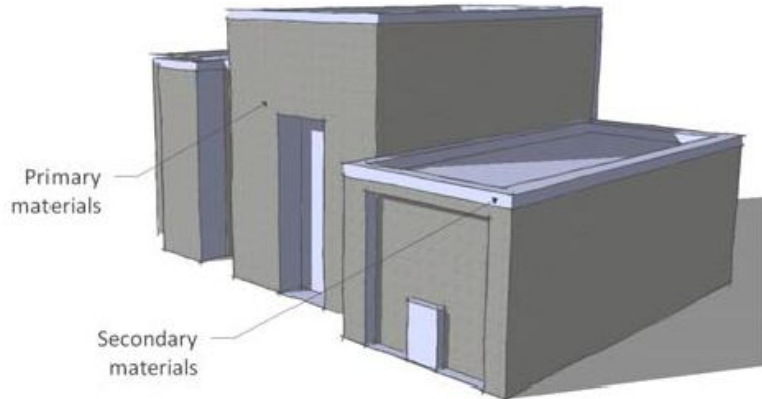
5.09.05.05 Building Materials

- A. **Purpose and Intent.** This ensures that building exteriors for Alternative Methods are durable and compatible with the character of development along the corridor. These standards are designed to promote these objectives in a reasonable and flexible way that avoids unreasonable cost burdens and unnecessary regulatory detail.
- B. **Applicability.** This section applies to any development that incorporates an Alternative Method described in Sections 5.09.02 and 5.09.03.
- C. **Permitted Building Materials and Configurations.**

1. Permitted building materials are divided into Primary and Secondary materials (Table 5.09.05.05-1).
2. Building exteriors facing and visible from Route 28 or a street must be composed predominantly of primary materials, with any secondary materials limited to accents or subordinate elements of the façade.
3. Additional materials not listed below are permitted if the Zoning Administrator determines that they are similar in appearance and quality to the listed materials.

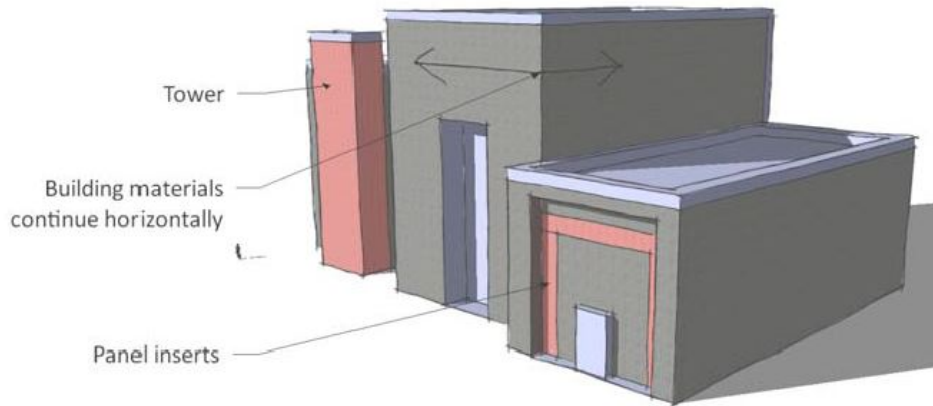
Table 5.09.05.05-1. Permitted Building Materials	
Primary	Secondary
Brick – solid or modular	Brick - panel/veneer, imprint or overlay systems
Concrete masonry units – split faced, or burnished	Cement fiber board / cementitious siding
Precast concrete ¹	Concrete masonry units (flush/plain, split faced or burnished)
Concrete tilt-wall ¹	Gypsum reinforced fiber concrete
Glass – clear	Metal panels
Glass – architectural panels	Pre-cast concrete (for trim and cornice elements only)
Metal panels	Cast stone
Native stone (or synthetic equivalent)	Wood or cementitious siding
Tile masonry / terra cotta	Composite wood trim
Stucco / EIFS (reinforced)	Fiber reinforced plastic
TABLE NOTES: 1. Permitted only on walls that meet the articulation standards of the applicable Alternative Method development.	

Figure 5.09.05.05-1. Primary and Secondary Materials



4. Wall materials must be consistent horizontally (i.e. joints between different materials must be horizontal and continue around corners) except for panel inserts (up to 15% of façade) and/or towers, chimneys and piers.

Figure 5.09.05.05-2. Wall Materials



- D. A building material not listed above is permitted if it is similar to the other materials in the same category with regard to:
1. Durability and quality;
 2. Appearance; and
 3. Compatibility with the architectural style of neighboring buildings.

5.09.05.06 Public & Civic Uses / Parks & Open Spaces

- A. **Typologies.** The following types of Public and Civic Uses / Parks and Open Spaces apply to the Standard and Alternative Methods in the CO, CI and CB Districts. The table indicates the ratio at which these spaces are counted for compliance with the requirements for the minimum area or ratio of Public and Civic Uses / Parks and Open Spaces that must be provided.

Table 5.09.05.06-1. Public & Civic Uses / Parks & Open Spaces



	Type	Ratio	Category	Description	
1	Civic	1.0	Civic	A single-use or shared building operated by a nonprofit group or organization that is dedicated to social, recreational, religious, educational, or charitable services. A single-use building or shared building operated for-profit for public assembly maybe considered a civic use if the Zoning Administrator determines that the use is compatible with the purpose of the Zoning District.	
2	Public	1.0	Public	Any building or structure, accessible to the general public, and held, used or controlled exclusively for public purposes by any department or branch of the federal, state, or Loudoun County government, such as post offices, motor vehicle departments, general government support offices, libraries, community centers, recreation centers, sheriff substations, fire and rescue stations, or similar facilities.	

