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PART A. GENERAL REQUIREMENTS

Section 1. Applicability

Except as otherwise provided below, the site design and improvement standards in this Article are required for all subdivisions, planned developments, and any other new development or redevelopment of a site upon which such improvements do not currently exist. Exemptions from these requirements may be granted by Variance or, in the case of the subdivision standards from Articles 5 and 6 of this ordinance, by a Variance of the Plan Commission subject to Article 5, Part A, Section 5. Existing improvements that do not meet the standards of this Article 6 shall be subject to Article 14, Nonconforming Uses.

Section 2. Conformity with Other Regulations

- A.** In addition to the requirements established in these regulations, the improvement of land shall comply with the following:
1. Applicable statutory provisions;
 2. Applicable provisions of this Unified Development Code and all other laws of the applicable jurisdictions;
 3. The official Comprehensive Master Plan and Capital Improvements Program of the applicable jurisdictions, including all streets, trails, and parks shown on any official map;
 4. The rules and regulations of the State Board of Health, the Department of Natural Resources, and other appropriate state agencies;
 5. Applicable planning and regulatory guidelines, including access control or driveway manuals, parking and traffic control ordinances, and other applicable guides published by the state or local governmental units;
 6. The current edition of the “Indiana Manual on Uniform Traffic Control Devices” for installation of traffic control devices; and
 7. The rules of the Indiana Department of Transportation (INDOT) if the development or any lot contained therein abuts a state highway.
 - {8. The Hamilton County Thoroughfare Plan, as amended; and,
 9. Pathway Standards and Design Guidelines as adopted and amended by the Hamilton County Alternative Transportation Task Force and the Hamilton County Plan Commission.} **ORD. #57-11-96**
 - {10. The Noblesville Public Improvement Standards. **ORD. #57-12-01 (APPENDIX F)**} **ORD. #55-12-02**
- B.** To assure, {through careful site evaluation and design the creation of new parcels that are compatible with existing neighborhoods, the natural environment, health and safety of the community’s residents;} the developer, contractor, {and/or engineer for the project shall comply with the policies of the Comprehensive Master Plan, Unified Development Ordinance, the Noblesville Standards, } and the latest issue of the “Indiana Department of Transportation Standard Specifications” for material and construction control, except when different specifications are 1) explicitly described in these regulations, or 2) adopted by the Engineer of appropriate jurisdiction and approved by all appropriate boards, commissions, agencies, and Offices of the City or County. **ORD. #29-9-11**
- C.** Plat approval may be withheld if a subdivision is not in conformity with the above laws, regulations, guidelines, and policies, the regulations of this Article, or the purposes of these regulations as established in Article 1 of this Development Code.

Section 3. Political and Jurisdictional Boundaries

To eliminate potential jurisdictional disputes and to facilitate effective coordination and control of development, the Plan Commission shall be guided by the following policy:

- A.** Whenever access to the development is required across land in another local government, the Commission shall request assurance from that local governmental attorney that access is legally established, and from the local governmental engineer that the access road is adequately improved, or that a Performance Bond has been duly executed and is sufficient in amount to assure the construction of the access road.
- B.** Lot lines shall be laid out so as not to cross boundary lines between adjacent units of local government which has separate governing bodies for the purpose of regulation and control of land use and development, as well as for tax purposes.

Section 4. Conditions of Development

A. Character of Land Suitable for Development

Land that the Plan Commission finds to be unsuitable for subdivision or development due to flooding, improper drainage, adverse earth formations or topography, utility easements, or other features that will reasonably be harmful to the safety, health, and general welfare of the present or future inhabitants of the development and/or its surrounding areas, shall not be subdivided or developed unless adequate methods are formulated by the developer and approved by the Planning Commission, upon recommendation of the Technical Advisory Committee, to solve the problems created by the unsuitable land conditions. Such land shall be set aside for uses as shall not involve any danger to public health, safety, and welfare.

B. Adequate Public Facilities

No primary plat shall be approved unless the Planning Commission determines that public facilities will be adequate to support and service the area of the proposed development. The applicant shall, at the request of the Planning Commission, submit sufficient information and data on the proposed development to demonstrate the expected impact on and use of public facilities by possible uses of said development. Public facilities and services to be examined for adequacy will include roads, sewerage, schools, and public safety agencies.

C. Reservation of Land for Public Use

- 1.** Where a proposed park or other public use is shown on an Official Plan of the City, and said public use is located in whole or in part within a proposed development, sufficient area for the public use shall be dedicated to the public or reserved and offered for public purchase. If within five (5) years of plat recording the purchase is not agreed on, the reservation shall be terminated. Space for public uses which is improved per public standards may count towards applicable Impact Fee Requirements.
- 2.** Where it is deemed essential by the Plan Commission, upon consideration of the particular type of development proposed in the development, the needs for public services that the development will generate, and the policies of the Comprehensive Master Plan, the Commission may recommend and the Common Council may require the reservation of land for public use. Land required for dedication shall be of a location, size, and character consistent with the needs created by the development. Land for public uses which is improved per public standards may count towards applicable Impact Fee Requirements.

D. Extension Policies

All public improvements and required easements shall be extended through the parcel on which new development is proposed. Streets, water lines, wastewater systems, drainage facilities, electric lines, and telecommunications lines shall be constructed through new development to promote the logical extension of public infrastructure. The City may require the applicant of a development to extend off-site improvements to reach the development or oversize required public facilities to serve anticipated future development as a condition of plat approval. The cost of such extensions or over sizing shall be borne by the developer unless other provisions have been made to cover the cost via impact fee ordinances.

Section 5. Required Improvements {(Noblesville Standards APPENDIX F)} **ORD. #55-12-02**

The following public and other improvements shall generally be provided in new developments and, when provided, shall be designed and installed in accordance with the conditions and specifications in this Article 6, "Site Design and Improvement Standards".

- A. Monuments.** The applicant shall place permanent reference monuments in the development in accordance with the Noblesville Standards. **ORD. #55-12-02**
- B. Blocks and Lots.** All blocks and lots shall be designed in accordance with Part C, "Block and Lot Layout."
- C. Streets and Alleys.** Streets and alleys within the jurisdiction of the City of Noblesville shall be designed and constructed in accordance with the standards and specifications of {Noblesville Standards (ORD. #57-12-01 and all amendments thereto).} **ORD. #55-12-02** Streets within the jurisdiction of Hamilton County shall be designed and constructed in accordance with the standards and specifications of the Hamilton County Code.
- D. Street Name Signs.** Street name signs shall be installed in one corner of each street intersection and in accordance with the Noblesville Standards. **ORD. #55-12-02**
- E. Street Lights.** Streetlights may be required for safety purposes, and such installations shall conform to: 1) the requirements of the City Council/County Commissioners, 2) the public utility providing such lighting, and 3) the {Noblesville Standards. **ORD. #55-12-02**
- F. Sidewalks.** Sidewalks shall generally be required on both sides of all streets and shall be designed and constructed in accordance with {the Noblesville Standards. **ORD. #55-12-02**
- G. Bicycle Pathways.** Bicycle pathways shall be provided within all developments if such facilities have been specified in an overall bicycle plan as adopted by the City Council/County Commissioners. Such facilities shall be installed as part of the public right-of-way or separate easement, as recommended by the bicycle plan.
- H. Pedestrian Walkways.** Pedestrian walkways may be required within long blocks, and if required shall be designed and installed in accordance with {the Noblesville Standards. **ORD. #55-12-02**
- I. Bridges and Culverts.** Bridges and culverts, if necessary, shall be constructed in accordance with engineering standards approved by the Engineer of the applicable jurisdiction.
- J. Median Openings, Auxiliary Lanes, and Curb Cuts.** Median Openings, Auxiliary Lanes, and Curbs, when approved or required, shall be designed and constructed as specified by the reviewing authority and in {accordance with the Noblesville Standards. **ORD. #55-12-02**
- K. Drainage Facilities.** Storm sewers, detention/retention ponds, and other drainage facilities shall be designed and constructed in accordance with Part E, "Drainage Facilities" {and the Noblesville Standards. **ORD. #55-12-02**

- L. Sanitary Sewers and Septic Systems.** Public sanitary sewers and septic systems shall be constructed in accordance with Part F, "Sewerage Facilities," Ordinance #64B-8-89, Sewer Use; the Ten State Standards {and the Noblesville Standards. **ORD. #55-12-02**
- M. Water Facilities and Fire Hydrants.** The placement of fire hydrants and water mains for adequate fire protection shall be in accordance with the appropriate fire district standards and Part G, "Water Facilities."
- N. Utilities.** Energy and communication utilities shall be installed underground and subject to Part H, "Other Utilities."
- O. Preservation of Existing Natural Features.** Existing natural features which add value to development and enhance the attractiveness of the community should be preserved in all site plans in accordance with Part I, "Preservation of Existing Natural Features and Amenities."
- P. Erosion Control Plan.** All development which requires an Improvement Location Permit shall conform to the regulations concerning types of soils involved and the conditions which are requisite to assure proper execution of erosion and sediment control and proper drainage, in accordance with Part J, "Erosion Control Plan" {and the Noblesville Standards. **ORD. #55-12-02**
- Q. Soil Preservation, Grading, and Seeding.** In lieu of the Erosion Control Plan described above, the construction of individual single and two-family homes shall conform to the regulations of Part K, "Soil Preservation, Grading, and Seeding".

