

CHAPTER 1109
Design Standards and Criteria

1109.01 Intent.	1109.05 Streets in multifamily areas.
1109.02 Topography and natural features (standard).	1109.06 Streets in business and service areas (criteria).
1109.03 Arterial and collector street system (standard).	1109.07 Design of blocks (criteria).
1109.04 Local street pattern in one-family areas (criteria).	1109.08 Design of lots (criteria).
	1109.09 Public land uses (criteria).

CROSS REFERENCES

Preliminary design plan - see DEV. 1107.03
Required improvements - see DEV. Ch. 1111
Streets definitions - see DEV. 1179.18

1109.01 INTENT.

Subdivision design standards and criteria are herein established as fundamental principles to be applied with professional skill in planning, subdividing and resubdividing the land. The standards are requirements to be complied with, the criteria are guidelines to be applied with skill, and the Planning Commission shall determine whether they have been effectively applied. The intent and objectives are to achieve, among others, the following purposes:

(a) To provide for the planning of attractive and harmonious neighborhoods; functional lots and building sites; and to take advantage of the natural features.

(b) To provide a pedestrian and vehicular circulation system; convenient and safe local streets; and to implement the Street Plan.

(c) To coordinate the planning and division of land and planning of building sites; and to carry out the objectives of the Master Plan.
(Ord. 58-73. Passed 7-23-73.)

1109.02 TOPOGRAPHY AND NATURAL FEATURES (STANDARD).

Land developments shall be planned to take advantage of the land formation and to utilize the natural contours in order to economize in the construction of drainage facilities, to reduce the amount of grading, to minimize destruction of trees and topsoil and, in addition, to create functional variations in the neighborhoods.

(a) Conformity to Development Plans and Zoning. The arrangement, character, width and location of all arterial and collector thoroughfares or extensions thereof shall conform with the City's Mapped Streets Plan. Thoroughfares not contained in the aforementioned Plan shall conform to the recommendation of the Planning Commission based upon the design standards set forth in City regulations and standards. In addition, no final plat of land within the City shall be approved unless it conforms with the City Zoning Code.

(b) Suitability of Land. If the Commission finds that land proposed to be subdivided, is unsuitable for subdivision development due to flooding, schools, transportation facilities and other such conditions which may endanger health, life or property; and, if from investigations conducted by the public agencies concerned, it is determined that in the best interest of the public the land should not be developed for the purpose proposed, the Commission shall not approve the land for subdivision unless adequate methods are advanced by the subdivider for solving the problems that will be created by the development of the land. (Ord. 58-73. Passed 7-23-73.)

1109.03 ARTERIAL AND COLLECTOR STREET SYSTEM (STANDARD).

(a) Streets shall be designed, relocated, extended, widened or narrowed to implement the Street Plan, to be in accord with the functions served, to be related to the use of abutting land, and otherwise designed to comply with the following planning standards.

(b) The system shall comply with the adopted Street Plan in regard to the alignment, width and adopted standards. Access to arterial streets shall be controlled in the interest of public safety and to maintain the design capacity of the street system.

(c) Whenever a one-family residential development abuts a major street, the Commission may, in order to protect residential property from the movements of heavy traffic and to control intersections with major streets, require marginal streets parallel to the major street; reserve frontage lots between a major street and a parallel local street with screen planting located in a nonaccess reservation along the right-of-way line of the major street; or, the fronting of lots with extra width on perpendicular local streets.

(d) Whenever land is subdivided or resubdivided, land shall be acquired by gift, purchase, exchange, devise or appropriation so as to provide a right of way for arterial and collector streets of not less than eighty (80) feet (24.38m) unless shown otherwise on the Street Plan. Property at street intersections shall be rounded with a radius of not less than thirty (30) feet (9.144m) for arterial or collector streets. Arterial and collector streets shall be paved in accordance with City requirements on an individually considered basis. (Ord. 58-73. Passed 7-23-73.)

1109.04 LOCAL STREET PATTERN IN ONE-FAMILY AREAS
(CRITERIA).

(a) The primary function of local streets is to provide direct access to abutting developments. The local street system should be designed to minimize through traffic movements. This can be accomplished by designing a system of collector streets and by creating discontinuities in the local street pattern, by offsetting local street intersections and providing continuous loop and angular streets. Every part of a residential area should be interconnected for convenience and to avoid excessive indirect travel except where connections are not feasible because of topographic conditions.

