

ARTICLE 3 DESIGN PRINCIPLES AND STANDARDS

Section 300 – GENERAL

1. In determining whether an application for approval shall be granted, the Commission shall determine if the plat conforms to the principles and standards required herein, which are deemed minimal; and whenever applicable requirements of other Town ordinances are higher or more restrictive, those requirements shall control any application for plat approval.
2. In the subdividing of any land, due regard shall be shown for all natural features such as tree growth, watercourses, historic spots, or similar amenities which, if preserved, will add attractiveness and value to the proposed development.
3. Due consideration shall be given to the prevention of air and stream pollution, proper treatment and disposal of refuse and other waste, and the elimination of other blighting characteristics. Major subdivisions filed under the terms of this Ordinance shall be required to install sanitary sewers.
4. The subdivision layout shall be of such character that it protects the health, safety, and general welfare of the Town and its residents.
5. In designing a street system, the subdivider shall be guided by the following principles:
 - a. Adequate vehicular and pedestrian access shall be provided to all parcels.
 - b. Local residential street systems shall be designed to minimize through-traffic movement, but street connections into and from adjacent areas may be required in order to promote connectivity with the overall thoroughfare system.
 - c. Local street patterns shall provide reasonable direct access to the primary circulation system of collector and arterial roadways.
 - d. Local circulation systems and development patterns shall not conflict with the efficiency of bordering arterial routes.
 - e. Elements in the local circulation system should be designed with the least amount of interruptions possible in order to function effectively and safely.
 - f. Traffic generators within residential areas shall be considered in the design of the circulation pattern.
 - g. Planning and construction of residential streets shall clearly relate to their local function.

- h. Local streets shall be designed to discourage excessive speeds.
- i. Pedestrian-vehicular conflict points shall be minimized.
- j. The space devoted to street uses shall be minimized.
- k. The number of intersections shall be minimized.
- l. Local streets shall be related to the topography.

Section 305 – STREET STANDARDS AND REQUIREMENTS

1. Current AASHTO standards shall be followed as design standards unless otherwise specified in this Ordinance. These standards are minimum requirements.
2. Only one street, driveway, or point of vehicle access shall be permitted from a Major Subdivision onto a collector street or road or an arterial street or road. Two or more streets, driveways, or points of vehicle access may be permitted or required by the Commission if they are needed to improve the safety and traffic circulation in the area.
3. Half streets shall not be permitted.
4. No street names may be used which will duplicate or be confused with names of existing streets. Streets which are logical extensions or continuations of, or alignments with, any existing streets, either constructed or appearing on any validly recorded plat, shall bear the names of such existing streets.
5. Rights-of-way and paving for proposed streets shall be extended to the boundary lines of the proposed subdivision so that a connection can be made to all adjacent properties unless such extension is not feasible because of topography or other physical conditions, or unless, in the Commission's opinion, such extension is not necessary or desirable for coordination with existing streets or the most advantageous development of adjacent tracts. If an adjoining development contains an existing stub street extending to the property line, the developer of a proposed new subdivision adjacent to that land must incorporate the stub street into the proposed subdivision. In any event, no subdivision shall be designed so as to create or perpetuate the land-locking of adjacent undeveloped land.

6. A temporary dead-end street shall be permitted in any case where a street is proposed to be, and should logically be, extended, but is not yet constructed. An adequate easement for a turnaround shall be provided for any temporary dead-end street that extends two hundred (200) feet or more in length. Such easement shall be automatically vacated to abutting property owners when said dead-end street is legally extended. The temporary easement shall have a fifty (50)-foot radius, and the traveled surface used for vehicular turnaround shall be at least forty (40) feet in radius. If the temporary turnaround is to be in place for longer than two (2) years, the surface material of the 40-foot diameter shall be composed of nine inches (9") of stone and two inches (2") of binder.
7. In subdivisions that adjoin or include existing streets that do not conform to the minimum right-of-way dimensions as established by this Ordinance, the subdivider shall dedicate additional width along either one or both sides of such streets so as to bring them up to standards, provided that the area to be used for widening is owned by the subdivider or under his control.
8. The following paragraphs shall be required as provisions of the restrictive covenants of all Secondary plats to which they apply;
 - a. No fence, wall, structure, hedge, tree, shrub planting, or other object which obstructs sight lines and elevations between two and one-half (2½) and eight (8) feet above the street shall be placed or permitted to remain on any corner lot within the triangular area formed by the street right-of-way lines and a line connecting points thirty-five (35) feet from the intersection of said street lines, or in the case of a rounded property corner, from the intersection of the street right-of-way lines extended.
 - b. The same sight line limitations shall apply to any area within ten (10) feet of the intersection of a street right-of-way line with the edge of any driveway pavement or alley line. No portion of a private driveway for a corner lot shall be permitted on dedicated rights-of-way within seventy (70) feet of the centerline intersections of streets adjacent to the corner lot.
 - c. No fence, hedge, tree, or shrub planting which obstructs sight lines and elevations between two and one-half (2½) and eight (8) feet above the street shall be placed within any median area within one hundred (100) feet of an intersection.
 - d. No trees shall be planted in any portion of a public street right-of-way within one hundred fifty (150) feet of a stop sign.
 - e. No walls, rocks or boulders larger than two (2) feet in any dimension shall be placed in the median.