Section 6. Development Names

The proposed name of the development shall not duplicate, or too closely approximate phonetically, the name of another development in the planning jurisdiction. The reviewing authority shall have final authority to designate the name of the development, which shall be determined at the time of Improvement Location Permit.

PART B. MONUMENTS

Section 1. General Requirements

- A.** Monuments shall be placed {for the purpose of delineating each individual lot boundaries, the external boundaries of the subdivision and the centerline of roadways.} **ORD. #55-12-02**
- B.** {Monuments shall be installed after final grading is completed. Each property corner and internal angle point shall be monumented by the installation of a 2'-6" long iron rod, capped flush at final grade with a durable plastic cover.} **ORD. #55-12-02**
- C.** {A Land Surveyor, registered in the State of Indiana, shall attest to the accuracy of the installed individual lot monuments. Certified Statements of Attestment shall be submitted to the Noblesville Department of Engineering after the Plan Commission has approved the plat but prior to the issuance of any building permits.} **ORD. #55-12-02**
- {D.** Monuments which are damaged or altered shall be reset by party responsible for damage/alteration. If a responsible party cannot be readily determined, the developer shall bear the costs of having the monument(s) reset.} **ORD. #55-12-02**

Section 2. External Boundaries**A. Type of Monument**

The external boundaries of a development shall be monumented in the field by monuments of concrete, not less than thirty (30) inches in length, not less than four (4) inches square, and marked on top with a cross, brass plug, iron rod.

B. Location of Monument

These monuments shall be placed not more than {one thousand three hundred and twenty (1,320)} **ORD. #55-12-02** feet apart in any straight line and {at points of tangency, points of curvature, and intersection of another roadway and} **ORD. #55-12-02** those points to be not less than twenty (20) feet back from the bank of any water body, except that when such corners or points fall within a street, or proposed future street, the monuments shall be placed in the side line of the street.

C. Guarantee of Accuracy

{A Land Surveyor, Registered in the State of Indiana, shall attest to the accuracy of the installed monuments. Certified Statements of Attestment shall be submitted to the Department of Engineering for consideration and acceptance of the roadway by the Noblesville Board of Public Works and Safety.} **ORD. #55-12-02**

{D. Damaged Monuments

Monuments which are damaged or altered shall be reset by party responsible for damage/alteration. If a responsible party cannot be readily determined, the developer shall bear the costs of having the monument(s) reset.} **ORD. #55-12-02**

Section 3. Internal Boundaries

All internal boundaries and those corners and points not covered by the preceding paragraph shall be monumented in the field on iron rods one-half inch in diameter and {thirty (30)} **ORD. #55-12-02** inches long. These monuments shall be placed at all block and lot corners and at all internal angle points as required by the {City Engineer.} **ORD. #55-12-02**

Section 4. Monuments Marking Water Bodies

The lines of lots that extend to bodies of water shall be monumented in the field by iron pipes at least thirty (30) inches long and seven-eighths (7/8) inch in diameter or by round or square iron bars at least thirty (30) inches long. These monuments shall be placed at the point of intersection of the water line, with a meander line established not less than twenty (20) feet back from the bank of the water body.

PART C. DEVELOPMENT BLOCK AND LOT LAYOUT**Section 1. Blocks**

- A.** Blocks shall have sufficient width to provide for two tiers of lots of appropriate depth, {pursuant to **Table 8.B., Table 8.C., Table 8.D., Table 8.E.4., and Table 8.F.4.**} Exceptions to this prescribed block width may be permitted in blocks adjacent to major transportation facilities, water courses, and industrial and commercial areas. **ORD. #10-03-13**
- B.** The length, width, and shape of blocks shall be appropriate for the location and the type of development contemplated, but shall follow the restrictions and guidelines below:
 - 1.** Blocks **on local streets** in residential areas shall not be more that one thousand (1,000) **feet** nor less than four hundred (400) feet in length.

2. Wherever practical, blocks along major arterials and collector streets should be a minimum of one thousand (1,000) feet in length.
 3. Blocks designed for industrial uses shall be of such length and width as may be determined suitable by the Planning Commission for the prospective use.
- C. In long blocks the Plan Commission may require an easement through the block to accommodate utilities, drainage facilities, or pedestrian walkways where deemed essential to provide circulation or access to schools, playgrounds, shopping centers, transportation, or other community facilities. **ORD. #10-03-13**
- D. Where blocks are developed along arterial streets and/or highways that shall contain alleys, those alleys shall run parallel to said arterial and not perpendicular or radial to it so as to create an intersection between the arterial and alley.

Section 2. Lots

A. Lot Arrangement

The lot arrangements shall be such that there will be no foreseeable difficulties, for reasons of topography or other conditions, in securing building permits to build on all lots in compliance with the zoning ordinance and other regulations, in providing safe driveway access to buildings on such lots from an approved street, or in providing service to public sanitary sewer or approved sanitary disposal facilities.

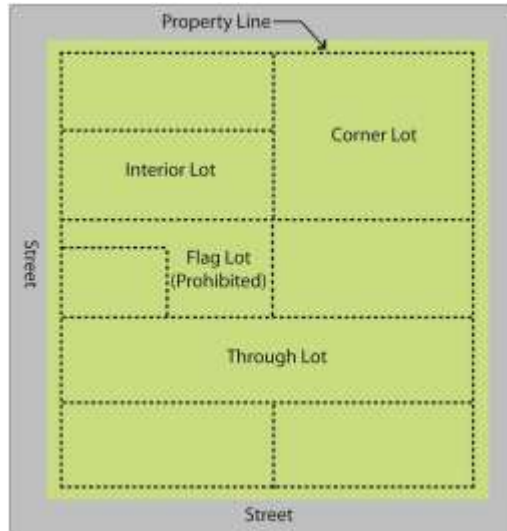
B. Lot Dimensions

1. The areas of all lots shall not be less than the standards for the zoning district in which they are located.
2. {Corner lots shall be a minimum of fifty (50) percent larger than the minimum lot area indicated for the zoning district in which it is located.} **ORD. 329-9-11**
3. Depth and width of properties reserved or laid out for business, commercial, or industrial purposes shall be adequate to provide for the off-street parking and loading facilities required for the type of use and development contemplated, as established in the Zoning Ordinance.
4. Adequate depth shall be allotted to new blocks and lots to accommodate landscape buffers, where required.
5. Where individual septic tanks have been authorized, sufficient area shall be provided for a replacement sewage disposal system.

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C. Lot Lines

1. The lot line common to the street right-of-way shall be the front line. All lots shall face the front line and a similar line across the street. Wherever feasible, lots shall be arranged so that the rear line does not abut the side line of an adjacent lot.



2. In general, side lot lines shall be at right angles to street lines (or radial to curving street lines) unless a variation from this rule will give a better street or lot plan.
3. Building setback lines shall be established on all lots, and the minimum building setback line shall be appropriate for the location of the development and for type of development and use contemplated, provided, however, that they shall not be less than the standards established by the zoning ordinance of the City of Noblesville.

D. Lot Shape

Double frontage and reversed frontage lots shall be discouraged except where necessary to provide separation of residential development from arterial streets or to overcome specific disadvantages of topography and orientation. Flag lots shall be prohibited.

E. Access to Lots

Single- and Two-Family lots shall not derive access from an arterial or major collector. Multi-family and Nonresidential lots should not generally derive access exclusively from an arterial or major collector street. Where driveway access from an arterial or major collector street may be necessary for several adjoining lots, the Plan Commission may require that such lots be served by a common and combined driveway in order to limit possible traffic hazards on such street. Driveways shall be designed and arranged so as to avoid requiring vehicles to back into traffic on arterials and major collectors.