Table 5.09.05.06-1. Public & Civic Uses / Parks & Open Spaces

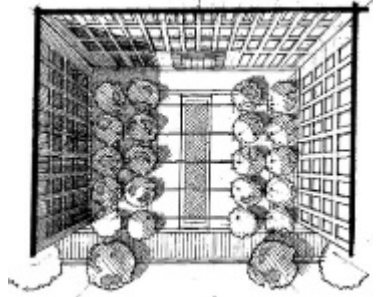
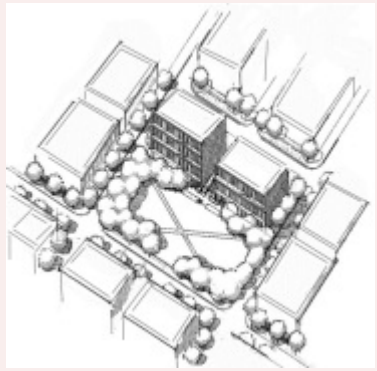

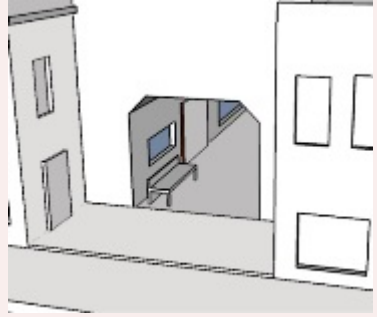

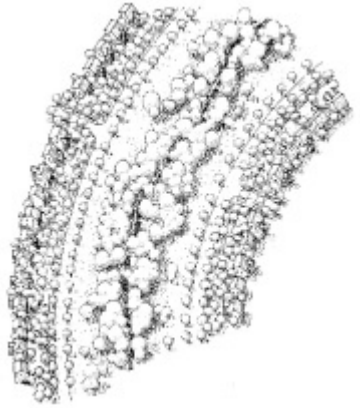

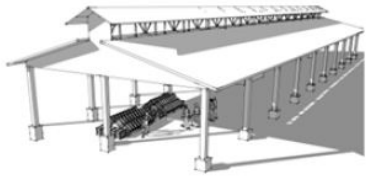
	Type	Ratio	Category	Description	
3	Plaza	1.0	Parks	An open area with seating that is adjacent to, or part of, a building. A Plaza may be combined with the Courtyard frontage type. Plazas function as gathering places and may incorporate a variety of nonpermanent activities such as vendors and display stands. A plaza requires a minimum depth and width of 10 feet and a minimum total area of 300 square feet.	
4	Square	1.0	Parks	Areas that are improved with a combination of lawn, landscaping and seating areas, and that are accessible to the public or the project's tenants or customers. A Square must be: <ul style="list-style-type: none"> ▪ Bounded by streets on at least one side and pedestrian walkways on at least 2 sides; ▪ Not bounded by streets, but accessible to the public; or ▪ Located on a rooftop. A Square requires a minimum depth and width of 30 feet and a minimum total area of 1,000 square feet. 	
5	Transport	1.0 or 1.2 for PD-CM	Public	On-site transportation amenities, including bus or shuttle stops and customer pick-up/drop-off stations.	
6	Pathways	1.0	Parks	Protected customer walkways or easily identifiable building pass-throughs that contain window displays and are intended for general public access. A Pathway must have a minimum vertical clearance of 9 feet and horizontal clearance of 12 feet for pedestrian access. A pathway is not to be construed as a sidewalk that is parallel to an abutting street.	
7	Water Feature	0.7	Open Space	A lake, pond, or fountain that is easily accessed by pedestrians and includes or integrates seating areas for pedestrians. A stormwater management improvement may count as a water feature if it meets these standards and is designed with a permanent pool.	

Table 5.09.05.06-1. Public & Civic Uses / Parks & Open Spaces

	Type	Ratio	Category	Description	
8	Greenways	1.0	Open Space	Natural areas (including areas protected by state or federal law) such as woodlands, floodplains, or protected tree canopy that connect buildings or gathering spaces with trail systems, or that buffer the site from streets or neighboring areas. A Greenway must have a minimum average width of 30 feet and length of 100 feet.	
9	Natural Areas	0.5 for required, 1.0 for bonus	Open Space	<p>Areas established for the protection of natural attributes of local, regional, and statewide significance, which may be used in a sustainable manner for scientific research, education, aesthetic enjoyment, and appropriate use not detrimental to the primary purpose. These areas are resource rather than user-based but may provide some passive recreational activities such as hiking, nature study, and picnicking. Natural Areas may include the Floodplain Overlay District, Scenic Creek Valley Buffer, and Steep Slope Standards.</p> <p>In order to receive a credit, the application must divide the area into Required and Bonus space. Required space includes areas that are protected by County, state or federal law, such as floodplains. Other Natural Areas such as jurisdictional waters and wetlands and riparian buffers are considered bonus space.</p>	
10	Heritage Resource Spaces	1.0	Civic	Areas that are established and actively managed in a way that reflects the County's culture and heritage. These include areas that are preserved and managed as Farm Markets, Commercial Wineries, Farm Based Tourism, or Agricultural Cultural Centers in compliance with the standards established for those uses in Chapter 4. This type is allowed only in CO and CB Districts.	