Section 307 – GEOMETRIC STREET STANDARDS AND REQUIREMENTS

1. All dedicated rights-of-way shall conform to the following minimum dimensions:

Arterial streets:	80 feet
Major collector streets:	60 feet
Minor collector streets:	60 feet
Local streets:	50 feet
Cul-de-sacs:	
Commercial or industrial:	65-foot radius
Residential:	50-foot radius
Crosswalks:	10 feet

2. Street jogs, and entrances with traffic counts greater than one hundred (100) vehicles per day, with centerline offsets of less than two hundred (200) feet shall not be permitted in any proposed residential, commercial, or industrial development.
3. All streets shall intersect at ninety (90) degrees whenever possible for a minimum distance of one hundred (100) feet; however, in no instance shall they intersect at less than seventy five (75) degrees onto arterial, collector streets or local streets.
4. To ensure adequate sight distances, when the street centerlines deflect more than ten (10) degrees, connections shall be made by horizontal curves. The minimum centerline radius for local and cul-de-sac residential streets shall be one hundred (100) feet, and two hundred (200) feet for all other residential streets.
5. A tangent of at least one hundred (100) feet shall be introduced between reversed curves on local and collector streets.

Section 310 – BLOCK STANDARDS

1. Block length and width, or acreage between bounding streets, shall be such as to accommodate the size of lot required in the area by this Ordinance and to provide for convenient access, circulation control, and safety of street traffic. Blocks that are unreasonably large or small shall not be approved.
2. The maximum block length shall be one thousand two hundred (1200) feet. In the design of blocks longer than eight hundred (800) feet, the Commission may specify the provision of pedestrian crosswalks near the center of the block, or wherever most useful to facilitate pedestrian circulation to a school, park, recreation area, shopping center, or other significant site.

3. Residential blocks shall be of sufficient depth to accommodate two (2) tiers of lots of minimum depth, except where reverse frontage lots bordering on a freeway, arterial street, or floodplain are used.
4. No specific rule concerning the shape of blocks is set forth, but blocks must fit easily into the overall plan of the subdivision and their design must evidence consideration of lot planning, traffic flow, and public areas.

SECTION 315 – LOT ARRANGEMENTS & SIZES

The size, shape, and arrangement of lots in proposed Subdivisions shall be such as set forward in the current Town of St. Leon Zoning Ordinance and these Subdivision regulations. Rectangular shaped lots shall be encouraged in all zoning districts. Extremely irregularly shaped lots shall be avoided. Consideration of additional lot depth should be made when lots adjoin railroads, major utility easements, commercial or industrial areas or other conflicting land uses.

Side lot lines shall be as close to right angles with the street centerline as possible, or radial to curve street centerlines. Lot lines not at right angles with the street centerline, and lot lines intersecting with curved right-of-ways shall have a reference tie to the tangent line of that centerline curve. Lot lines of a Subdivisions should display an organized and uniform development pattern.

- a. Lot Size - The minimum size, width and area of a lot in a proposed Subdivision or development depends on the current zoning district that said Subdivision or section thereof lies in. The minimum size for the respective zone is contained in the current Town of St. Leon Zoning Ordinance;
- b. Irregular Lots - Corner lots should be sufficiently large enough to allow building frontage on either street. Double frontage lots shall be avoided except where essential to provide separation of a residential development from arterial streets or to overcome specific disadvantages of topography and orientation. Double frontage lots can be restricted to one driveway in Residential Subdivisions;

- c. Flag Lots - Flag lots can be used in those locations where because of limited road frontage or geometric, topographic, or other natural features, it would be impractical to extend a public street. Flag lots shall have a panhandle extending to a publicly dedicated street for the purpose of access, and shall have two conforming lots adjoining the flag lot.