F. Water bodies and Watercourses

If a tract being subdivided contains a private water body, or portion thereof, lot lines shall be so drawn as to distribute the entire ownership of the water body among the fees of adjacent lots. The Planning Commission may approve an alternative plan whereby the ownership of and responsibility for safe maintenance of the water body is so placed that it will not become a local government responsibility. No more than twenty-five percent (25%) of the minimum area of a lot required under the Unified Development Ordinance

may be satisfied by land that is under water. Where a watercourse separates the buildable area of a lot from the street by which it has access, provisions shall be made for installation of a culvert or other structure, of design approved by the City or County Engineer, as applicable.

G. Utility Easements

Easements across lots or centered on rear or side lot lines shall be provided for utilities where necessary and shall be at least fifteen (15) feet wide. Easements for streetlights shall be located as approved by the Board of Public Works and Safety.

H. Drainage

Lots shall be laid out to provide positive drainage away from all buildings. Individual lot drainage shall be coordinated with the general storm drainage pattern for the area.

PART D. TRANSPORTATION SYSTEM

Section 1. Streets and Roads

A. Purpose

In order to provide for streets of suitable location, width, and improvement to accommodate expected traffic and afford satisfactory access to police, fire fighting, snow removal, sanitation, and road maintenance equipment, and to coordinate street development so as to compose a convenient system, avoid undue hardships to adjoining properties and assure compatibility with long range comprehensive plans, all streets shall be designed according to the standards set forth in these regulations.

In designing and approving subdivision streets, the following factors shall receive consideration:

1. Safety for all vehicular and pedestrian traffic;
2. Efficient ability of the roadway and related facilities to accommodate the modes of transportation it is anticipated to serve, including but not limited to pedestrians, passenger cars, buses, emergency services, and freight.
3. Livability or amenities as affected by traffic elements in the circulation system;
4. Economy of both construction and use of land.

B. Applicability

Design of major collector and arterial streets shall require special design and approval by the Engineer of the appropriate jurisdiction. The following design guidelines are specifically intended for streets within the subdivision, i.e., minor collectors and locals. Standards for each classification are found in this Part **A**.

C. General Provisions

1. Conformance with Thoroughfare Plan, Existing Development, and Natural Features.

- a. All streets shall be properly integrated with the existing and proposed system of thoroughfares and dedicated rights-of-way, as established in the Comprehensive Master Plan.
- b. All thoroughfares shall be properly related to special traffic generators such as industries, business districts, schools, churches, and shopping centers; to population densities; and to the pattern of existing and proposed land uses.

- c. Minor or local streets shall be laid out to conform as much as possible to the topography, to discourage use by through traffic, to permit efficient drainage and utility systems, and to require the minimum number of streets necessary to provide convenient and safe access to property.

2. Public Streets {Required} ORD. #55-12-02

- a. All arterial and collector streets, as shown on the {Official Noblesville Thoroughfare Plan Map, a part of the Comprehensive Master Plan} **ORD. #55-12-02**, shall be dedicated to the public. {Local Streets may be Private Streets and shall meet the *current adopted Noblesville Standards* for local streets including right-of-way width, pavement width, pavement construction, etc., the Noblesville Standards and additional requirements of the Unified Development Ordinance. All private streets shall be inspected by the Engineering Department for compliance with the Unified Development Ordinance and Noblesville Standards.}. **ORD. #89-10-06**

3. Frontage on Improved Roads Required

No subdivision shall be approved unless the area to be subdivided shall have frontage on and access from an existing street or a street shown upon a plat approved by the Plan Commission and recorded in the County Recorder of Deeds' office. Such street or highway must be suitably improved as required by this Division, or be secured by a performance bond required under the regulations of Article 5, Subdivisions.

4. Improvement of Noblesville Thoroughfares

Wherever the area to be subdivided is to utilize existing road frontage, the road shall be suitably improved as {required by the City Engineer and approved by the Plan Commission} **ORD. #55-12-02**. Whenever a proposed subdivision borders an existing {roadway, which is depicted on the adopted Noblesville Thoroughfare Plan, the developer shall be required to improve said roadway(s) in accordance with the Noblesville Standards.- The reconstruction or widening of such street as a condition of plat approval and additional dedication of right-of-way may also be required. Acceleration/Deceleration lanes and passing blisters shall be constructed for all new developments directly adjacent to a primary arterial, secondary arterial, major collector or INDOT right-of-way.} **ORD. #55-12-02**

5. Residential Subdivisions Abutting Arterials, Expressways, and Collectors

{Where a subdivision abuts or contains an arterial, expressway, and/or collector thoroughfare, the visual impact of both the rears of residential homes and the backyards of such lots adjacent to these thoroughfares shall be minimized. The minimization must be accomplished by one of the following methods:

- a. Applicants may install a significant landscape and mounding treatment in order to visually screen the backyards and the first floor elevation of the exterior of homes on lots which abut such thoroughfares. Applicants shall provide elevation drawings of the typical section of the proposed mounding and landscaping treatment along with the common and scientific names and plant sizes at the time of planting and maturity of the plant species to be provided as a part of the subdivision application. The mound shall be a minimum height at the peak of four (4) feet and shall be planted as per the requirements of Article 12. An opaque fence or wall may be used in combination with the landscaping and mounding subject to the approval of the Noblesville Plan Commission.
- b. Applicants may construct frontage roads approximately parallel to and on each side of such above mentioned thoroughfares, thus requiring the applicable perimeter home fronts to face the exterior of the development or the frontage

road. Applicants shall be required to install street trees as per the Unified Development Ordinance requirements in Article 6 *Site Design and Improvement Standards*, Part M *Street Trees* on both sides of each frontage road. The trees on each side of the frontage road shall be staggered.

- c. Applicants may provide other appropriate treatments, as deemed necessary and approved by the Noblesville Plan Commission, in order to minimize the visual impact of the rear façades of residential homes and backyards abutting the above mentioned thoroughfares.

The Noblesville Plan Commission may require such other treatment as is necessary for the adequate protection of the residential lots to separate through traffic from local traffic, and to lessen the visual impact of said development of public streets. Vehicular access from the residential lots to an arterial, collector, and/or expressway shall be prohibited. Any landscaping installed under 'a' or 'c' above shall be located within a dedicated and maintained easement and not within the public right-of-way.} **ORD. #25-06-02**

6. Half Streets

Half streets shall be prohibited except where unusual circumstances make such a facility necessary to the reasonable development of a tract in conformance with these regulations and where satisfactory assurance for dedication of the remaining part of the street is provided. Whenever a tract to be subdivided borders on an existing half or partial street, the other part of the street shall be dedicated within such tract.

7. Continuation of Streets and Dead End-Streets

a. Continuation of Streets (Stub Streets)

Streets in new subdivisions should extend to the boundary line of the parcel to provide for the future extension of said streets into adjacent areas when the continuation is necessary for convenient movement of traffic, effective fire protection, for efficient provision of utilities, and where the continuation is in accordance with the Thoroughfare Plan. If the adjacent property is undeveloped and the street must temporarily be a dead-end street, the right-of-way shall be extended to the property line. A temporary T- or L-shaped turnabout shall be provided on all temporary dead-end streets, with the notation on the subdivision plat that land outside the normal street right-of-way shall revert to abutters whenever the street is continued. The Planning Commission may limit the length of temporary dead-end streets in accordance with the design standards of these regulations.

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b. Permanent Dead-End Streets (Cul-de-sacs)

- (1) Where a road does not extend beyond the boundary of the subdivision and its continuation is not required by the Planning Commission for access to adjoining property, its terminus shall be in a cul-de-sac turnaround. Permanent dead-end streets (cul-de-sacs) shall not be longer than six hundred (600) feet.

The minimum radii for cul-de-sacs shall be as follows:

Use Type	Right-of-way	{ Center of Cul-de-sac} to back of curb ORD. 76-9-05
Residential	Fifty (50) feet	{Forty (40) feet} ORD. 55-12-02
Commercial	Sixty (60) feet	Fifty (50) feet
Industrial	Sixty (60) feet	Fifty (50) feet

- (2) Wherever a minor collector street serves exclusively an industrial or commercial area, a cul-de-sac may be allowed and the length may be increased to 1,000 feet. This special provision shall be allowed only in areas which have a difficult access or are otherwise unsuitable for normal subdividing. However, a 48-foot pavement width shall be required in all cases under this special provision.
- (3) All streets to be terminated on a temporary basis shall be constructed with a turnaround. Such turnaround shall be constructed beyond all lots intended for development. In a development which is not phased, the turnaround shall be developed in a way that will not preclude the future extension of the road.