B. Cash in Lieu of Parks & Open Spaces / Public & Civic Uses.

- Where this Section 5.09 allows the property owner to contribute cash in lieu of providing Parks and Open Spaces / Public and Civic Uses and the property owner elects this option, the value of the contribution must equal:
 - The fair market value of the land subject to the contribution; and
 - The proportionate cost of improvements, construction or equipment subject to the contribution.
- The land and construction or equipment costs waived pursuant to Section 5.09.05.06.B.1. above must be determined as provided in Sections 5.09.05.06.B.3. and B.4., below.
- Fair Market Value of Land.**

- a. The cash-in-lieu must be based on the fair market value of the property as a whole, proportionate to the amount of the contribution, as determined by a certified property appraiser hired and paid for by the property owner.
- b. If the County rejects the property owner's appraisal, the County may hire and pay for a second appraiser to appraise the property.
- c. If either party rejects the second appraisal, a third appraisal may be performed by an appraiser chosen by the first and second appraisers, the costs of which are to be shared equally by the County and the property owner. The third appraisal is binding on both parties.
- d. All appraisals must be consistent with generally-accepted appraisal techniques, reflect the value of comparable properties within the Route 28 corridor, and be based on the value of the property as of the date of the application review.

4. Improvements, Construction, and Equipment.

- a. The cash-in-lieu contribution for improvements, construction, and equipment, other than land, must reflect the proportionate costs incurred by the property owner to provide the remaining on-site required Parks and Open Spaces / Public and Civic Uses improvements.
- b. The contribution amount must be verified through receipts, bids, and other evidence of actual costs incurred or to be incurred by the property owner to meet the remaining requirements for providing Parks and Open Spaces / Public and Civic Uses.

5.09.05.07 Parking Requirements

- A. For an Alternative Method of development, the number of parking spaces required by Section 7.06.02 is reduced by the following percentage as shown in Table 5.09.05.07-1.

Table 5.09.05.07-1. Parking Reduction	
Alternative Method	Parking Reduction
Office Cluster	25%
Office Center	35%
Campus	10%

- B. The parking reductions provided above are in addition to any reductions provided by Section 7.06.08 or Section 5.09.05.03.
- C. A parking space located on a street may be included in the calculation of parking requirements if it is adjacent to the building site where the use is located.

5.09.05.08 Site Standards

- A. **Applicability.** This section applies to the Alternative Method of development in the CO and CB Districts.
- B. **Blocks.**
 1. This section 5.09.05.08.B. applies to:
 - a. Business Campus and Custom Campus Alternative Method development sites that are larger than 30 acres. This subsection does not apply to a Secure Office Campus; and
 - b. Office Cluster and Office Center development sites.
 2. The development site must be divided into blocks.
 3. Block length within the development area must not exceed:
 - a. 600 feet for an Office Cluster;

- b. 800 feet for a Business or Custom Campus; and
- c. 400 feet for an Office Center.

C. Streets.

1. Streets interior to an Alternative Method development may be public or private, consistent with the Facilities Standards Manual.
2. Streets must be arranged in a generally rectilinear grid.
3. Streets must align with existing or planned streets on adjacent sites.

Figure 5.09.05.08-1. Grid Street Pattern



- D. Parking Arrangement.** Parking spaces and parking structures must be located internal to a block, or in the areas outside of the Frontage Buildout and separated from a road by landscaping and screening as provided in Section 7.04.06.

E. Street Trees.

1. Canopy trees must be planted at the following density along all areas dedicated for use for vehicular access in the Office Center, Office Cluster, Business or Custom Campus at a rate of one tree per 30 linear feet.
2. Canopy trees must have a minimum caliper of 2 inch and a height at maturity of 15 feet or more. As part of a Site Plan approval, the Zoning Administrator (on the advice of the County Urban Forester/Arborist) may approve substitute plantings or substitute locations if street trees will not survive in a given location.

5.09.05.09 Sustainability Incentives

- A. Applicability.** Property owners applying for the Alternative Method of Development may qualify for the sustainability incentive using the method below.
- B. Stormwater Management.**
1. A property owner may achieve an intensity bonus for stormwater management treatment that captures and retains on-site, through infiltration, re-use, and/or other best management practices, at least 20% of site runoff volume, based on the first inch of runoff.

2. The property owner must provide plans, with supporting documentation as necessary, that demonstrate how the performance targets established are met with the Site Plan or Concept Development Plan approval.
3. The plans must identify practices to be employed, such as:
 - a. Permeable pavements;
 - b. Stormwater harvesting for non-potable uses; and
 - c. Green roofs; and
 - d. Be otherwise consistent with low-impact development practices consistent with the [Facilities Standards Manual](#).

5.09.05.10 Campus Alternative Method

Description. Campus is an office-oriented development that includes a mix of uses in a park-like setting. This section establishes 3 types of Alternative Method Campus Developments:

- A. Business Campus;
- B. Custom Campus; and
- C. Secure Office Campus.

Table 5.09.05.10-1. Alternative Method Campus Developments

Campus Type (predominant use in each campus type is Office and/or Research & Development)

Business Campus

An office-oriented planned development that combines office / research-and-development / flex buildings and supportive retail and service uses. This campus type **does not include manufacturing and production uses**.



Mix of Uses

		Minimum Square Feet Required	Maximum Square Feet Permitted
1	Office/Research & Development	75%	100%
2	Flex/Data Centers	0%	10%
3	Retail & Services*	0%	10%

Custom Campus

An office-oriented planned development -that combines office, research-and-development, and **manufacturing and production** uses.