Single flag lots shall have a minimum of thirty feet (30') and a maximum of sixty feet (60') of panhandle width on a publicly maintained street. A second, contiguous flag lot may be accessed by the panhandle established for the initial flag lot land division; however, for two contiguous panhandle lots, an (equal) deeded strip of land for each lot is required for a common unobstructed access easement to the public street. The area of the access driveway of the flag lot shall not be included in computing minimum lot area requirements, as referenced in the Town of St. Leon Zoning Ordinance. The minimum front yard setback shall be thirty feet (30')—as measured from the lot line that is most parallel and closest to the public street, excluding the panhandle portion of the flag lot.

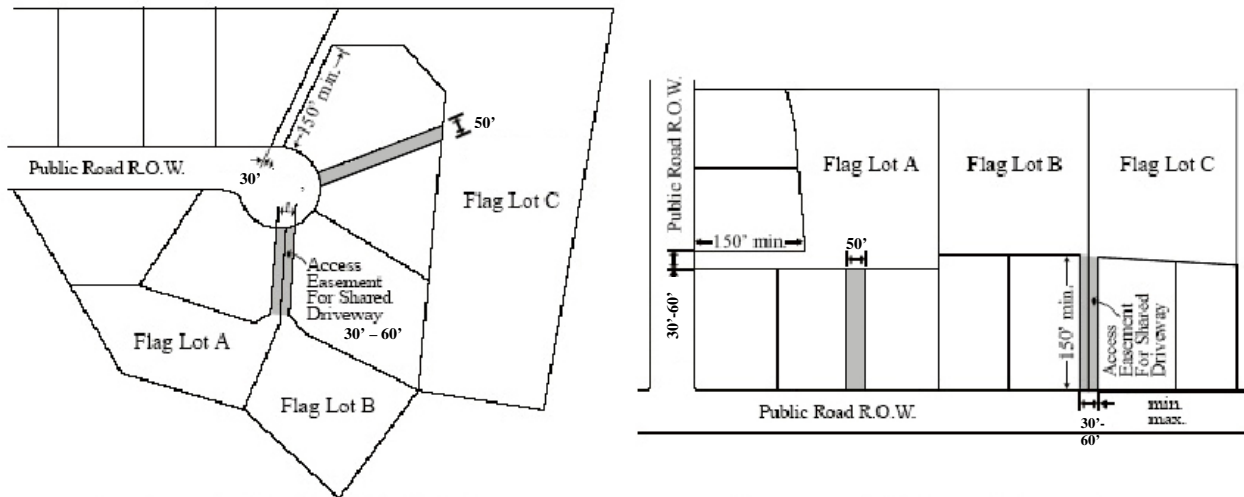
All flag lots require Technical Review Committee approval. All proposed access points on the land division plat shall contain the Land Surveyor's certification that indicates the approximate number of feet of sight distance that exists for both directions at the intersection with the public road. All flag lots shall have a panhandle for a minimum distance of one hundred fifty (150) feet from a publicly dedicated street. In no case shall more than two flag lots be contiguous to each other at the publicly dedicated street. The maximum number of flag lots permitted for each phase of a Major Subdivision (Improvement Plan submittal) shall not exceed fifteen percent (15%) of the total number of lots.

A driveway must be located within the panhandle of the deeded property for a flag lot, except in the following conditions, where this requirement may be exempted by the Technical Review Committee:

- The driveway may be located within an access easement across an adjoining conforming lot provided: 1) the access easement is at least fifty feet (50') wide; and 2) the access easement serves no more than two new lots in addition to the adjoining, conforming lot on which it is located or exists.

Unless an exemption is granted by the Technical Review Committee as noted above, a driveway for a flag lot shall be located at a minimum of five (5') feet from each lot line. For all contiguous flag lots involving a common driveway, a joint access easement shall be shown across the entire width of both panhandles containing the common driveway on the final plat. All record plats and corresponding deed documentation shall contain an appropriate written agreement to assure the perpetual maintenance of the common driveway.

Figure 3.4: Proper Use of Flag Lots



- d. Lot Frontage - All lots in a Subdivision shall have the minimum frontage on a public or private street as stated for their respective zone under the current Town of St. Leon Zoning Ordinance;
- e. Double-frontage lots shall not be permitted except where the purpose is to buffer residential development from adverse influences or to minimize the number of intersections with arterial streets and highways. A no-access, planted buffer strip of no less than ten (10) feet in width shall be provided along lot lines adjoining such adverse influence or arterial street;
- f. A “20/20” option shall be available to the developer at the discretion of the Plan Commission, which provides an allowance to reduce lot size by twenty percent for twenty percent of the lots in a subdivision. This option applies only to lot area and width;
- g. Lots abutting a watercourse, drainageway, channel, or stream shall have additional minimum width or depth as required to provide an adequate building site and afford the minimum usable area required for front, rear, and side yards. The minimum building setback from all drainageways shall be a distance of seventy-five (75) feet from the top of bank plus the required minimum yard setback distance, unless modified by the Commission.