8. Guidelines for Street Location and Arrangement in Commercial/Industrial Areas

- a. Alleys shall be provided in multiple dwelling or commercial subdivisions unless other provisions are made for service access and off-street loading and unloading. Dead-end alleys shall be prohibited.
- b. In business and industrial developments, the streets and other accessways shall be planned in connection with the grouping of buildings, location of rail facilities, and the provision of alleys, truck loading and maneuvering areas, and walks and parking areas so as to minimize conflict of movement between the various types of traffic, including pedestrian.

9. Maintenance of State Road 37 Right-of-Way

For all new development abutting the right-of-way of SR 37, the developer shall request that the Indiana Department of Transportation (INDOT) remove any existing fence in said right-of-way. Thereafter, said right-of-way shall be maintained in good condition, along with other exterior spaces on the premises, by the abutting property owner.

- {10. Right of way pavement widths refer to Noblesville Standards Sheet 2 – Right of Way} **ORD. #55-12-02**

D. Street Design Standards and Guidelines

1. Design Traffic Volumes.

The design hourly volume (DHV) or average daily traffic (ADT) is the accepted basis for design. In rural areas, the Engineer of appropriate jurisdiction may amend the design standards as determined by traffic demand analysis. However, the traffic volume does not always determine the type of curves to be used in designing low volume residential local and minor collector streets. Traffic volumes are a major factor to be considered for streets serving commercial and industrial areas, and the Engineer of appropriate jurisdiction is required to give special attention to these areas.

2. Design Speed.

Design speeds are a factor for urban residential local and minor collector design. In general, the same rule can be applied to rural low volume roads in subdivision design. The sight distances and curve radii are to be commensurate with average acceptable design speeds as indicated by the Indiana Design Manual.

3. Vertical Grades.

Drainage design may become critical where grades exceed 4%. For this reason, grades lower than the suggested tabular values are encouraged. Commercial and industrial streets shall be held to a maximum grade of 4%. Residential streets shall in no case exceed the tabular values. In order to provide for proper drainage, the minimum grade should be held to 0.5%.

The maximum grade on the approach leg of any intersection shall not exceed 5% in hilly terrain and 2% in level terrain.

4. {Superelevation.

It should be considered in commercial and industrial areas and for collector streets where operating speeds may exceed 30 to 35 miles per hour. Where superelevation is used, street curves should be design for a maximum elevation rate of:

a. Urban: 0.04 to 0.06 foot per foot

b. Rural: 0.08 to 0.12 foot per foot

Superelevation shall only be used when the designer has demonstrated that the property horizontal curvature for the appropriate design speed and the regulatory speed limit cannot be attained. Where superelevation is not provided within residential areas, the proper signage shall be provided with the appropriate advisory speed supplemental plaque.} **ORD. #95-11-06**

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5. Horizontal Alignment.

Minimum centerline radii for horizontal curves shall be

- {a. **Arterial/Major Collector:** Per Indiana Design Manual
- b. Commercial/Industrial Collector/Residential Minor Collector:** 225-FT
- c. Residential Local** (serves less than 50 residences): 150-FT

The minimum tangent distance between reverse curves shall be

- a. Arterial/Major Collector:** Per Indiana Design Manual
- b. Commercial/Industrial Collector:** 200-FT
- c. Residential Minor Collector:** 150-FT
- d. Residential Local** (serves less than 50 residences): zero-FT} **ORD. #56-11-07**

{e. Special Design exceptions for these requirements may be granted for roundabout design. Minimum design speeds and regulatory speed limits for the applicable roadway section shall apply. The use of spiral and compound curves is prohibited.} **ORD. #95-11-06**

6. Intersections.

Intersections, including median openings, should be designed with adequate intersection sight distance. The recommended minimum {intersection sight distance shall be determined from the Indiana Design Manual related to Intersection Sight Distance based on the roadway design speed or posted speed limit.} In order to maintain these distances, the Engineer of appropriate jurisdiction or the Technical Advisory Committee may recommend regulations to restrict the height of embankment, location of buildings and screening fences and landscaping, and other provisions necessary for intersection sight control. **ORD. #56-11-07**

The minimum intersection angle shall be 75 degrees.

Closely spaced offset intersections are undesirable. The minimum intersection centerline offset (jog) for the following intersections shall be

- {a. **Residential - Local/Commercial/Industrial Collectors with Residential - Local/Commercial/ Industrial Collectors:** 150-FT
- b. Arterial/Major Collector with any drive, public or private:** Intersection Sight Distance (ISD) shall be determined using the design speed for the affected roadways. Intersection Sight Distance shall be analyzed and meet the requirements for Intersection Sight Distance in Chapter 46, Intersections at Grade of the Indiana Design Manual for all driveways and intersections. Vision Corner Clearance for all intersections and drives shall also meet the requirements of Article 9, Part A. Section 8 of the Unified Development Ordinance. The location for all sight distance evaluations shall be from the estimated location of the driver while the design vehicle is stopped at the required yield point. If the location has no defined yield point, the established yield point for the vehicle shall be the right-of-way line. Driveways, entrances, or streets not meeting this section shall have movements restricted or the entrance relocated.} **ORD. #56-11-07**

To accommodate transitional tapers, turning lanes, and other potential roadway design requirements where needed, the Engineer of appropriate jurisdiction may recommend longer offsets.

{Throating or center median curb may be required for all drives, public or private, which connect to a Major Collector or Arterial to prevent queuing within the right-of-way. If the distance from the edge of traveled way to the nearest edge of drive is equal to or less than the values below, the entry drive of street shall be throated or provided with center curb.

a. Arterials: 100-FT

b. Major Collectors: 75-FT

c. Minor Collector; Commercial/Industrial, Local: zero feet.} **ORD. #56-11-07**

The minimum curb return radius at local streets shall be 15 feet and at residential collector streets 20 feet. The desirable radius is 25 to 30 feet, respectively. On commercial and industrial streets, the radius shall be 30 feet, except where traffic conditions may warrant a smaller radius.

No intersection shall be constructed with more than four approach legs, and the development of three legged “T” intersections is encouraged due to the increased safety of such intersections.

7. Auxiliary Lanes.

{Refer to the Noblesville Standards Sheet 2 – Right of Way.} **ORD. #55-12-02**

E. Improvement Standards for Streets and Roads Under City of Noblesville Jurisdiction

1. General Requirement

Streets shall be completed to grades shown on plans, profiles, and cross-sections approved by the City Board of Public Works. Minimum Cross Section Standards and Geometric Design Standards are found in {the Noblesville Standards – APPENDIX F.} **ORD. #55-12-02**

2. Classification of Streets; Right-of-Way and Pavement Widths

Minimum street right-of-way widths and pavement widths shall be as {illustrated in the Noblesville Standards Sheet 2 – Right of Way.} **ORD. #55-12-02**

3. Pavement Surfacing

The street surface shall be of Portland cement concrete or a flexible pavement and shall be constructed in accordance with design characteristics at least equal to those {in the Noblesville Standards.} **ORD. #55-12-02**

F. County Streets and Roads

For streets and roads in subdivisions under the jurisdiction of Hamilton County, design and improvement standards shall be as provided in the Hamilton County {Standards for Construction of Road Improvements.} **ORD. #55-12-02**

G. Curb and Gutter

Curb and gutter shall be placed according to grades shown on plans, profiles, and cross-sections {as shown in the Noblesville Standards Sheet 3 – Pavement, Curb and Sidewalk Details and Notes.} **ORD. #55-12-02** They shall be constructed with plain Portland cement concrete and in the manner shown for the Integral or Combined curbs, except in the case of Arterial Streets where the Separate Curb may be required. Roll curbs may be used in Residential Streets when the distance between the back of the curb and the nearest edge of a sidewalk is {four (4) feet} **ORD. #55-12-02** or more.

Section 2. Alleys

- A. The minimum right of way of an alley, if provided, shall be sixteen (16) feet.
- B. Alleys shall be paved full width to minimum local road standards.
- C. Alley intersections and sharp changes in alignment shall be avoided, but where necessary, corners shall be cut off sufficiently to permit safe vehicular movement.
- D. Dead-end alleys shall be avoided where possible, but if unavoidable, shall be provided with adequate turnaround facilities at the end, as determined by the Planning Director.

Section 3. Sidewalks and Pedestrian Access**A. Sidewalks and Trails Required**

Sidewalks shall be provided by the developer on both sides of all streets, except that in the SR Districts, such requirement may be waived by the Plan Commission.