(b) The pattern should be logical and comprehensive for the convenience of local residents and visitors and for providing services. The design should be planned to provide these basic functions so as not to need to rely on extensive traffic regulations. The streets should be designed for uniformly low volumes of traffic, commensurate with residential amenities, to discourage speeds of more than twenty-five (25) miles per hour. The amount of space devoted to local streets should be minimized for costs and economy of land use.

(c) There should be a basic underlying design related to the topography and natural features. The pattern should also be related to attaining functional, economical and practical patterns and shapes and sizes of areas for development. Necessary traffic generators such as schools, bus routes and playgrounds should serve as focal points in the pattern and such routes should have a minimum number of pedestrian crossings. There should be a minimum number of intersections. T-intersections should predominate and cross-intersections should be minimized.

- (1) Right of Way and Pavement Widths (Standard). Whenever the local street pattern is planned to assure low traffic volumes, fifty (50) foot (15.24m) rights of way, otherwise, sixty (60) foot (18.29m) rights of way; pavement width of twenty-six (26) feet (7.83m) back to back of curbs on cul-de-sacs and loop streets, thirty-two (32) feet (9.75m) on other local streets, and thirty-six (36) feet (10.97m) on collector streets. Arterial streets shall be paved in accordance with City requirements on an individual consideration basis.
- (2) Intersections (Criteria). Designed so streets shall intersect at approximately ninety (90) degrees, but in no case less than seventy-five (75) degrees. Centerline offsets or jogs of T-intersections shall not be less than one hundred twenty-five (125) feet (38.10m). At intersecting streets, an unobstructed sight triangle shall be maintained of not less than twenty (20) feet (6.10m), measured along the nearest intersecting front property

lines. Property lines at street intersections shall be rounded with a radius of not less than twenty (20) feet (6.10m) for local streets.

- (3) Grades or Vertical Alignment (Standard). The minimum grade should be not less than three tenths (.3) of one (1) percent for local and collector streets. The maximum grade within one hundred (100) feet (30.48m) of an intersection should not exceed three percent (3%).
- (4) Horizontal Alignment (Criteria). Curving local streets are encouraged in residential districts where related to topography or other functional features; a minimum curve of one hundred (100) foot (30.48m) radius measured from the inside edge of the pavement; minimum tangent fifty (50) feet (15.24m), a minimum sight distance of two hundred (200) feet (60.96m).
- (5) Cul-de-sac Streets (Criteria). Where approved, cul-de-sacs shall terminate with a permanent turn-around, having a minimum outside curb radius of fifty (50) feet (15.24m), property line radius of sixty (60) feet (18.29m), and shall not exceed one thousand (1000) feet (304.80m) in length. The Commission may require that the center circle, or oval, be paved. If the cul-de-sac street does not open in the direction of schools or playgrounds, a pedestrian way may be required.
- (6) Temporary Dead-End Streets (Standard). Where a proposed subdivision adjoins undeveloped land, temporary "T" turn-arounds may be permitted provided provisions are made for the future extension of such streets and utilities, and for the reversion of the excess rights of way to the abutting properties. Permanent dead-end streets are not permitted.
- (7) Streets of Nonconforming Width (Standard). Streets of less than the required right of way shall not be permitted except where the Commission finds it would not be reasonable to require dedication of the remaining part until the abutting property is subdivided. Wherever property abuts a street which does not conform to the width required by either the Street Plan or plans of Cuyahoga County or the Ohio Department of Transportation, the additional width shall be provided when the land is subdivided.
- (8) Reserve Strips Adjoining Streets (Standard). An intervening division of land which controls access or extensions of pavement and utilities to adjoining property shall not be permitted except where the control of such

land has been assigned to be under the control of the City.

- (9) Driveways. Driveways shall be located in accord with a plan for the block and on corner lots not less than sixty (60) feet (18.29m) from the nearest intersecting street right-of-way lines.
- (10) Street Names (Criteria). Names shall not duplicate unless directly connected or related with the names of existing streets in northwestern Cuyahoga County; the names shall be subject to the approval of the Commission.
(Ord. 58-73. Passed 7-23-73.)

1109.05 STREETS IN MULTIFAMILY AREAS.

(a) Streets serving multifamily buildings shall be planned to connect with arterial or collector streets and so as not to direct traffic on local residential streets.