Section 320 – EASEMENTS

1. Adequate areas of suitable size and location shall be allocated for drainage and/or utility easements. Such easements shall provide reasonable continuity from block to block and shall be at least twenty (20) feet in width located along all rear lot lines, and at least fifteen (15) feet in width located at least along every other side lot line. All exterior boundaries of the subdivision shall be provided with an easement of at least twenty (20) feet in width. The Commission may require larger easements when necessary.
2. Where a subdivision is traversed by a watercourse, drainageway, channel, or stream, adequate areas for storm water or drainage easements shall be allocated for the purpose of widening, deepening, sloping, improving, or protecting said watercourses.
3. Whenever practicable, the subdivider shall design for the placement of utility lines underground, following the required standards and specifications established by each utility company. The location of each underground utility system shall be shown by appropriate easement lines on the proposed plat.
4. Erection of structures with foundations shall be prohibited within all easements. Placement of temporary, portable structures shall be prohibited within drainage easements, as shall pavement above the contour elevation of approved drainage swales. Projection of portions of structures over easements shall be permitted as long as the entity controlling the easement provides written approval.

Section 325 – COMMERCIAL AND INDUSTRIAL SUBDIVISIONS

1. It is recognized that the subdivider creating a commercial or industrial subdivision faces unique problems of lot design not normally encountered in residential subdivisions. For this reason, the initial emphasis of the Commission shall be upon street layout and block arrangement.
2. Generally, the procedural requirements shall be for the owner to follow the regular procedure outlined herein; however, the subdivider need show only two (2) lots along with the street and block layout. Then, from time to time, as prospective buyers or users express interest in lots sized to their required specifications, the owner shall submit an amendment to the approved, recorded subdivision plat for consideration. Regular procedural requirements of the Commission following the receipt of a final subdivision plat shall then apply, except those streets that have been built by following an approved set of plans on the previously approved Secondary plat shall not have to be rebuilt because of adoption of new specifications. This shall also apply to storm drainage facilities within said subdivision unless runoff characteristics have been changed by newly proposed improvements or unauthorized existing improvements.

3. Commercial projects shall be subject to minimum lot areas set forth in the Town Zoning Ordinance, including a two-acre minimum for structures served by septic as opposed to sanitary sewer. Each distinct business use shall occupy a separate lot, exempting strip centers, malls, or buildings containing more than one business.

Section 330 – SUBDIVISION IMPROVEMENTS

1. Subdivision improvements shall be designed, furnished, and installed in accordance with requirements herein and other applicable criteria. Whenever requirements of any other governmental unit are higher or more restrictive than this Ordinance, those requirements shall control any application for plat approval.
2. Prior to final approval of a plat and any construction in a subdivision, the subdivider shall submit copies of the erosion control plan and construction drawings for street drainage facilities and all other required improvements to the Town Board at least thirty (30) days before construction begins. Construction drawings for the sanitary sewer system shall also be submitted to the Dearborn County Board of Health, Indiana State Board of Health, Indiana Department of Environmental Management, and such other State agencies as may be appropriate, at least sixty (60) days before construction begins.
3. All construction within the Town road/street right-of-way shall require a permit and a bond through the Highway Department.
4. Inspection of construction of all required improvements shall be under the direction of the Town Board. The subdivider shall sign an agreement for Inspection and Testing Services with the Town, as prescribed in the Appendix, Forms 12 and 13.

Section 340 – STREETS

Improvements for streets shall be performed to meet the following minimum standards and requirements:

1. Pavement Construction

- a. The Town Engineer shall be notified at least twenty-four (24) hours in advance of subgrade work, placement of stone base, concrete paving, or asphalt paving, but work may proceed if the Town Engineer fails to inspect within seventy-two (72) hours of notification.
- b. The Planning Director, or his designee, shall, when necessary and prudent, and at the developer's expense, have core samples taken from the finished work to verify thickness and quality.
- c. Subgrade
 - i. Subgrade and proposed building areas, as shown on the approved plans, shall be graded to a smooth, true surface and to the required depth, and all soft and spongy places not affording a firm foundation will be dug out and refilled with compacted earth or stone. The entire area shall be so compacted as to meet a Proctor dry density of ninety-five percent (95%) or better. Stone backfill gradation shall have the approval of the Town Engineer. The subgrade shall be rolled with a roller weighing no less than ten (10) tons.
 - ii. If dry, the subgrade shall be sprinkled or otherwise wetted prior to the time of laying the pavement. However, no pavement shall be laid on a muddy subgrade. The subgrade shall be maintained in a well-drained condition at all times during construction.
 - iii. The subgrade condition must be approved by the Town Engineer or his representative before any concrete is placed. The final subgrade and stone base shall pass a proof roll test as directed by the Town.
 - iv. No stone base shall be placed until all utility road crossings are completed.
 - v. All utility road crossings shall be backfilled with No. 53 compacted aggregate stone, which shall be compacted so as to meet a Proctor dry density of ninety-five percent (95%) or better. Alternative backfill materials may be used upon approval by the Town Engineer.
 - vi. If lime stabilization is required, the results of the soil tests used to determine the type and percent of lime used shall be submitted to the Town Engineer for review and approval prior to placement. A two-inch (2") reduction in the required stone thickness may be allowed if approved by the Town Engineer.