B. Location

Where provided, sidewalks shall be included within the dedicated non-pavement right-of-way, and shall be placed according to the grades shown on plans, profiles, and cross-sections {as illustrated in the Noblesville Standards.} **ORD. #55-12-02**

C. Dimensions; Improvement Standards

- 1. All proposed sidewalks shall be constructed {of width and thickness as illustrated in the Noblesville Standards. pursuant to the Noblesville Alternative Transportation Plan. **ORD. #55-12-02, ORD. #10-03-13**
- 2. Ramps suitable to the safe movement of mobility impaired persons shall be provided by the developer. A ramp shall not have a slope of greater than 1 foot rise in 12 feet, or 8.33%, or 4 degrees 50 minutes. The specific design of such ramps shall {conform with the illustrations of the Noblesville Standards} **ORD. #55-12-02** and shall conform to the recognized standards of the Indiana Department of Transportation (INDOT), the American National Standards Institute, Inc., and the U.S. Department of Health, Education & Welfare, or any other applicable agency.

D. Responsibility

{The applicant is responsible for the installation of the sidewalk or trail including replacement or necessary repairs, if there is an existing sidewalk or trail.} **ORD. #56-11-07**

E. Pedestrian Walkways

Pedestrian walkways may be required through the center of blocks ~~more than eight hundred (800) feet long~~ where deemed essential by the Plan Commission to provide circulation or access to schools, playgrounds, shopping centers, transportation, or other community facilities. Pedestrian walkways, where required, shall have easements at least ten (10) feet in width which shall be indicated on the plat. Pedestrian walkways shall otherwise be constructed in accordance with the regulations for sidewalks, above.

Section 4. Street Names & Numbers, Street Signs, and Traffic Control Devices**A. Street Names & Numbers**

- 1. Street names shall not duplicate any existing name within the area covered by these regulations except where a new street is a continuation of an existing street. Street names that may be spelled differently but sound the same as existing streets shall not be used. The Plan Commission shall have secondary authority to name all streets in

the case of conflict upon recommendation of the Technical Advisory Committee at the time of primary plat approval.

2. The street numbering system for any property shall be subject to the approval of the Director of Planning and Development.

B. Street Signs

The applicant shall fund the installation of street name signs in accordance with {Noblesville Standards} **ORD. #55-12-02** and the Manual on Uniform Traffic Control Devices of Indiana. One sign shall be installed at each intersection indicating the name of each street thereat. Regulatory signs shall also be the responsibility of the {applicant.} **ORD. #55-12-02** Street name signs shall be lighted or reflectorized.

C. Warning Signs and Other Devices

The City or County shall be responsible for the installation of all warning signs and other traffic control devices, in accordance with the Noblesville Standards except for those, which may be warranted in industrial and commercial areas. In such cases, the developer whose project has increased traffic to the degree that a signal may be warranted may be required to pay the cost of traffic signal installation and interconnection.

D. Street Lights

1. General Guidelines

Street lighting shall be designed so as to provide an appropriate degree of illumination for various activities based on their location along arterial, collector, or local streets and the intensity of the surrounding land uses. This lighting shall be funded by the developer. Illumination guidelines shall be as follows:

Table 6.0.4.D. Illumination Guidelines

Area to be Illuminated	Commercial ¹	Intermediate ²	Residential ³
Streets			
Arterials	1.2 foot-candles	0.9 foot-candles	0.6 foot-candles
Collectors	0.8 foot-candles	0.6 foot-candles	0.4 foot-candles
Locals	0.6 foot-candles	0.5 foot-candles	0.3 foot-candles
Parking Lots	In accordance with Article 10, Off-Street Parking and Loading.		
Other Areas	As recommended by the Planning Director.		

¹*Commercial* - Business districts with heavy pedestrian traffic at night.

²*Intermediate* -Moderately heavy pedestrian traffic at night for community recreation centers, libraries, neighborhood stores, etc.

³*Residential* - Predominately residential areas with light pedestrian traffic at night.

2. Minimum Requirements

At a minimum {the applicant shall provide lighting in accordance with the Noblesville Standards Sheet 10 – Street Lighting Guidelines.} **ORD. #55-12-02**

{3. Dusk-to-Dawn Lights

If the covenants of the subdivision provide for the installation and maintenance of a free-standing dusk-to-dawn light on each lot, such light standards shall be installed

within 25 feet of the edge of the street, shall be uniform in design, and shall be maintained with a bulb of at least 75 watts.} **ORD. 12-4-97, ORD. 55-12-02**

Section 5. Plans Approved for Acceptance and Dedications

A. Change of Plans

Any change in plans of a street from the original plans approved by the {Department of Planning and Development and the Department of Engineering} **ORD. #55-12-02**, as applicable, must be submitted to the Board of Works & Safety or the Commissioners by the contractor or developer for approval before being constructed.

B. Acceptance

All work must be acceptable to and meet all of the requirements of the City or County pertaining to Maintenance Bond. Upon the completion of all improvements and installations as required by this ordinance, the developer shall furnish the Board of Public Works or County Commissioners with an engineer's certification that said improvements and installations have been constructed, installed, and completed in compliance with the requirements of this ordinance.

C. Samples

The contractor to furnish samples of concrete for testing as required. All concrete specimens shall be made in accordance with AASHTO designation T-23, Cylindrical specimen T-22, and Beam specimen T-97. The City or County reserves the right to core the slab before accepting. The contractor shall furnish all labor and equipment costs to make all tests.

D. Specifications

{All work and materials shall meet the specification requirements of the Noblesville Standards and the Standard Specifications of the Indiana Department of Transportation or other applicable ordinance(s).} **ORD. #55-12-02**

E. Bonds

City Jurisdiction

Prior to the approval of a proposed plat for subdividing land under the jurisdiction of the City of Noblesville, the person or firm or corporation requesting the approval of said plat shall furnish a performance bond, a certified check, Certificate of Deposit or irrevocable letter of credit guaranteeing the completion of required infrastructure improvements in the proposed development as set out in the plat tendered for approval. Said bond to be in the amount of 110% of the estimated cost of completion of the required public infrastructure improvements and which bond shall guarantee those said infrastructure improvements. (Minimum amount - \$1,000)

Prior to acceptance of construction and release of the performance surety, the person, firm, or corporation requesting the development shall file a maintenance bond or other accepted surety in the amount equal to 15% of the total construction costs of the required public improvements and which surety shall provide for a period of three years following the release of the performance surety.

County Jurisdiction

Prior to the approval of a proposed plat for subdividing land under the jurisdiction of Hamilton County for residential or business use, the person or firm or corporation requesting the approval of said plat shall furnish a performance bond or approved letter of credit guaranteeing the completion of infrastructure improvements in the proposed development as set out in the plat tendered for approval, said bond to be in the amount as

required in the Hamilton County Standards for Construction of Road Improvements and which bond shall guarantee that said infrastructure improvements will be completed not later than two years from the acceptance of surety.

Prior to acceptance of construction and release of the performance surety, the person, firm, or corporation requesting the development shall file a maintenance bond or approved letter of credit in the amount equal to 20% of the construction costs as estimated by the County Engineer and shall provide for a period of three years following the release of the performance surety. The proposed development plat shall set out the specifications for the construction of the road or street. Prior to approval of the plat, the road/street specification shall be approved by the County Highway Engineer.} **ORD. #55-12-02**

PART E. DRAINAGE FACILITIES

Section 1. Purpose

These storm water drainage regulations are intended to minimize off-site water run-off, increase on-site infiltration, encourage natural filtration functions, stimulate natural drainage systems, and minimize off-site discharge of pollutants. Storm water shall be managed by the best and most appropriate technology and environmentally-sound site planning and engineering techniques, which may include combined retention facilities, porous paving and piping, and swales; as well as traditional storm sewers and retention basins.

Section 2. General Requirements

All new development shall make adequate provision for storm or flood water runoff {in accordance with the Noblesville Stormwater Technical Standards or the requirements of the jurisdictional agency.} The applicant may also be required by the Plan Commission to carry away by pipe or open ditch any spring or surface water that may exist either previously to, or as a result of, the development. The drainage system shall be separate and independent of any sanitary sewerage system. Inlets shall be provided so that surface water is not carried across or around any intersection, or for a distance of more than four hundred (400) feet in any gutter. Surface water drainage patterns shall be shown for each lot and block on the development plat or plan. **ORD. #56-11-07**

Section 3. Public Storm Sewers

- A.** Where a public storm sewer is accessible, the applicant shall install storm sewer facilities. If the Commission determines that a connection to a public storm sewer will eventually be provided as shown in existing local plans and programs, the developer shall make arrangements for future storm water disposal in the development by a public sewerage system at the time the plat or plan receives secondary approval. Provision for such connection shall be incorporated by inclusion in the Performance Bond required for the development.
- B.** Drainage facilities shall be located in the road right-of-way where feasible or in perpetual unobstructed easements of appropriate width. Drain facilities shall be provided under driveways so that the flow of water in ditches is not impeded.
- C.** Storm sewers, where required, shall be designed according to the {Noblesville Stormwater Technical Standards or other} methods required by the Engineer of appropriate jurisdiction, endorsed by the Technical Committee, and approved by the Plan Commission, and a copy of the design computations shall be {completed in accordance with the Stormwater Technical Standards and be} submitted along with plans and specifications. **ORD. #56-11-07**
- D.** All storm sewers shall be self-cleaning systems without manhole drops.