(b) The criteria for horizontal and vertical alignment intersections and other design criteria of streets in multifamily developments shall be the same as for one-family developments, except higher traffic volumes are generated in multifamily projects. For collector streets, the minimum rights of way shall be sixty (60) feet (18.29m); the paved surface shall be thirty-two (32) feet (9.75m), provided only stopping or short duration parking is permitted. A cul-de-sac street shall not exceed five hundred (500) feet (152.40m) in length.
(Ord. 58-73. Passed 7-23-73.)

1109.06 STREETS IN BUSINESS AND SERVICE AREAS (CRITERIA).

(a) Streets and parking area driveways serving business developments shall connect with arterial streets and be planned so as not to direct traffic on local residential streets. The intersection of parking area driveways shall be located so as to cause the least possible interference with the movement of traffic on the arterial streets, and wherever possible, be located not less than one hundred (100) feet (30.48m) from the intersection of two (2) arterial streets. Acceleration, deceleration and turning lanes shall be provided at all intersections of collector or arterial streets with another collector or arterial street, and also at all principal driveways serving a planned area development, unless specifically waived by the Planning Commission.

(b) Parking areas serving adjoining business establishments shall be interconnected by on-site circulation lanes designed to provide the maximum safety and convenience for the entire shopping district.

(c) Streets for service and manufacturing areas shall be planned in accord with the applicable criteria as set forth for business areas in this Section.
(Ord. 58-73. Passed 7-23-73.)

1109.07 DESIGN OF BLOCKS (CRITERIA).

(a) The boundaries and lines of blocks shall be designed to conform to natural and topographic features and lines, to the street planning criteria, and to accommodate lots and building sites as required for the district as set forth in the Zoning Code, and to provide for community facilities.

(b) Blocks shall be planned; in length, an average of fifteen hundred (1500) feet (457.20m), but not exceeding twenty-five hundred (2500) feet (762m) or less than eight hundred (800) feet (243.84m); in width, to accommodate two (2) tiers of lots unless separated by community facilities, common green areas, or other compatible uses. Crosswalks or pedestrian ways, of not less than ten (10) feet (3.05m) in width (five-foot (1.52m) hardsurfaced) may be required for walkways across excessively long blocks or at the end of cul-de-sac streets for access to schools, playgrounds or bus stops.
(Ord. 58-73. Passed 7-23-73.)

1109.08 DESIGN OF LOTS (CRITERIA).

(a) Each lot shall be designed to form a functional site to fully accommodate the dwelling and surrounding open space. It should be rectangular in general form; triangular, elongated or other shapes that restrict its use as a building and landscaped site shall be avoided.

(b) The area and width of lots shall be in accordance with the requirements of the Zoning Code which shall be construed, however, as absolute minimum and not as optimum dimensions. All remnants of land less than the required lot size shall be incorporated into the lot pattern, and not as a remnant, nonconforming parcel. The lot shall conform with the required width at the front building line and on curved streets, the chord of either, but not both, the front lot line or the rear lot line may be less, but not less than sixty (60) percent of the required width. The depth of lots abutting a local residential street in a one-family subdivision should not exceed two and one-half (2-1/2) times its width. The ratio shall be increased when the rear line abuts a railroad or nonresidential land uses; also, where abutting an arterial street in order to increase safety and privacy.

(c) Corner lots shall have extra width to obtain the required setbacks and yards from both streets, as set forth in the Zoning Code.

(d) Side lot lines shall be designed to be at approximately right angles to street lines or radial to curved street lines. At T-intersections, the lots shall be arranged so that one (1) side lot line shall be approximately opposite the center of the street which terminates.

(Ord. 58-73. Passed 7-23-73.)

1109.09 PUBLIC LAND USES (CRITERIA).

Sites for playgrounds, schools and other public uses as shown on the Community Facilities Plan, if located in whole or in part in a proposed subdivision, shall be incorporated in the subdivision plan and the land shall be reserved for such purposes in accord with Chapter 1103. Drainage courses, ponds or land subject to flooding shall not be accepted for public use and maintenance unless conforming with the plan for public facilities. Where utilities are not located in the street right of way, easements, at least twelve (12) feet (3.66m) wide shall be located parallel to and centered on the rear lot lines, or on side lot lines where necessary to complete the circuit.

Drainage way easements shall be established where a subdivision is traversed by a drainage way or stream. Such easements shall be not less than twenty (20) feet (6.10m) wide, exclusive of the required lot area; rear lot lines shall be arranged along such drainage easements.

(Ord. 58-73. Passed 7-23-73.)