Mix of Uses

		Minimum Square Feet Required	Maximum Square Feet Permitted
--	--	------------------------------	-------------------------------

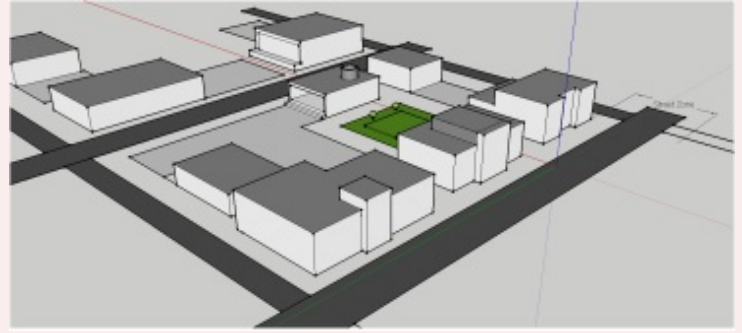
Table 5.09.05.10-1. Alternative Method Campus Developments

Campus Type (predominant use in each campus type is Office and/or Research & Development)

4	Office/Research & Development	60%	100%
5	Flex/Data Centers	0%	10%
6	Retail & Services*	0%	10%

Secure Office Campus

An office-oriented planned development that includes design standards that accommodate security elements, such as greater building setbacks, secured perimeters, and controlled site access. To use this option, the applicant must demonstrate that a secured perimeter and standoff distances are required for the applicant's prospective tenants by state or federal law or regulations.



Mix of Uses

		Minimum Square Feet Required	Maximum Square Feet Permitted
7	Office/Research & Development	60%	100%
8	Retail & Services*	0%	10%

Generally (applicable to all campus types)

9	Flex/Data Centers	<ul style="list-style-type: none"> Up to 10% of all floor area in CO. Up to 100% of the Office/Research & Development allocation in CB. Flex uses are not permitted within a Major Street Zone. This restriction does not apply to Data Centers. 	
10	Public & Civic Uses/Parks & Open Spaces	Refer to the applicable Optional Overlay District standards (Sections 5.09.02.05 or 5.09.03.03).	

TABLE NOTES:

*Retail and services do not include showrooms that are accessory to flex buildings and located entirely within the flex building.

D. A Campus is divided into 2 or 3 subareas:

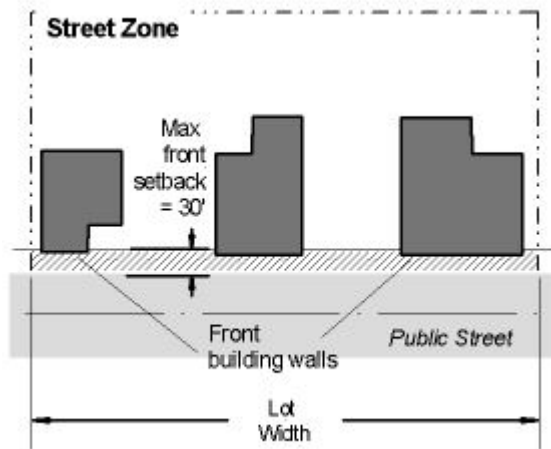
1. The Street Zone includes all areas located within 50 feet of the right-of-way of a public street other than Route 28. A Street Zone adjacent to the following roadways is considered a "Major Street Zone": George Washington Boulevard, Russell Branch Parkway, Waxpool/Church Road (Route 625), Loudoun County Parkway, Moran Road, Sterling Boulevard, Route 7, and Route 606 east of Route 28. The Street Zone does not apply to a Secure Office Campus;
2. The Interior Zone, includes all areas outside of the Street Zone other than the Corridor Zone, if applicable; and
3. If the Campus is adjacent to the Route 28 right of way, a Corridor Zone applies, and is located within 100 feet of the planned right-of-way of Route 28.

Table 5.09.05.10-2. Lot and Building Placement Standards

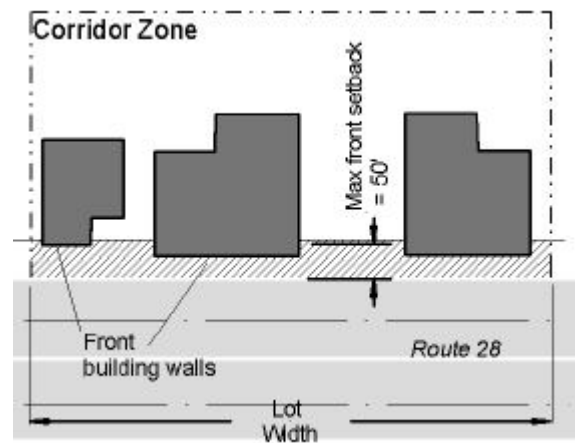
Lot Standards

Street Setback.

In the **Street Zone** - 0 feet (minimum) and 30 feet (maximum). No front setback applies to the **Interior Zone**. In the **Corridor Zone**, the setback is 50 feet (maximum) from the planned right-of-way of Route 28. This setback supersedes the building and parking setback requirements of Table 7.04.02-1. Road corridor buffers in accordance with Table 7.04.02-1 are required.



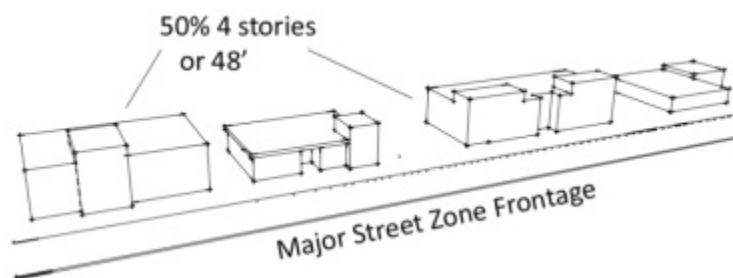
- **Frontage Buildout** (minimum). In the Street Zone, Front building walls must occupy at least 50% of the lot width at the maximum Street Setback lines. In the Corridor Zone, building walls must occupy at least 60% of the lot width at the maximum Corridor Setback lines.
- **Rear and Side Setbacks** are not required.