- E. All below-ground drainage systems, {except for underground retention facilities or pipes less than twelve (12) inches in diameter shall be maintained by the City.
- {F. All storm sewer facilities shall be provided to comply with the Noblesville Standards.} **ORD. #55-12-02** and the Noblesville Stormwater Technical Standards.} **ORD. #56-11-07**
- {G. Ordinance No. 23-4-05 “City of Noblesville Illicit Discharge and Connection Stormwater Ordinance” and all amendments thereto. (See Appendix H)} **ORD. #32-10-11**

Section 4. Detention/Retention Ponds

If no public storm sewer outlets are available within a reasonable distance, the disposal of storm waters shall be accomplished through a detention/retention pond.

A. General Requirement

1. Where detention/retention facilities or “ponds” are used for storm water management, they shall accommodate site runoff generated from 2-year, 10-year, and 100-year storms considered individually {in accordance with the Noblesville Stormwater Technical Standards,} unless the detention/retention basin is classified as a dam, in which case it must also meet any applicable dam safety standards.
2. Runoff greater than that occurring from a 100 year, 24 hour storm shall be passed over an emergency spillway.
3. Detention/retention shall be provided {to limit stormwater discharge to the rates required by the Noblesville Stormwater Technical Standards or the requirements of the jurisdictional agency.}
4. Detention/retention facilities shall be located as far horizontally from surface water and as far vertically from groundwater as is practicable. Detention/retention facilities shall not interrupt the post-development groundwater table, where practicable.
5. Detention/retention ponds, where required, shall be designed according to the methods recommended by the {Noblesville Standards, Noblesville Stormwater Technical Standards, and the} Engineer of appropriate jurisdiction, endorsed by the Technical Committee, and approved by the reviewing authority, and a copy of the design computations shall be submitted along with plans and specifications.
6. All above-ground drainage systems {and below ground stormwater detention systems} shall be maintained by the owner(s). **ORD. #56-11-07**

B. Combined Facilities

Where possible, a detention/retention pond may be created so as to serve several adjacent parcels concurrently, subject to the following criteria:

1. The pond shall be designed with appropriate capacity to serve all applicable sites, as determined by the Engineer of the applicable jurisdiction,
2. Provisions for completion of improvements and maintenance, or any applicable bonds in lieu thereof, shall be coordinated between all applicable sites, in a manner acceptable to the attorney of the applicable jurisdiction.
3. Shared detention/retention ponds should be designed and landscaped as a site amenity to the extent practicable.
4. The subdivision of lots abutting the combined detention/retention pond shall be subject to Section C.2.E, Access to Lots.

Section 5. Accommodation of Upstream Drainage Areas

A culvert or other drainage facility shall in each case be large enough to accommodate potential runoff from its entire upstream drainage area, whether inside or outside the development. The design engineer shall determine the necessary size of the facility, based on the provisions of the construction standards, {Noblesville Stormwater Technical Standards}, and specifications assuming conditions of maximum potential watershed development permitted by the Unified Development Ordinance.

Section 6. Effect on Downstream Drainage Areas

{The design engineer of the site shall determine if the immediate downstream receiving pipe/culvert, system, or waterway is sufficient to handle the stormwater runoff and note that in the drainage calculations.} The Engineer of the applicable jurisdiction shall also study the effect of each development on existing farther downstream drainage facilities outside the area of the development. Local government drainage studies together with such other studies as shall be appropriate, shall serve as a guide to needed improvements. Where it is anticipated that the additional runoff incident to the development will overload an existing downstream drainage facility, the Planning Commission may withhold approval of the development until provision has been made for the expansion of the existing downstream drainage facility. No development shall be approved unless adequate drainage will be provided to an adequate drainage watercourse or facility. **ORD. #56-11-07**

Section 7. Poor Drainage Areas

Whenever a plat is submitted for an area, {or is just upstream of an area, which is subject to ponding or flooding, the Plan Commission may approve such application provided that the applicant's design engineer designs a stormwater system to eliminate the ponding or flooding of the site or the immediate downstream area; and that it is acceptable by the Engineer of appropriate jurisdiction. The plan or system shall be constructed and accepted by the Engineer of jurisdiction prior to the approval of said plat.} **ORD. #56-11-07**

Section 8. Floodplain

The Plan Commission shall, when it deems it necessary for the health, safety, or welfare of the present and future population of the area and necessary to the conservation of water, drainage and sanitary facilities, prohibit the development of any portion of the property which lies within the flood plain. Any approvals within the floodplain shall, at a minimum, meet the requirements of the Indiana Department of Natural Resources.

{Development plans, primary plats, secondary plats, preliminary development plans, and detailed development plans shall delineate the 100-year floodplain and base flood elevations on said plans as referenced by the current Flood Insurance Rate Maps, a part of the National Flood Insurance Program as provided by the Federal Emergency Management Agency.} **ORD. #82-10-05**

Section 9. Drainage Easements

Where a development is traversed by a watercourse, drainageway, channel, or stream, the developer shall provide a storm water easement or drainage right-of-way conforming substantially to the lines of such watercourse, and of such width and construction as will be acceptable to the Engineer of appropriate jurisdiction. Such easement shall be adequately monumented; and, whenever possible, it is desirable that the drainage be maintained by open channel with landscaped banks.

PART F. SEWERAGE FACILITIES**Section 1. General Requirements****A. Mandatory Connection to Public Sewer System**

1. For newly platted developments with access to the public sewer system, stub-up sewer lines shall be located at each lot and shall be extended {as illustrated in the Noblesville Standards.} **ORD. #55-12-02**
2. If a public sanitary sewer is accessible and a sanitary sewer is placed in a street or alley abutting upon property, the owner of the property shall be required to connect to the sewer for the purpose of disposing of waste, and it shall be unlawful for any such owner or occupant to maintain upon any such property an individual sewage disposal system.

B. Individual Disposal Systems (Septic Systems)

If public sewer facilities are not available and individual disposal systems are proposed, minimum lot areas shall conform to the requirements of this Unified Development Ordinance (see Tables 8B, 8C, and 8D). Percolation tests and test holes shall be made as directed by the Planning Director and the results submitted to the Health Department. There shall be at least one (1) percolation test for every three (3) lots, and the test holes shall be distributed throughout the development and not concentrated in any one location. Distribution should be approved by the County Health Officer. Should the test indicate poor percolation in the development, percolation tests may be required on each lot by the Commission. The individual disposal system, including the size of the septic tanks and size of the tile fields or other secondary treatment device, shall also be approved by the Hamilton County Board of Health.

C. Special Conditions

The Plan Commission shall have the right and discretion to require better or more stringent methods of sewage disposal when it determines that site conditions, such as poor soils, poor drainage, or otherwise, will not adequately or safely handle sewage disposal methods otherwise allowed by this ordinance.

Section 2. Requirements for Public Sewer Systems**A. General**

The Applicant shall install sanitary sewer facilities in a manner prescribed {in the Noblesville Standards.} **ORD. #55-12-02** All plans shall be designed and sewer facilities (including laterals in the right-of-way) installed, subject to the specifications, rules, regulations and guidelines of the Engineer of appropriate jurisdiction and appropriate Health and other officials. Sanitary sewers shall be located within the right-of-way or within a fifteen (15) foot easement in the front yard. The center of manhole covers shall be no more than twelve (12) feet from the back of curb.

B. SR District

In the SR District, Individual Disposal Systems are encouraged, but Public Sewers may be permitted subject to the requirement for the SR District found in Article 8, Part B, Section 1.

C. Low and Medium Density Residential Districts (except for SR)

Sanitary sewer systems shall be constructed as follows:

1. Where a public sanitary sewer system is within one thousand (1,000) feet of the proposed project, as determined by the Plan Commission, the applicant shall connect with same and provide sewers to each lot in the development.
2. Where a public sanitary sewer system is not within one thousand (1,000) feet, as determined by the Plan Commission, but will become available within a reasonable time, not to exceed fifteen (15) years, the applicant may choose to: install individual sewage disposal systems, including conventional septic systems and other types developed through new technology as approved by the Indiana State Board of Health and Hamilton County Health Department provided that sufficient area is available on the lot for two drain fields in the event that the first field would fail.
3. Where sanitary sewer systems are not reasonably accessible and will not become available within an estimated fifteen (15) year period, the applicant may install sewerage systems as follows:
 - a. Medium Density Residential Districts shall have a central sewerage system. Individual disposal systems will be permitted, including conventional septic systems and other types developed through new technology as approved by the Indiana State Board of Health and the Hamilton County Health Department provided that sufficient area is available on the lot for two drain fields in the event that the first field would fail.
 - b. Low Density Residential Districts may have individual disposal systems including conventional septic systems and other types developed through new technology as approved by the Indiana State Board of Health and Hamilton County Health Department, or a central sewerage system can be used subject to the ISBH approval.

