ORDINANCE NO. 2010-12

An Ordinance Adopting Driveway and Road Access Regulations

WHEREAS, the Board of Commissioners of Huntington County, Indiana, hereinafter referred to as "COMMISSIONERS" desire to adopt an ordinance restricting and regulating driveway and road access regulations.

NOW, THEREFORE, BE IT ORDAINED by the Board of Commissioners of Huntington County, Indiana, that the following rules and regulations are adopted:

A. Access Management

1. Purpose and Intent

It is the purpose of this ordinance to provide vehicular access to land development in a manner that preserves the safety and efficiency of the transportation system. Access management can extend the operational life of roadways, increase public safety, reduce traffic congestion, and improve the appearance along a roadway corridor. This in turn benefits property owners abutting county roads by preserving property values and enhancing development potential.

Huntington County, Indiana, through the Huntington County Highway Department, hereafter referred to as the HCHD, recognizes that the right of reasonable access to public roads is incidental to ownership of abutting land. The goal of the HCHD is to grant landowners access connections for their needs consistent with HCHD access management and access control requirements in the public interest. The HCHD driveway permit process determines the location and design of driveways so as to provide freedom of traffic movement, safety for roadway users, and preservation of roadway capacity. A successful access management program reduces crash potential and preserves capacity by regulating parameters such as driveway location, driveway spacing, driveway design, traffic signal progression, use of channelization, and use of alternate access systems.

Construction of a new driveway, shared driveway, or private road connecting to a county road or reconstruction of a driveway or private road connecting to a county road shall be allowed only after an approved driveway permit has been obtained from the HCHD.

Permits for access connections to public roads shall be issued when consistent with public safety and based upon traffic volumes, drainage requirements, maintenance needs, the character of the use of the land adjoining the roadway, and any other requirements in the public interest. Construction or reconstruction of any driveway or road approach shall be as described in the approved permit and plans or drawings accompanying the permit. Approaches for private roads shall be constructed or reconstructed to the same geometrics and specifications as a new public road unless otherwise approved by the HCHD.

Construction of a new road which will become a public road shall be allowed only after an approved permit for the approach has been obtained from the HCHD. Construction of the approach, tapers, auxiliary lanes and new road shall be in accordance with plans and specifications as approved by the Huntington County Board of Commissioners and Huntington County Plan Commission. Geometrics and construction standards may be found in the Huntington County Road Manual.

The standards and geometric specification set forth in this ordinance and their application are to be used in conjunction with field investigation, sound engineering and judgment on behalf of the HCHD. Reference to the requirements or standards set forth herein is considered discretionary on the part of HCHD. The quantitative standards referenced herein shall be construed to be to be typical in nature and shall be used as a standard guide for field applications. Driveway geometric figures, materials, specifications, and similar elements are current at the time of adoption and shall not disqualify the utilization of newly introduced or technological advancements.

This ordinance is a general guide and it should be realized that the HCHD reviews each driveway on an individual basis.

B. Applicability

The standards set forth herein shall be applied to driveways, and new roads to be dedicated as a County Road, located in Huntington County, Indiana that have direct access to roadways possessed and maintained by Huntington County, Indiana.

C. Compliance With Other Requirements

Nothing contained within this ordinance shall be construed to waive individual requirements set forth elsewhere by other agencies having jurisdiction on applicable properties and activities, such as: the Huntington County Zoning Ordinance, Building

Permits, Development Plan approval, Indiana Department of Transportation and other applicable approvals.

D. Permit Application

Prior to the construction or use of any driveway, an application for a driveway permit, on forms provided by the HCHD, shall be submitted and approved. The HCHD may require supplemental information in addition to the standard permit application before approving a driveway permit request. The HCHD may approve the system as requested or may condition approval on such changes as may be necessary to maintain safe conditions and proper spacing between driveways. Application review will be based on anticipated traffic volumes on the driveways and on the roadway, type of traffic to use the driveways, type of roadside development, drainage, and other operational considerations in the public interest.