Building Placement Standards

1. **Height.** At least 50% of a **Major Street Zone** frontage setback must be occupied by buildings that are at least 4 stories or 48 feet in height. If a Corridor Zone is present, the frontage buildout, corridor setback and height standards for the Corridor Zone in Section 5.09.02.03 apply.
2. **Orientation.** In the **Street Zone**, front building walls must face streets or adjacent Civic Uses (see classification system in Section 5.09.05.06).
3. **Frontage Types.** Buildings within the Frontage Buildout of the **Street Zone** must use the Frontage Types listed in Section 5.09.05.04. Frontage Types are not required in the Corridor Zone.

4. **Massing / Façade.** In the **Street Zone**, building planes above the fifth story or 60 feet above average finished grade must be separated by at least 60 feet.
5. **Open Space Network.** Buildings, parking areas and exterior spaces must be connected by a continuous open space network. The open space network must include interior paths that link buildings with pedestrian walkways, bikeways, plazas, and trails. The open space network is counted toward the required parks and open space area (Section 5.09.02.05.B).
6. **Materials.** Building walls that face a Road or Street must comply with Section 5.09.05.05.



5.09.06 Use Table and Supplemental Regulations

- A. The Use Table for the Route 28 Corridor Districts establishes the following categories of uses.

Table 5.09.06-1. Categories of Uses

Notation	Category	Description
P	Permitted	Permitted if they meet the standards established in the Zoning District.
S	Special Exception	Requires Special Exception approval by the Board of Supervisors (refer to Section 10.11.01).
A	Alternative Development	Uses that are permitted only as part of an Alternative Development.
M	Minor Special Exception	Requires Minor Special Exception approval by the Board of Supervisors (refer to Section 10.11.02).

B. Land Use Allocations.

1. The categories in the Use Table (Table 5.09.06-1) are used to compute land use allocations.
2. For purposes of computing land use allocations for an Alternative Method, any building square footage associated with a use listed under the Parks and Open Spaces or Utilities and Transportation is excluded.
3. If a use is not defined in this Section 5.09 or in Chapter 12, the Zoning Administrator will refer to the most recent edition of Webster's Unabridged Dictionary. If a use is not defined in Webster's Unabridged Dictionary, the Zoning Administrator will refer to the North American Industry Classification Manual (Executive Office of the President, Office of Management and Budget, 2012) (NAICS). If the use is not defined in the NAICS, the Zoning Administrator will refer to the American Planning Association, Land-Based Classification Standards LBCS Tables (April 1, 2001).

Table 5.09.06-2. Use Table

	Uses	Route 28 CO (Corridor Office)	Route 28 CB (Corridor Business)	Route 28 CI (Corridor Industrial)
Office				
1	Conference and Training Center	P	P	S
2	Medical Care Facility, Outpatient Only	P	P	
3	Office: Administrative, Business, Professional	P	P	S
4	Office: Medical, Dental, and Optical	P	P	
5	Training Facility	P	P	P
Research and Development				
6	Medical Laboratories	P	P	P
7	Research, Experimental Testing, or Development Activities	P	P	P
Flex and Data Centers				
8	Data Centers	S	P	P
9	Flex Building that includes Manufacturing & Production or Industrial Uses			A
10	Flex Building as part of a Custom Campus	A	A	
11	Flex Building	A	A	A
Retail and Services				
12	Adult Day Care Center	P	P	P
13	Animal Hospital / Veterinary Service			S
14	Art Gallery	P		
15	Auction House	P	P	P
16	Automobile Service Station	S	S	S

Table 5.09.06-2. Use Table

	Uses	Route 28 CO (Corridor Office)	Route 28 CB (Corridor Business)	Route 28 CI (Corridor Industrial)
17	Bank or Financial Institution (5-659)	P	P	S
18	Business Service Establishment (5-661)	P	P	P
19	Car Wash (stand-alone)	S	S	S
20	Child Care Center (5-609(B))	P	S	S
21	Convenience Food store	P	S	S
22	Courier and Express Delivery	P	P	
23	Craft Beverage Manufacturing (5-668)	P	M	M
24	Facility for lessons in Dance, Gymnastics, Judo and Sports Training	S		S
25	Farm Based Tourism	A	A	
26	Farm Market, Off-site Production	A	A	
27	Firearm Range, Archery Range, Indoor			S
28	Health and Fitness Center	P	P	S
29	Heavy Equipment, Machinery, and Specialty Vehicle Sales, Rental, Repair and Accessory Service			P
30	Kennel			S
31	Livestock or Farm Product Auction or Wholesale Facility			S
32	Lodging: Hotel/Motel (Section 5-611)	P	P	
33	Lodging: Full Service Hotel	P	P	
34	Motor Vehicle Rental, Outdoor Vehicle Storage Only)			S
35	Motor Vehicle Service and Repair, Light			P
36	Motor Vehicle Service and Repair, Heavy with Accessory Motor Vehicle Sales			P
37	Motorcycle or ATV Sales, Rental, Repair, and Associated Service			P
38	Outdoor Sales Area, Accessory			S
39	Parking Lot/Valet Service, Long-Term			S
40	Personal Service Establishment	P	S	S
41	Pharmacies (Section 5-659)	P	P	
42	Pharmacies or Production, Fitting or Selling Optical or Prosthetic Appliances in Medical Office or Clinic	P	P	S
43	Radio, Motion Picture, Music and Television Recording Studio, Video Production and Distribution, and Postproduction Services	A	A	P
44	Recreation Establishment, Indoor	P	P	
45	Restaurant, Carry-out Only	P	P	S
46	Restaurant, Dinner Theatre	P	P	
47	Restaurant, Excluding Drive-through Facilities	P	P	S
48	Restaurant, Including Carry-out, with Drive-through Facilities	S	S	S
49	Retail or Wholesale Sales in Showroom of Flex Use	See "Flex" category		
50	Retail Sales Establishment (not listed elsewhere)	S	S	