D. High Density Residential District.

Sanitary sewer facilities shall connect with public sanitary sewer systems. Sewers shall be installed to serve each lot and to grades and sizes required by appropriate local officials and agencies. No individual disposal system or treatment plants (private or group disposal systems) shall be permitted.

PART G. WATER FACILITIES**Section 1. General Requirements**

Necessary action shall be taken by the applicant for any subdivision plat or development plan to provide water for domestic use and fire protection.

Section 2. Public Water Utilities

- A. Where a public water main is accessible, the developer shall install adequate water lines and other facilities, including fire hydrants, subject to the specifications of State and local authorities. Upon completion of the installation of the water lines, they shall be purged as witnessed by the representative of the City to assure proper installation.
- B. The location of fire hydrants and all water supply improvements shall be confirmed with the appropriate fire and/or engineering departments and shall be shown on the primary plat or development plan.
- C. All water mains shall be at least six (6) inches in diameter.

Section 3. Individual Wells and Central Water Systems

- A. In low density zoning districts and in outlying or rural areas where a public water system is not available, the Plan Commission may approve individual wells or a central water system provided that an adequate supply of potable water will be available to every lot in the development, as determined by the Engineer of the applicable jurisdiction.
- B. Water samples shall be submitted to the Health Department for its approval, and individual wells and central water systems shall be approved by the appropriate health authorities. Approvals shall be submitted to the Planning Commission prior to final development plat approval.
- C. All rates for individual wells and central water systems shall be established by the Public Service Commission.
- D. If the Planning Commission requires that a connection to a public water main be eventually provided as a condition to approval of an individual well or central water system, the applicant shall make arrangements prior to receiving final plat approval for future water service. Performance or cash bonds may be required to ensure compliance.

Section 4. Fire Hydrants{and Fire Department Connections (FDC)}

Fire hydrants shall be required for all developments served by a public water utility or where public water utilities are reasonably accessible as determined by the Engineer or Fire Marshall of the appropriate jurisdiction. Fire hydrant and fire department connection (FDC) placement shall comply with the Noblesville Standards and shall be approved by the local fire protection unit. Adequate water supply as determined by the City Engineer or Fire Marshal shall be provided to all fire hydrants or fire department connections (FDC). {(See APPENDIX F-1 Fire Department Access and Water Supply and Fire Hydrant Specifications)} **ORD. #55-12-02** and the Noblesville Standards.} **ORD. #56-11-07**

PART H. OTHER UTILITIES**Section 1. Location**

All newly installed utility facilities, including but not limited to gas, electric power, telephone, and CATV cables, shall be located underground wherever possible. Whenever existing utility facilities are located above ground, except when existing on public roads and rights-of-way, they shall be removed and placed underground. Underground service connections to the street property line of each platted lot shall be installed at the developer's expense. At the discretion of the Planning Commission, the requirement for service connections to each lot may be waived in the case of adjoining lots to be retained in single ownership and intended to be developed for the same primary use.

Section 2. Easements

- A. Except for sanitary sewer utilities, easements provided for other utilities (private and municipal) {shall be negotiated and accepted by those individual utilities.} **ORD. #33-6-04** Easements shall be indicated on the plat or development plan. Proper coordination shall be established between the developer and the applicable utility companies for the establishment of utility easements in adjoining properties.
- B. Easements for sanitary sewer utilities shall be as provided for in Article 6.F.2.A.

PART I. PRESERVATION OF EXISTING NATURAL FEATURES AND AMENITIES

Existing features that would add value to residential development or to the community as a whole, such as trees (as herein defined) watercourses and water bodies, beaches, historic spots, and similar irreplaceable assets, shall be preserved in the design of the development. No trees shall be removed from any development nor any change of grade of the land affected until approval of the primary plat has been granted. All trees on the plat required to be retained shall be preserved, and all trees where required shall be walled and protected against change of grade. The sketch plat shall show the number and location of existing trees as required by these regulations and shall further indicate all those marked for retention and the location of all proposed shade trees required along the street side of each lot as required by Part J, below. (See Article 12, Landscaping and Screen, Section 11 – Natural Area Protection)

PART J. EROSION CONTROL PLAN

All proposed development that requires an Improvement Location Permit shall meet the applicable criteria set forth herein concerning types of soils involved and the conditions which are requisite to assure proper execution of erosion and sediment control and proper drainage.

Section 1.. General Requirements

- A.** No changes shall be made in the contour of the land; nor shall grading, excavating, removal, or destruction of the topsoil, trees, or other vegetative cover of the land be commenced, until an Erosion Control Plan has been reviewed by the {Technical Advisory Committee} **ORD. #55-12-02**, or there has been a determination by the {Technical Advisory Committee} **ORD. #55-12-02** that such plans are not necessary.
- B.** Erosion Control Plans shall be reviewed concurrently with the development plan and become a part thereof, except that an Erosion Control Plan may be filed and reviewed prior to the rest of the development plan for the purpose of obtaining a Preliminary Grading Permit.
- C.** The Erosion Control Plan shall provide all information, reports or plans necessary for the application {including pre- and post elevations}and any additional expense necessary to ensure adequate information, report or plan shall be met by the applicant. **ORD. #76-9-05**
- {D.}** No Improvement Location Permit shall be issued for grading, excavating, removal or destruction of topsoil, trees or other vegetative cover of land until approval has been received by the Technical Advisory Committee.
- E.** No Building Permit shall be issued until the Planning Department has received and reviewed a certified elevation certificate regarding the parcels of land for which an Improvement Location Permit and Building Permit is sought.} **ORD. #76-9-05**

Section 2. Review of Erosion Control Plans

A. Design Guidelines

The following measures are effective in minimizing erosion and sedimentation and shall be included, where applicable, in the control plan.

In reviewing these measures, the {Technical Advisory Committee} **ORD. #55-12-02** shall be guided by the information set forth in the findings in the National Cooperative Soil Survey prepared by the USDA Soil Conservation Service in cooperation with the Purdue Experiment Station and the Hamilton County Soil & Water Conservation District, and the specifications set forth in both the Indiana Heartland Urban Development Planning Guide and Section 1 (C) herein. The Director of Planning and Development shall also be guided by advice from the USDA Soil Conservation Service, Hamilton County Soil & Water District, Hamilton County Drainage Board, Indiana Department of Natural Resources - Division of Water, and other agencies or officials offering technical assistance on the subjects of soils, drainage, erosion, and sediment control.

1. Stripping of vegetation, regrading, or other development shall be done in such a way that will minimize erosion.
2. Development plans shall preserve salient natural features, keep cut-fill operations to a minimum, and ensure conformity with topography so as to create the least erosion potential and adequately handle the volume and velocity of surface water runoff.
3. Whenever feasible, natural vegetation shall be retained, protected, and supplemented.
4. The disturbed area and the duration of exposure shall be kept to a practical minimum.
5. Disturbed soils shall be stabilized as quickly as practical.
6. Temporary vegetation and mulching shall be used to protect exposed critical areas during development.
7. The permanent final vegetation and structural erosion control and drainage measures shall be installed as soon as practical in the development.
8. Provisions shall be made to effectively accommodate the increased runoff caused by changed soil and surface conditions during and after development. Where necessary, the rate of surface water runoff will be structurally retarded.
9. Sediment in the runoff water shall be trapped until the disturbed area is stabilized by the use of debris basins, sediment basins, silt traps, or similar measures.
10. {Ordinance No. 24-4-05 “An Ordinance Regulating Storm Water Run-off Associated with Construction and Post Construction Activities in the City of Noblesville” and all amendments thereto. (See Appendix H)} **ORD. #32-10-11**

B. Design Standards

1. Measures used to control erosion and reduce sedimentation and to provide drainage shall, as a minimum, meet the standards and specifications of the Hamilton County Soil & Water Conservation District. The {Technical Advisory Committee} **ORD. #55-12-02** shall ensure compliance with the appropriate specifications, copies of which are available from the Hamilton County Soil & Water Conservation District or the Department of Planning and Development. The applicable guides are: “URBAN DEVELOPMENT PLANNING GUIDE”, and “URBAN SOIL AND WATER CONSERVATION GUIDELINES, SPECIFICATION NO.1”.
2. In order to provide more suitable sites for building and other uses, improve surface drainage, and control erosion, the following requirements shall be met:
 - a. The location, grading, and placement of subgrade (base) material of all driveway and parking areas shall be accomplished as the first work done in a development plan.
 - b. All lots, tracts, or parcels shall be graded to provide proper drainage away from buildings and dispose of it without ponding; and all land within a development shall be graded to drain and dispose of surface water without ponding.
 - c. All drainage provisions shall be of such design to adequately handle the surface runoff and carry it to the nearest suitable outlet such as a curbed street, storm drain, or natural watercourse. Where drainage swales are used to divert surface waters away from buildings, they shall be sodded or planted as required and shall be of such slope, shape, and size as to conform with the requirements of the City of Noblesville or Hamilton County, as the case may be.