E. Plan Requirements

With the exception of most applications for residential and agricultural field driveway permits, applications shall be accompanied by three (3) sets of plans or drawings signed and sealed by a Professional Engineer, when required, which clearly show the following features:

1. Existing road pavement, ditches, right of way and property lines, road appurtenances, medians (if existing) and dimensions thereof, driveways on adjacent property and on property opposite the frontage, and names of existing and proposed roads.

2. All buildings and appurtenances, both proposed and existing, with dimensions and a notation as to present or proposed use of the buildings.

3. Design standards of all driveways, tapers, through lanes, right turn lanes, left turn lanes, or passing lanes to be constructed, reconstructed, relocated, surfaced, resurfaced, operated, used or maintained shall include the following dimensions and features:
   a. widths of all driveways and lanes;
   b. radii of driveway returns and other points of curvature;
   c. driveway grades or profile view of driveway;
   d. road centerline and edge of pavement grades;
   e. angle of the driveway(s) relative to the roadway centerline;
   f. dimensions of roadside control island and other traffic islands adjacent to the

road;
g. driveway surface material and traffic island surface material; and
h. Sight distance for the approach.

2. Distance from existing driveway(s) and proposed driveway(s) to the nearest intersecting street and distance from driveways to property lines.

3. North directional arrow and scale of drawing.

4. All roadside features to be constructed within the road right-of-way, including without limitation roadside control island, curb, sidewalks, traffic control devices, manholes, poles, etc.

5. Existing and proposed drainage structures and controls to include:
   a. size of drive culvert;
   b. type of culvert;
   c. type of culvert end treatment;
   d. grade of culvert with sufficient elevations upstream and downstream to show the extent of flow across the proposed development and to the proposed outlet;
   e. direction of surface water flow on and from adjacent property;
   f. drainage structures;
   g. Drainage plan and outlet for all storm drainage on the site.

B. Traffic Impact Studies

The HCHD recognizes the direct correlation between land use decisions and traffic operations. The Applicant's proposed project or development, and its needs for access, will create traffic impacts on the public roads. The intent of these procedures and regulations is to provide a framework for proper evaluation and remediation of those impacts. In order that the HCHD may continue to meet its statutory duty to maintain roads under its jurisdiction in reasonable repair, so as to be reasonably safe and convenient for public travel, the HCHD may require, as a permit condition, the completion by the Applicant's engineer of a Traffic Impact Study. This policy will further promote the following objectives:

1. Provide a standard set of analytic tools and format for traffic impact analysis.

2. Provide a consistent and comprehensive approach to the overall impact of development on the public roads.

3. Allow the community to assess the effects that a proposed project may have on the transportation network by outlining information needed and evaluation procedures to be used.

4. Promote reasonably safe and convenient traffic operating conditions on roads and intersections after development of a proposed site.

5. Reduce the negative traffic impacts created by individual developments, in the interests of the public and of the development, by helping to ensure that the transportation system can accommodate the expected traffic safely and efficiently.

6. Realize a comprehensive approach to the overall impacts of various developments along a corridor or within part of a community rather than a piecemeal approach.

7. Provide direction to governmental agencies and developers of expected impacts of a project.

8. Alert the community, governmental agencies, and developers to the need for improvements or modifications to the roadway, access or site design.

9. Protect the substantial public investment in the existing road system by facilitating the HCHD ability to maintain roads under its jurisdiction as required by statute.

When a Traffic Impact Study is required, it shall be prepared under the direction of an experienced traffic/transportation engineer, licensed as a Professional Engineer by the State of Indiana.

C. Driveway Locations

The location and spacing of access for driveways and road approaches is an important element in the planning, design, and operation of roadways. Access points are the main location of crashes and congestion. Their location and spacing directly affect the safety and functional integrity of the roadway.

A driveway shall be so located that no undue interference with the free movement of roadway traffic will result. A driveway shall be so located also to provide the most favorable vision and grade conditions possible for motorists using the roadway and the driveway consistent with development of the site considering proper traffic operations and safety. The Applicant shall submit plans showing the driveway layout requested, including the number, type, dimensions, location, and spacing of all driveways.

Driveways shall provide the required sight distance and shall provide the most favorable driveway grade reasonably possible.