Table 5.09.06-2. Use Table

	Uses	Route 28 CO (Corridor Office)	Route 28 CB (Corridor Business)	Route 28 CI (Corridor Industrial)
51	Retail Sales Establishment, Restaurant or Personal Service Use on Ground Floor of Vertical Mixed-Use Building	P	P	
52	Restaurant, Stand-alone Building	S	S	
53	Theatre, Indoor			
54	Winery, Commercial	A	A	A
Manufacturing and Production				
55	Baker, Commercial			P
56	Light Manufacturing incidental to Research & Development Activities which serve as an ancillary and interrelated component of the development	A	A	P
57	Machinery Manufacturing, Machine Shops			P
58	Manufacture of Concrete Block, Cinderblock, or Brick			P
59	Manufacture of Pre-Form Concrete Products			P
60	Manufacture, Processing, Fabrication and/or Assembly of Products (not otherwise listed)	A	A	P
61	Printing, Paper Products and Printing Materials Manufacturing (Manufacture, Processing, Fabrication, and/or Assembly)			P
62	Publishers, including Books, Newspapers, and Software	A	A	P
63	Sawmill, Wood Processing Facility, Stump Processing Plant			S
Industrial				
64	Contractor Service Establishment (Section 5-662)			P
65	Distribution Facility			P
66	Dry Cleaning Plant			S
67	Fruit Processing, Storage			P
68	Outdoor Storage, Accessory up to 10% of lot area of principal use			P
69	Warehousing			P
70	Wholesale Trade Establishment (Section 5-663)			P
Residential				
71	Dwelling, Accessory to a Permitted or Special Exception Use (Example: Resident Manager, Caretaker)			
72	Dwelling, Attached Multi-Family			
Public and Civic				
73	Agricultural Cultural Centers	A	A	
74	Amphitheater, Outdoor	S	S	
75	Church, Synagogue, and Temple	P	P	S
76	Civic, Social, Fraternal Association Meeting Place	A	A	S
77	Community Center	A	A	S

Table 5.09.06-2. Use Table

	Uses	Route 28 CO (Corridor Office)	Route 28 CB (Corridor Business)	Route 28 CI (Corridor Industrial)
78	Commuter Parking Lot	P	P	P
79	Educational Institution	P	P	
80	Fire and/or Rescue Station, Emergency Response	S	S	S
81	Hospital (Section 5-610)	S	S	
82	Library	S	S	
83	Museum, Cultural Center, Interactive Science, Arboretum, Zoo, Botanical Garden, Planetarium, Aquarium, or Technology Center	P	P	P
84	Performance Arts Center	P	P	
85	Police Station	S	S	S
86	Postal Services	P	P	P
87	Recycling Drop-off Collection Center, Small (Section 5-607)	P	P	P
88	Recycling Drop-off Collection Center, Large (Section 5-607)			S
89	School, Private	S	S	S
90	School, Elementary, Middle, and High	S	S	S
91	School, Vocational	S	S	S
92	Winery, Commercial	A	A	
Parks and Open Spaces				
93	Agriculture, Horticulture, Forestry, and Fishery (including Farm Winery)	P	P	P
94	Golf Course	S	S	S
95	Golf Driving Range	S	S	S
96	Park	P	P	P
Utilities and Transportation				
97	Airport, Private or Commercial, Including Support Activities such as Freight and Cargo Handling			S
98	Bus Stop	P	P	P
99	Bus or Truck Maintenance or Storage Facility			S
100	Freight Trucking, General and Specialized			S
101	Heliport, Helistop	S	S	S
102	Mass Transit Facilities and Stations	P	P	P
103	Public Utility Service Center			S
104	Radio, Radar and/or Television Tower	S	S	S
105	Sewage Treatment Plant			S
106	Sewer Pumping Station	P	P	P
107	Scenic and Sightseeing Transportation	A	A	P
108	Telecommunications Antenna (Section 5-618(A))	P	P	P
109	Telecommunications Monopole (Section 5-618(B)(1))	P	P	P
110	Telecommunications Monopole (Section 5-618(B)(2))	S	S	S
111	Telecommunications Tower (Section 5-618(C)(2))	S	S	S

Table 5.09.06-2. Use Table

	Uses	Route 28 CO (Corridor Office)	Route 28 CB (Corridor Business)	Route 28 CI (Corridor Industrial)
112	Telecommunications Tower (Section 5-618(C)(1))			P
113	Ground Passenger Transportation (Including Taxi or Limousine Service, Employee Transportation, and Special Needs Transportation Services)			S
114	Utility Substation, Dedicated	P	P	P
115	Utility Substation, Distribution (Section 5-616)	P	P	P
116	Utility Substation, Transmission (Section 5-616)	S	S	S
117	Water Pumping Station	P	P	P
118	Water Storage Tank	S	S	S
119	Water Treatment Plant	S	S	S

5.09.07 Procedures

Generally. Except as provided below, all development subject to Section 5.09, Route 28 Corridor District, must be processed as provided in Chapter 10.

5.09.07.01 Election to Waive Route 28 Tax District Law

- A. Applicants who wish to file a Site Plan under the Route 28 Corridor Optional Overlay regulations for property located in a commercial or industrial Zoning District must file an election.
- B. The owner(s) of any commercially or industrially zoned property with an optional overlay district within the Route 28 Tax District may elect to waive the protection of the state legislation establishing the Route 28 Transportation Improvement District and Section 1.02.K. by filing a written notice of such election accompanied by an affidavit in recordable form indicating that all owners:
 1. Have signed the notice of election;
 2. Are electing to waive the protection of the state legislation establishing the Route 28 Transportation Improvement District and Section 1.02.K; and
 3. Must request that any land use approvals for the subject property be reviewed and developed pursuant to the Section 5.09: Route 28 Corridor Zoning Regulations of the Zoning Ordinance; and
 4. The election will not relieve the owner(s) of any obligations under previously accepted proffers.
- C. Property that is presently subject to the 1972, 1993, and Revised 1993 Zoning Ordinances that file an election are subject to this Section as shown in Table 5.09.07.01-1.