d. Concrete Street Pavement Standards

- i. Construction shall consist of reinforced or plain cement concrete laid as a pavement, in one course, on a 4" stone base and conforming with lines, grade, thicknesses, and cross-sections shown on plans or otherwise specified. The concrete shall reach a minimum four thousand (4000) P.S.I. compressive strength at twenty-eight (28) days.
- ii. Unless otherwise specified, concrete for pavement shall entrain five percent (5%) to seven percent (7%) air and shall conform to the Indiana Department of Transportation's most recent specifications, Section 500.
- iii. The test for slump of concrete for reinforced concrete pavement shall be in accordance with ASTM C143-52, and for paving, the maximum slump shall be two inches (2"). In no case shall the water used, including any free water in the aggregate, exceed five and eight-tenths (5.8) gallons per bag (94 pounds) of cement used.
- iv. The two aggregates shall be proportioned to use the maximum amount of course aggregate to produce a workable mix. Fine aggregates shall not be less than thirty percent (30%) nor more than fifty percent (50%) of the total weight of the aggregate used in each cubic yard.
- v. Ready-mixed concrete shall be used in street construction except in extreme emergencies. Each ready-mix supplier shall provide certified mix analyses for all concrete provided.
- vi. Construction shall proceed in an orderly fashion with the contractor assuring that adequate equipment and sufficient labor to expedite the work is on the job site at all times.
- vii. Expressways, arterial highways, and primary thoroughfares shall be constructed with a minimum eight inch (8") thickness concrete and be reinforced with a minimum of one layer of 6 x 6 6/6 W.W.F. Secondary thoroughfares, collector streets, and minor residential streets shall be a minimum six inch (6") thickness concrete, with no reinforcing steel.
- viii. During construction activity, concrete trucks and other construction traffic shall not be allowed on a poured lane until a minimum of fourteen (14) days curing time has elapsed, or until concrete has reached design strength.
- ix. At the close of each day's work, a construction joint shall be made not less than ten feet, zero inches (10'-0") from the preceding transverse contraction joint. Sections less than ten feet, zero inches (10'-0") shall not be permitted.

- x. The upper edges of all preformed expansion material in joints shall be parallel to the surface of the pavement and level therewith.
- xi. Transverse expansion joints shall be constructed only as specified on plans.
- xii. In the construction of an expansion joint with load transfer, the joint shall comply with plan details.
- xiii. A joint holder will be required to hold the dowel bars accurately in place perpendicular to the cross section of the pavement and to the line of the joint.
- xiv. A dummy joint shall be constructed at four feet, zero inches (4'-0") off back of curb and parallel with the curb line.
- xv. Contraction joints shall be installed at eighteen feet, zero inch (18'-0") intervals, at least one quarter of slab thickness, early enough to control cracking, but late enough to prevent damage by blade action if sawed, to slab surface and to the concrete immediately adjacent to the joint.
- xvi. At junctions with an unpaved street, new pavement shall be thickened for at least twelve feet, zero inches (12'-0"), gradually increasing thickness to not less than one and one-third (1 1/3) times as thick as the designed slab. Three-quarter inch (3/4") by fifteen inch (15") dowel bars at eighteen inch (18") centers shall be properly placed in this end section and carefully bent down after concrete is thoroughly set. The adjoining last fifty feet, zero inches (50'-0") of unpaved street shall be carefully graded and compacted to blend with new pavement.
- xvii. Wire mesh, if shown on plans or requested by the Town Highway Engineer, shall be placed as directed and comply with provisions of AASHTO M 55" welded steel wire fabric for concrete reinforcement.
- xviii. Unless otherwise specified, mesh shall be placed in the middle third of concrete and parallel to finished subgrade. The ends shall be more than two inches (2") back from joints, and the edges not more than three inches (3") from forms. Sheets shall be lapped the width of one mesh.
- xix. Asphalt filler shall meet the detailed requirements of the Indiana Department of Transportation.
- xx. Immediately upon completion of finishing process, the concrete shall be properly cured by use of curing blankets, plastic sheets, or liquid membrane forming compounds conforming to ASTM C309-53T. Failure to comply with requirements herein will result in rejection of the work.