In general, one access point is adequate for a single business. When one-way pair driveways (In-Out) are requested and the inside traffic circulation promotes such operation, these driveways may be considered as a single access point. If multiple access points are requested, the Permit Section may require a traffic impact study from the business owner/property owner to justify the need for the multiple access points.

Adjacent driveways on the same side of the road shall be spaced as far apart as on-site circulation allows. In some cases the Permit Section may require that the business owner/property owner redesign the site plan, and relocate the access point to meet the desirable spacing distance.

Adjacent property owners may consolidate their driveways by using either a frontage road or a joint driveway system. If the HCHD approves such a system, a driveway permit shall be issued to all property owners concerned and shall state that there is an agreement that all properties shall have access to the roadway via the frontage road and the joint driveway system.

The table below shows desirable unsignalized access spacing as a function of posted speed. These distances are based on average acceleration and deceleration considered adequate to maintain good traffic operations. The sight distance at the access points must also be investigated. Driveway spacing in this table is measured from centerline to centerline.

Unsignalized Access Spacing (adjacent) Table

Design Speed (mph)	Center-to-Center of Access (ft)
25	130
30	185
35	245
40	300
45	350
50 and above	455

In the event that a particular parcel or parcels lack sufficient frontage to maintain adequate spacing, the owner(s) have several options:

1. Seek a variance from the HCHD from the desired spacing, but in no case can the variance be greater than the next lowest classification shown in Table 2. For example, on a 30 mph roadway requiring 185 foot spacing, the distance may be reduced to no less than 130 feet. To minimize left turning conflicts, driveways should be either aligned directly with those across the road, or offset a sufficient distance from those across the road to achieve the minimum spacing standards listed in the table above

2. Adjacent owners may agree to establish a common driveway. In such case the driveway centerline should be the property line between the two parcels. The driveway must meet standard specifications, and meet approval from DCD and HCHD and the estimated driveway volume will be the sum of the trip generation rate of both parcels.

3. In areas where frontage roads or service drives exist or can be constructed, individual properties shall be provided access to these drives rather than directly to the main highway.

4. After all the above options are exhausted, an access point may be allowed within the property limits as determined by the Permit Section.

All frontage roads shall be placed on private property outside of the future right-of-way, as defined by the HCHD.

If the road carries one-way traffic, the dimensions provided in the table above may be revised so that the movements creating conflict are discouraged. If the driveway system is on the left-hand side of a one-way road, the dimensions approved shall be based on the same principles as used on right-hand side driveways.

In accordance with AASHTO guidelines, driveways should not be situated within the functional boundary of at-grade intersections. This boundary includes the longitudinal limits of auxiliary lanes. An access point may be allowed within the above boundary if the entire property frontage is located within this boundary.

A driveway, including the radii but not including the right-turn lanes and tapers, shall be located entirely within the area between the Applicant's property lines extended to the centerline of the roadway. A driveway radius may extend outside of that area only if the adjacent property owner certifies in writing that he will permit such extension.

Driveways, including the radii (but not including right turn lanes, left-turn lanes, passing flares, or tapers), shall be located entirely within the Applicant's right-of-way frontage. This right-of-way frontage is determined by projecting the property lines to the centerline of the road. Radii on adjacent right-of-way frontage shall be permitted only upon obtaining a letter allowing encroachment from the adjacent property owner and when the Permits Section has determined that such encroachment is necessary.

A driveway shall not be constructed along acceleration or deceleration lanes and tapers, unless no other reasonable access point is available. HCHD may require extension of these lanes by the Applicant.

Driveways shall not be constructed along the acceleration or deceleration lanes and tapers connecting to freeway interchange ramp terminals.

The number of residential driveways that may be permitted shall be determined as follows:

1. One (1) residential driveway shall be permitted for each platted lot or for each unplatted residential parcel.

2. Two (2) residential driveways may be permitted for residential property with more than 300 feet of frontage if, in the opinion of the HCHD, the additional driveway does not create a safety problem.

3. Two (2) residential driveways may be permitted on the same property, in lieu of the above, to serve a circle driveway if the frontage of the property is 100 feet or more at the right-of-way line.