Table 5.09.07.01-1. Route 28 Corridor Plan Category	
Route 28 Corridor Plan Category	Optional Overlay
Core-Office Cluster (north of Sterling Avenue)	CO, Subdistrict 1
Core-Office Cluster (south of Sterling Avenue)	CO, Subdistrict 2
Business	CB
Industrial	CI

- D. After an election is filed, all land use and land development approvals sought for the subject property will be reviewed and developed pursuant to the Section 5.09: Route 28 Corridor Zoning Regulations of the Zoning Ordinance, and the property owner may file a Site Plan pursuant to such regulations.

- E. Expansion of the R-1, R-2, and R-3 Zoning Districts is not permitted after December 13, 2023.

5.09.07.02 Site Plans

In addition to the requirements established in the [Facilities Standards Manual](#) and Section 10.06 for a Site Plan, a Site Plan filed under the Route 28 Corridor regulations must include the following:

- A. Names and route numbers of boundary streets and widths of existing right(s)-of-way. Delineation of existing centerline of all streets abutting the property, including dimensions from the existing centerline to the edge of pavement and to the edge of the right-of-way;
- B. The location and arrangement of all proposed uses;
- C. The height, in feet, of all buildings and the number of floors both above and below or partially below finished grade;
- D. Proposed building footprints and massing details;
- E. The traffic circulation system and the pedestrian and bicycle circulation system, including the location and width of all streets, driveways, entrances to parking areas and parking structures, pedestrian walkways and bicycle paths. This must include an automobile turning analysis that demonstrates adequacy of access;
- F. Location of bus and rail stops;
- G. Landscaping plan indicating the location and type of all plantings, in accordance with the requirements of the Facilities Standards Manual, and any trees to be conserved;
- H. Location and size of parks, civic, and open space areas, specifying the proposed treatment or improvement of all such areas;
- I. Location and quantity of required number of off-street parking and loading area provided;
- J. Architectural sketches of typical proposed structures, including lighting fixtures. The sketches must include sufficient detail to show how buildings will comply with building entryway, fenestration, modulation, and building material requirements of any Alternative Method; and
- K. Total floor area and floor area for each use type and total floor area ratio in each subarea and land bay.

5.09.07.03 Duration of Permits

- A. The duration of a permit or approval for an Alternative Method of development under Section 5.09 is:
 - 1. **Site Plan.** 10 years;
 - 2. **Special Exception.** 10 years; and
 - 3. **Zoning Permit.** 3 years.
- B. This section supersedes any provisions to the contrary in the Zoning Ordinance, including Sections 10.04.G. and 10.11 of this Zoning Ordinance and 1244.02 of the Land Subdivision and Development Ordinance, but is otherwise subject to the procedures set forth in those sections.

5.09.08 Definitions

The words, terms and phrases used in Section 5.09 have meanings assigned in Chapter 12 and this section. If a definition in this section conflicts with a definition in Chapter 12, this section controls.

Average Finished Grade: A reference plane representing the average of finished ground level adjoining the building at its exterior walls. Where the finished ground level slopes away from the exterior walls, the reference plane is established by the lowest points within the area between the building and the lot line, or where the lot line is more than 6 feet from the building, between the building and a point 6 feet from the building.

Average Height: The average height is computed as the weighted average of building height based on building frontage.

Average Height Formula

$$H = (\sum S \times W) / \sum W$$

Where:

H = Average building height

S = Stories of each building at the front building line

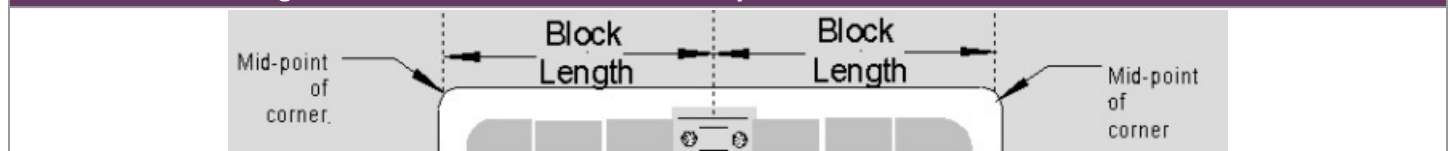
W = Width of each building at the front building line

Block Length: The length of a block face lying between 2 intersection streets or between an intersection street and a pedestrian feature. length is measured from the mid-point of the corner along each opposite intersection if there is no pedestrian feature. If there is a pedestrian feature between the intersection streets, block length is measured from the mid-point of the intersection street corner to the mid-point of the pedestrian feature. For purposes of this definition, a “pedestrian feature” is a mid-block through alley with pedestrian access (which may permit secondary vehicle access to land uses on the block), a pedestrian way that connects land uses on both sides of the block, or another significant pedestrian gathering place such as a plaza, park, or promenade.

Figure 5.09.08-1a. Block Face Formed by 2 Intersections



Figure 5.09.08-1b. Block Face Formed by Intersection and Pedestrian Feature



Building Frontage: The side, or façade, of a building closest to and most nearly parallel to an abutting street.

Building Wall: A vertical element that is used to enclose space that is intended for human occupancy.

Building Wall, Front: The building wall that includes the principal entrance to a building.

Corridor Zone: The area within 100 feet of the existing or planned right-of-way of Route 28.

Discretionary Approval: For purposes of the Route 28 Corridor regulations, zoning amendment or Concept Development Plan.