- e. Asphaltic Concrete Street Pavement Standards
 - i. Construction shall consist of a full-depth hot asphaltic concrete pavement on a compacted subgrade or hot asphaltic concrete on a compacted crushed stone base, with pavement thickness coordinated with the Town Highway Engineer.
 - ii. All materials, mixtures, and workmanship shall conform with current Indiana Department of Transportation specifications and all other applicable portions of Section 6-102-5 of this Ordinance.
 - iii. Stub ends of streets shall have each layer of asphalt material extend at least two (2) feet beyond the end of the subsequent layer.

2. Minimum Paved Surface Dimensions

- a. Local and cul-de-sac streets:

Width, with curb and gutter	28 feet*
Width, without curb and gutter	24 feet
Terminus diameter on cul-de-sac	
Residential use only	90 feet
School bus turn-arounds	110 feet
Radius at intersections	
Residential developments	25 feet
Commercial and industrial developments	50 feet

- b. Collector streets:

Width, with curb and gutter	32 feet*
Width, without curb and gutter	28 feet
Radius at intersections	
Residential developments	25 feet
Commercial and industrial developments	50 feet

*Measured back-to-back of curb

- c. Landscape islands are encouraged for cul-de-sacs only in residential subdivisions. The maximum radius of such islands shall be ten (10) feet. Geometrics of cul-de-sacs with landscaping will be reviewed individually and may require a larger overall diameter than listed above.
- d. At an intersection of a subdivision street, or commercial or industrial drive, with an existing street or road, the subdivider shall install deceleration, acceleration and passing lanes along an existing street in accordance with Figure 1, Acceleration, Deceleration, and Passing Blister, located in the Appendix of this Ordinance.
 - i. All road work involving construction of passing blisters and/or accel/decel lanes shall require a one-inch (1") overlay of bituminous surface, which shall extend across the full width of the existing roadway as well as the new features. Limits of this work shall be the extreme ends of the tapers and/or blister. Butt joints shall be milled at the ends of the work to ensure a smooth transition.
 - ii. The overlaid area shall be striped as shown on approved construction plans. Striping material shall be thermoplastic in accordance with Indiana Department of Transportation specifications. Pavement curing shall take place for thirty (30) days prior to placement of the striping. Temporary tape striping may be required, at the discretion of the Town Highway Department, until the thermoplastic markings are placed.
 - iii. Additional off-site rights-of-way may be required for construction of the passing blisters or the tapers. The right-of-way shall be obtained and dedicated prior to the approval of Town Driveway permits.
 - iv. Stone or asphalt shoulders shall be required adjacent to all passing blisters, tapers, and turn lanes. Stone shoulders shall be compacted #53 stone with a minimum thickness of six inches (6"). Both stone and asphalt compositions shall be placed flush with the new finished pavement, shall have a cross slope of six percent (6%) or three-quarters of an inch (3/4") per foot, and have a minimum width of two (2) feet.
- e. At an intersection of two streets with different functional classifications (arterial, collector, local), any new pavement section within the right-of-way shall be composed of the structural material required for the street with the highest functional classification.
- f. A graphical specification showing the proposed roadside ditch location and road widening for any adjacent street to a project is shown in Figure 2, Roadside Ditch Location and Road Widening Detail, in the Appendix of this Ordinance.

3. Pavement Sections

The minimum thickness of sub-base, base course, and pavement shall be as follows, unless otherwise allowed, in writing, by the Town Engineer:

a. Local and cul-de-sac streets

A six-inch (6") plain concrete pavement on four inches (4") of compacted crushed stone on compacted subgrade, or for asphalt pavement, either one and a half inches (1 ½") HMA Surface and three inches (3") of HMA Intermediate on eight inches (8") of compacted #53 compacted stone on a compacted subgrade or one and a half inches (1 ½") HMA Surface and three inches (3") of HMA Intermediate on four inches (4") of HMA Base.

b. Collector streets

A seven-inch (7") plain concrete pavement on four inches (4") of compacted crushed stone on compacted subgrade, or for asphalt pavement, either one and a half inches (1 ½") HMA Surface and six inches (6") of HMA Intermediate on eight inches (8") of compacted #53 compacted stone on a compacted subgrade or one and a half inches (1 ½") HMA Surface and five inches (5") of HMA Intermediate on five inches (5") of HMA Base.