4. Residential driveways on the same property shall be at least 45 feet apart, center-to-center.

Spacing between a road intersection and an access connection shall be sufficient to avoid creating conflicts between driveway traffic movements and road movements at the intersection. The corner clearance required is a function of the types of roads which intersect. In all quadrants of an intersection access points should be located according to the dimensions shown in Figure 1. Table 4 provides the minimum corner clearance dimensions. The spacing requirements in Table 4 are from the centerline of the proposed driveway to the near right-of-way line of the intersecting road.

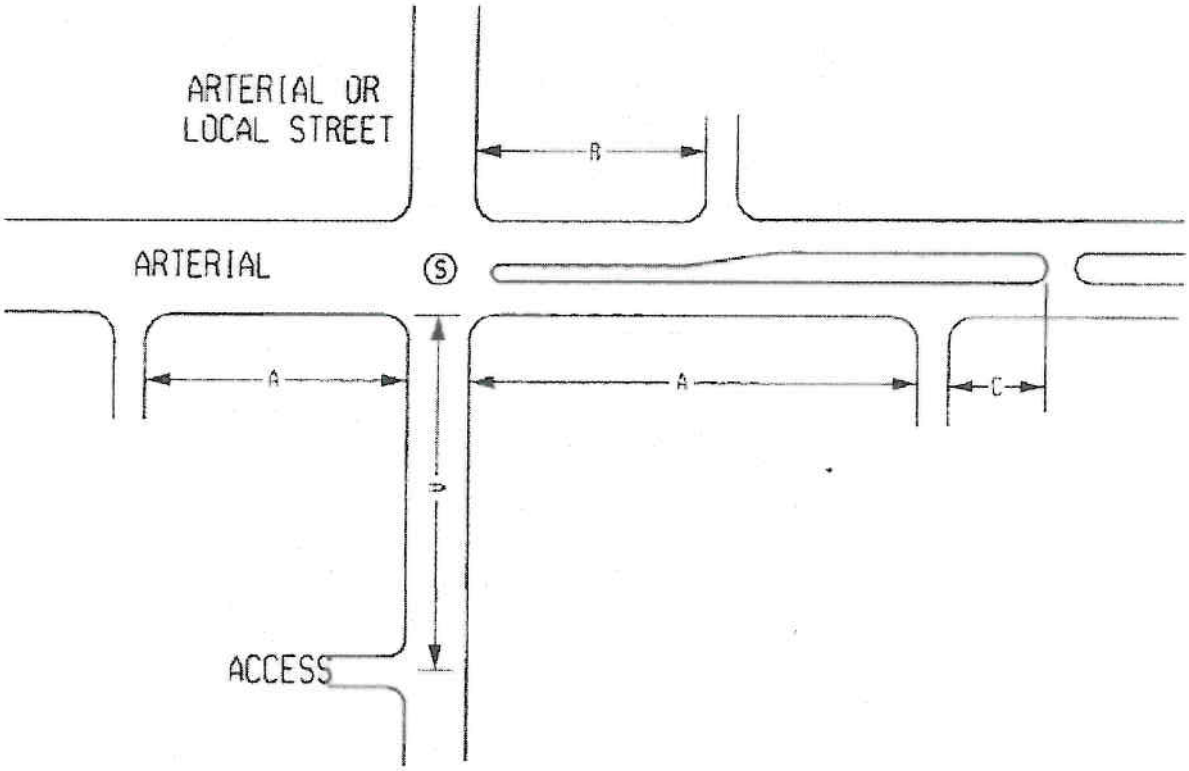

Figure 1: Corner Clearance

Corner Clearance Table

Design Speed (mph)	Dimension (above)	Signalized Intersection Control (ft)	Stop Sign Intersection Control (ft)
25 to 35	A	230	115
	B	115	85
	C	75	75
40 to 55	A	460	230
	B	230	170
	C	150	150

The application shall specify the driveway system requested, including the number and type (two-way, one-way, or divided) of driveway(s). The HCHD may approve the requested system or may require as a condition of issuance that the Applicant make changes to ensure safe operations and necessary spacing between driveways. Such requirements shall be based on anticipated traffic volumes on the driveways and on the road, type of traffic to use the driveway, characteristics of roadside development, and other safety and operational considerations. Generally, only one driveway will be permitted per parcel.