Entryway: A door or similar building entry that allows entry by the general public, customers, residents, or employees. An entryway may be secured or unsecured.

Exterior Wall: A wall, bearing or nonbearing, that is used as an enclosing wall for a building, other than a fire wall, and that has a slope of 60 degrees or greater with the horizontal plane.

Flex or Flex Building: A building designed to accommodate a combination of uses, the exact proportions of each use being subject to user needs over time and the applicable optional overlay district and/or Alternative Method regulations. A multiple use flex building includes office or research and development, and any of the following uses:

- A. Wholesale trade establishment;
- B. Warehousing;
- C. Laboratories;
- D. Data centers;
- E. Training facilities that relate to the office or research and development uses;
- F. Retail or commercial uses that support the uses listed above, up to 10% of the gross floor area of the building; and
- G. Showrooms, consisting of retail or service uses but may exceed the 10% threshold listed above; or
- H. Where allowed in the Use Table (Section 5.09.06), manufacturing and production or industrial uses.

Front Building Line: The point at which a building façade is closest to the front property line.

Frontage, Development:

- A. The frontage of an individual lot that is not subject to an application that includes multiple lots as described below; or
- B. For a development, the combined lot frontage all of lots within an area covered by an application that includes more than one lot. An “application” includes any application for Zoning Map Amendment, Zoning Modification, Final Site Plan, or Special Exception.

Frontage Buildout: The linear percentage a line parallel to the Development Frontage that is occupied by buildings that face a road. The required percentage and the location of the parallel line is designated by regulations that apply to Alternative Methods (as designated in Sections 5.09.02 and 5.09.03) and, if applicable, the Zoning District regulations.

Glazing: Placed in transparent glass. "Transparent" means capable of transmitting light in a manner that permits a person standing outside of a building to view shapes, tones, and objects inside a building. A tinted window is considered transparent if it meets the requirements of this paragraph.

Gypsum or Glass Reinforced Fiber Concrete (or “GRFC”): A cementitious matrix composed of cement, sand, water, and admixtures, in which short length glass fibers are dispersed. GRFC is concrete that uses glass fibers for reinforcement instead of steel. It is typically used for nonstructural façade panels.

Horizontal Mixed-Use Building:

- A. A building in which a compatible mixture of different use categories (such as commercial, cultural, institutional, governmental, recreational, and/or high-density residential uses) are located side by side and separated by party walls, or
- B. Two or more buildings that have adjoining walls, and that are occupied by such different use categories.

Hotel, Full-Service: Multi-story, hotels with a minimum of 200 rooms that are targeted to business and/or leisure travelers and include large meeting facilities of 10,000 square feet or greater or are combined with a convention center, and contain amenities, including one or more restaurants, bell and valet service, room service, concierge service, 24-hour front-desk service, business services, spa service, fitness center and recreational/entertainment facilities.

Land Use Allocation: The minimum and maximum mix of uses prescribed for an Alternative Method development.

LEED: The Leadership in Energy and Environmental Design (LEED) certification program administered by the United States Green Building Council. The LEED rating is determined in accordance with the U.S. Green Building Council, LEED 2009 for New Construction and Major Renovations Rating Systems, Version 3.0 (November 2008), or the most current version of that document.

Manufacture, processing, fabrication and/or assembly: Manufacture, processing, fabrication and/or assembly. processing, fabrication and/or assembly of products such as, but not limited to: scientific and precision instruments, photographic equipment, communication, computation equipment, drugs, medicines, pharmaceutical, household appliances, toys, sporting and athletic goods, die-cut paperboard and cardboard, glass products made of purchases glass, electric lighting and wiring equipment, service industry machines, lithographic and printing processes, industrial controls, radio and TV receiving sets, watches and clocks, bags and containers, sanitary paper products, optical goods, electrical machinery.

Maximum Setback: See Setback, Maximum.

Mixed-Use Building: A horizontal mixed-use building or vertical mixed-use building.

Planting/Furniture Zone: An area within a sidewalk that provides space for landscaping, street furniture, and pedestrian amenities.

Pedestrian Through Zone: An area within a sidewalk that provides space for pedestrian through traffic, and that is located between the building front and a Planting/Furniture Zone.

Proposed Development: Any use, construction activity, and related activity proposed by an application for Zoning Map Amendment, Zoning Modification, Concept Development Plan, Final Site Plan, or Special Exception.

Route 28 Corridor Regulations: Section 5.09 of the Loudoun County Zoning Ordinance.

Setback, Corridor: A setback measured from the planned right-of-way of Route 28.

Setback, Maximum: The distance of an imaginary line measured from the following reference points and extending along a Development Frontage, and that is used to measure the Frontage Buildout:

- A. If sidewalks exist or are planned at the time an application is filed, from the outer edge of the sidewalk; or
- B. If sidewalks do not exist and are not subject to current construction plans that designate their location, from the edge of the public right of way or, if applicable, a public access easement.

Setback, Street: A setback measured from the outer edge of any Road (other than Route 28 or Route 7). For a public Road, the setback is measured from the reference points described in “Setback, Maximum” above. For a private road or driveway, the setback is measured from the outer edge of the sidewalk or, if sidewalks do not exist, the edge of the road’s curb or pavement.

Street, Interior: Any street that is located interior to the boundaries of a proposed development.

Story Above Grade Plane: Any story that has its finished floor surface above the finished grade, or in which the finished surface of the floor next above is:

- A. More than 6 feet above grade plane; or
- B. More than 12 feet above the finished ground level at any point.

Vertical Mixed-Use Building: A building that has a compatible mixture of different use categories (such as commercial, cultural, institutional, governmental, recreational, and/or high-density residential uses) occupying different floors.