c. Arterial streets

An eight inch (8") reinforced concrete pavement on four inches (4") of compacted crushed stone on compacted subgrade or for asphalt pavement, either one and a half inches (1 ½") HMA Surface and three inches (3") of HMA Intermediate and five inches (5") of HMA Base on eight inches (8") of compacted #53 compacted stone on a compacted subgrade or one and a half inches (1 ½") HMA Surface and three inches (3") of HMA Intermediate on nine inches (9") of HMA Base.

d. Higher standards than indicated in this Section may be required by the Commission or the Town Board to accommodate extraordinary traffic volumes or other abnormal characteristics. All materials, mixtures, and workmanship shall conform to the Indiana Department of Transportation's current specifications, except as modified by Town specifications.

4. Curbs and Gutters

For all proposed major residential, commercial, and industrial subdivisions, the subdivider shall provide curbs and gutters. Curbs and gutters in residential areas may be an approved roll type with four inch (4") curb and twenty-four inch (24") minimum width made of six bag concrete, and shall be six inch (6") vertical face in other areas and on arterial streets. Curbs shall have one and one-half inch (1.5") minimum depth control joints every ten feet, zero inches (10'-0"), and one-half inch (.5") expansion material at all sides of structures.

5. Sidewalks

For all proposed major residential, commercial, and industrial subdivisions, the subdivider shall provide sidewalks on both sides of the street, and a common area sidewalk shall be provided along the frontage of public roads. The sidewalks shall be at least four feet, zero inches (4'-0") wide and four inches (4") thick, underlaid with adequate granular material, sloped one-quarter inch (1/4") per foot toward the street and be located no closer than one foot, zero inches (1'-0") from property lines, and no closer than one foot, zero inches (1'-0") from the back of the curb. Handicap access ramps shall be provided where sidewalks join streets, at street intersections, and at the necks of cul-de-sacs.

6. Roadside Swales

New and existing streets not having curbs and gutters shall provide the following:

- a. Side ditch swales measuring a minimum of one foot, zero inches (1'-0") deep at their centerline at a point four feet, zero inches (4'-0") inside the right-of-way line.
- b. A shoulder width based on the road classification and dictated by the Highway Engineer. In no case shall the shoulder be less than two feet (2') in width.
- c. A swale or culvert at all driveways sized according to amount of storm water flow, as required to keep a ten-year rainfall event. All culverts shall extend at least five feet, zero inches (5'-0") beyond either edge of the paved driveway edge.
- d. Culverts shall be installed under the roadway where necessary and be sized to carry, flowing full, a minimum of a ten-year rainfall event. All culverts shall extend at least five feet, zero inches (5'-0") beyond either edge of the paved roadway.
- e. Relief of side ditches and swales along the roadway shall be accomplished through the use of off-street retention basins or existing drainage channels.

7. Street Identification Signs

It shall be the responsibility of the subdivider to provide and install street identification signs at all street intersections within the subdivision prior to the construction of any permanent improvements other than those specifically set forth by this Ordinance. Said signs and posts shall conform to the following standards or be of a design approved by the Town Board:

- a. Each signpost shall consist of a number 2, Type A U-Channel or 2 1/4" 12 gauge Square Galvanized Posts, twelve feet, zero inches (12'-0") long with a minimum three feet (3') below grade, weighing two (2) pounds per foot with placement per the MUTCD.
- b. Each sign shall be of a metal, double-blade design, green prismatic with six-inch (6") or larger, uppercase white series C or D letters, mounted at the top of the post, with the street name on both sides.
- c. Street signs shall be located within the street right-of-way, but no closer than six feet, zero inches (6'-0") from the edge of the traveled portion of the street, as shown on construction drawings.

8. Stop and Speed Limit Signs

It shall be the responsibility of the subdivider to provide and install stop signs and speed limit signs prior to issuance of any building permits, including those for model homes. Permits for model homes may be issued if temporary signs are installed. The maximum posted speed limit shall be twenty-five (25) MPH unless otherwise approved by the Town Board. Said signs and posts shall conform to the following standards or be of a design approved by the Town Board:

- a. Each signpost shall consist of a #2 Type A U-Channel or 2 1/4" 12 gauge Square Galvanized Posts, twelve feet, zero inches (12'-0") long with a minimum three feet (3') below grade, weighing two (2) pounds per foot with placement per the MUTCD.
- b. Sign sizes shall be for conventional roads per the MUTCD.