- d.** Concentration of surface water runoff shall be permitted only in swales or watercourses.
- e.** Excavation and fills:
 - (i)** Cut and fill slopes shall not be steeper than 3:1, unless stabilized by a retaining wall or cribbing.
 - (ii)** Provisions shall be made to prevent surface water from damaging the cut face of excavations or the sloping surfaces of fills by installation of temporary or permanent drainage across or above these areas.
 - (iii)** Cuts and fills shall not endanger adjoining property.
 - (iv)** Fill shall be placed and compacted so as to minimize sliding or erosion of the soil.
 - (v)** Fills shall not encroach on natural watercourses or constructed channels.
 - (vi)** Fills placed adjacent to natural watercourses or constructed channels shall have suitable protection against erosion during periods of flooding.
 - (vii)** Grading will not be done in such a way so as to divert water onto the property of another land owner.
 - (viii)** During grading operations, necessary measures for dust control will be exercised.
 - (ix)** Grading equipment will not be allowed to cross live streams. Provision will be made for the installation of temporary or permanent culverts or bridges.

Section 3. Installation, Responsibility, and Maintenance

- A.** Whenever sedimentation is caused by stripping vegetation, regrading, or other development, it shall be the responsibility of the applicant, person, corporation, or other entity causing such sedimentation to remove it from all adjoining surfaces, drainage systems, and watercourses and to repair any damage at his expense as quickly as possible.
- B.** Maintenance of all driveways, parking areas, drainage facilities, and watercourses within any development plan area is the responsibility of the applicant, or owner developer.
- C.** It is the responsibility of the applicant and any person, corporation, or other entity doing any act on or across a communal stream, watercourse, or swale or upon the flood plain or right-of-way thereof, to maintain as nearly as possible in its present state the stream, watercourse, swale, flood plain, or right-of-way during the duration of the activity and to return it to its original or equal condition after such activity is completed.
- D.** No applicant and person, corporation, or other entity shall block, impede the flow of, alter, construct any structure, or deposit any material or thing, or commit any act which will affect normal or flood flow in any communal stream or watercourse without having obtained prior approval from the Hamilton County Drainage Board or the Indiana Department of Natural Resources, Division of Water, whichever is applicable.
- E.** Where a Development Plan Area is traversed by a watercourse, the total development of the watercourse shall be considered. There shall be provided a drainage easement or right-of-way conforming substantially to the line of such watercourse, and of such width as will be adequate to preserve natural drainage.

- F. Each applicant, person, corporation, or other entity which makes any surface changes shall be required to:
 1. Collect on-site surface runoff and dispose of it to the point of discharge into an adequate outlet approved by the {City Engineer.} **ORD. #55-12-02**
 2. Handle existing and potential off-site runoff through his development by designing to adequately handle storm runoff from a fully developed drainage area.
 3. Pay his proportionate share of the total cost of off-site improvements to the common natural watercourse, based on a fully developed drainage area.
 4. Provide and install at his expense all drainage and erosion control improvements (temporary and permanent) as required by the Erosion and Sediment control plan.
- G. It is the responsibility of the applicant or owner to keep all major streams, not under the jurisdiction of another official agency, open and free flowing.
- H. The applicant or owner will assume the responsibility for maintaining an open and free flowing condition in all minor streams, watercourses, and drainage systems, constructed or improved in accordance with City and County design criteria on his property, which are necessary for proper drainage in the discretion of the Director of Planning and Development if adequate right-of-way exists or can be acquired.

Section 4. Enforcement

In the event the applicant or developer proceeds to clear and grade prior to the approval of the Development Plan, the Board of Zoning Appeals may revoke the approval of all plans.

PART K. SOIL PRESERVATION, GRADING, AND SEEDING

The following regulations shall apply to the construction of single and two-family homes. They are intended to decrease the possibility of erosion, sedimentation, and water pollution in the absence of an Erosion Control Plan which would be required of larger development or construction projects.

Section 1. Soil Preservation and Final Grading

No certificate of occupancy shall be issued until final grading has been completed in accordance with the approved final development plat and the lot recovered with soil with an average depth of at least six (6) inches which shall contain no particles more than two (2) inches in diameter over the entire area of the lot, except that portion covered by buildings or included in streets, or where the grade has not been changed or natural vegetation seriously damaged. Topsoil shall not be removed from residential lots or used as spoil, but shall be redistributed so as to provide at least six (6) inches of cover on the lots and at least four (4) inches of cover between the sidewalks and curbs, and shall be stabilized by seeding or planting.

Section 2. Lawn-Grass Seed and Sod

All lots shall be seeded from the roadside edge of the unpaved right-of-way back to a distance of twenty-five (25) feet behind the principal residence on the lot. No certificate of occupancy shall be issued until respreading of soil and seeding of lawn has been completed; except that between October 1 and March 15, and between May 15 and August 15, the applicant shall submit an agreement in writing signed by the developer and the property owner, with a copy to the Building and Zoning Inspector, that respreading of soil and seeding of lawn will be done during the immediate following planting season as set forth in this selection, and leave a cash escrow for performance in an amount determined by the Building and Zoning Inspector. Sod may be used to comply with any requirement of seeding set forth herein.

PART L. NONRESIDENTIAL SUBDIVISIONS AND DEVELOPMENTS

Section 1. General Requirement

If a proposed development includes land that is zoned for non-residential purposes, the Plan Commission may require any reasonable provision on the layout of the development that would help to further the purposes of this ordinance or the comprehensive plan. A nonresidential development shall also be subject to all the requirements of site plan approval set forth in Article 4, Part B, Section 2 of this Ordinance. A nonresidential development shall also be subject to all the requirements of these regulations, as well as such additional standards required by the Commission, and shall conform to the proposed land use and standards established in the Comprehensive Plan and other plans of the City/County.

Section 2. Standards

In addition to the principles and standards in these regulations, which are appropriate to the planning of all developments, the applicant shall demonstrate to the satisfaction of the Commission that the block, lot, and transportation network pattern proposed is specifically adapted to the uses anticipated and takes into account other uses in the vicinity. The following principles and standards shall be observed:

- A.** Each non-residential area or parcel shall be shown and marked on the plat as to its intended use.
- B.** Proposed non-residential parcels shall be suitable in area and dimensions to the types of development anticipated.
- C.** The engineer of appropriate jurisdiction shall approve in writing prior to secondary plat approval a provision that the proposed non-residential development will not conflict with traffic circulation patterns, and the requirements for driveway location and design can reasonably be implemented at no cost to the City/County.
- D.** Every effort shall be made to protect adjacent residential areas from potential nuisance from a proposed nonresidential development, including the provision of extra depth in parcels backing upon an existing or potential residential development, and provisions for a permanently landscaped buffer strip when necessary.
- E.** Truck Routes shall be established so as to prevent industrial traffic from encroaching into adjacent residential areas.
- F.** To the greatest degree possible, nonresidential developments shall be located on arterials or major collectors.

{PART M. STREET TREES

Section 1. City Streets

Trees shall be planted as a public improvement along any new subdivision street. The cost of street trees and installation shall be born by the developer. The spacing of the street trees shall be every 40 to 60 feet. The developer shall follow the other standards set forth in the Street Tree Ordinance of the City of Noblesville {(Ordinance No. 17-4-98, as amended).} (See **Article 12 – Landscaping and Screening**) **ORD. #14-4-99, ORD. #10-03-13**

Section 2. County Streets

Trees shall be planted as a yard tree along any new subdivision street. The cost of these trees and installation shall be born by the developer. The spacing of the trees shall be every 40 to 60 feet. The trees shall be installed between the right-of-way and 15 feet outside of the right-of-way.} **ORD. 12-4-97**