* The construction of streets and their associated improvements shall conform to the current edition of the Indiana Department of Transportation (INDOT) Standard Specifications*, the current effective INDOT Supplemental Specifications*, INDOT Standard Drawings*, and the applicable improvement drawings. If there is a conflict between INDOT Standards and these standards, the stricter of the two will apply.

Construction activities include, but are not limited to, excavation, grading, backfill and compaction. Construction improvements include, but are not limited to, drainage structures, sidewalks, curbs and gutters, and streets.

Section 345 – SANITARY SEWAGE DISPOSAL

A sanitary system shall be designed and constructed by the subdivider to provide adequate sewage service for all lots in a proposed subdivision. A subdivision plat shall not be considered for final approval until improvement plans for a sewage system have been submitted to the Town Board for approval:

1. In all major subdivisions, a permanent sanitary sewer collection system, including all pipes and manholes, shall be provided and said system shall be connected to new or existing public or private sewage systems in accordance with plans and specifications therefor.

Section 350 – WATER SYSTEM

A water distribution system shall be provided by the subdivider to provide adequate water service for all lots in the proposed subdivision. A subdivision plat shall not be considered for final approval until improvement plans for a water system by one of the following methods have been submitted to the Town Board for approval:

1. A permanent water distribution system, including pipes, fire hydrants, valves, and other appurtenances shall be provided, and said distribution system shall be connected with an approved public or private water system in accordance with plans and specifications therefor.
2. If the land to be subdivided is not so located with regard to adequate public or group water supply systems before platting, an adequate individual water supply system for each lot shall be constructed and installed in accordance with plans and specifications therefor. Exceptions may be made for model homes according to the Zoning Ordinance allowance for such uses, as long as fire protection capability is present. Lakes, ponds, and cisterns are not considered adequate private water systems. All private water systems shall be installed in compliance with Indiana State Board of Health requirements.

Section 355 – UTILITIES

1. A subdivision plat shall not be considered for final approval until plans for the utilities have been submitted to the Town Board for approval.
2. All existing utilities in road rights-of-way, including poles, shall be relocated prior to any construction work taking place in the vicinity of the utilities. No base rock or pavement shall be placed around unmoved facilities.

Section 360 – MONUMENTS AND MARKERS

1. All Section corners and Quarter Section corners shall be monumented and perpetuated.
2. The plat and legal description of subdivisions shall be referenced to two known Section corners. The section corners shall be referenced to the Indiana Coordinate System of 1983.
3. One permanent monument in each section of a subdivision shall be installed by the subdivider to establish elevation control and shall have the following characteristics:
 - a. Be four inch (4") by four inch (4") by forty-eight inch (48") concrete, with the top flush with grade;

- b. Contain the elevation based upon U.S. Geodetic Survey datum to the nearest one-hundredth of a foot;
 - c. Be installed prior to acceptance of the maintenance bond on that section; and
 - d. Have its location and elevation filed with the County Surveyor prior to acceptance of the maintenance bond on that subdivision section.
4. Permanent markers shall be installed at:
- a. All new and existing street centerline intersections. Monuments at these locations shall be ten-inch (10") extendible markers (Harrison or an approved equal), epoxy grouted into a six-inch (6") diameter by twelve-inch (12") deep core in the pavement. The markers must have a precise point marked in the cap. The top of the monument shall be one-quarter inch (1/4") below the finished pavement surface.
 - b. Any change in direction of a street centerline, including the beginning and ending of all curves in street centerlines. Also, a monument shall be placed at the center point of all cul-de-sacs. Monuments at these locations shall be a five-eighths inch (5/8") minimum diameter by twelve inch (12") long steel rod, epoxy grouted in place with the top of the rod one-quarter inch (1/4") below the finished pavement surface. Any cul-de-sacs with a center landscape island shall have the monument encased in four-inch (4") by four-inch (4") by forty-eight inch (48") concrete with the top of the monument flush with existing grade.
 - c. All outside boundary corners and angle points of a Primary plat. These monuments shall be a five-eighths inch (5/8") diameter rod set in four-inch (4") by four-inch (4") by forty-eight-inch (48") concrete with the top of the monument flush with existing grade.
 - d. All lot corners shall be marked with capped steel rods at least five-eighths inch (5/8") in diameter and thirty inches (30") in length; however, this is not required upon initial development, but rather said marker shall be in place in order to receive a final inspection for the structure erected on the lot. All other markers shall be installed prior to the release of a performance bond or surety, and an affidavit signed by the developer and/or his engineer acknowledging that the markers were, in fact, installed, which shall be submitted with the maintenance bond.
5. All U.S., State, County, or other official benchmarks, monuments, or triangulation stations