B. Driveway Grade

The driveway grade shall be determined using the following criteria:

1. If the road is uncurbed, the grade of the driveway shall meet the existing shoulder.
2. If the road is curbed, the grade of the driveway shall meet the existing edge of pavement.
3. The grade of a commercial driveway shall not exceed a maximum of six percent (6%).
4. The grade of a residential driveway shall not exceed a maximum of ten percent (10%).
5. If the sidewalk elevation must be adjusted to meet the driveway, the slope shall not exceed five percent (5%).

F. Sight Distance

Minimum sight distance for all driveways and road approaches shall be in accordance with the current edition of the AASHTO Policy on Geometric Design of Highways and Streets.

The safety of an access connection is improved where the location and geometrics of the connection are clear to approaching drivers and the driver of a stopped vehicle intending to enter or cross the intersecting road. The area on either side of an access connection should contain a triangular area free of obstructions that might block an approaching or stopped driver's view. To provide for adequate vision, all obstructions must be removed within the clear vision area, otherwise known as a sight distance triangle. A driveway or road approach shall be constructed and maintained at a location along the property frontage that meets or exceeds the requirements of Tables 5 and 6. Should this not be obtainable, then the driveway shall be constructed at a

location that provides the distance closest to that required in Tables 5 and 6, provided the stopping sight distance identified in Table 6 is met or exceeded.

Stopping Sight Distance: The following general discussion on stopping sight distance is adopted as excerpted from the 2004 edition of A Policy on Geometric Design of Highways and Streets (AASHTO) page 110:
Sight distance is the length of the roadway ahead that is visible to the driver. The available sight distance on a roadway should be sufficiently long to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object in its path. Although greater lengths of visible roadway are desirable, the sight distance at every point along a roadway should be at least that needed for a below-average driver or vehicle to stop.

Stopping sight distance is the sum of two distances: (1) the distance traversed by the vehicle from the instant the driver sights an object necessitating a stop to the instant the brakes are applied; and (2) the distance needed to stop the vehicle from the instant brake application begins. These are referred to as brake reaction distance and braking distance, respectively.

In computing and measuring stopping sight distance, the height of the driver's eye is estimated to be 3.5 feet and the height of the object to be seen by the driver is 2 feet (equivalent to the taillight height of a passenger car). 2004 AASHTO Exhibit 3-1 on page 112 also gives stopping sight distances for various design speeds.

Intersection Sight Distance: The following general discussion on intersection sight distance is adopted as excerpted from the 2004 edition of A Policy on Geometric Design of Highways and Streets (AASHTO) page 651:

The driver of a vehicle approaching an intersection should have an unobstructed view of the entire intersection, including any traffic control devices, and sufficient lengths along the intersecting highway to permit the driver to anticipate and avoid potential collisions. The sight distance needed under various assumptions of physical conditions and driver behavior is directly related to vehicle speeds and to the resultant distances traversed during perception-reaction time and braking.

Intersection Sight Distance for Passenger Cars from Stop Table

Design Speed (mph)	Left Turn (ft)	Right Turn or Crossing (ft)
25	280	240
30	335	290

35	390	335
40	445	385
45	500	430
50	555	480
55	610	530

Sight Distance for Passenger Cars Left Turn from Intersection Road Table

Design Speed (mph)	Stopping Sight Distance (ft)	Intersection Sight Distance (ft)
25	155	205
30	200	245
35	250	285
40	305	325
45	360	365
50	425	405
55	495	445

Sight distance will be measured 10 feet from the edge of the traveled portion of the intersecting road for proposed residential driveways and a minimum of 15 feet for all other proposed access connections.

The sight distances presented in Tables 5 and 6 are valid for passenger cars, two-lane undivided intersecting roads, and when roadway grades are between -3.0 percent and +3.0 percent. Additional adjustment factors, per AASHTO, shall be applied for situations that exceed these parameters.

1. A permit for an access connection between a property and a public road shall be denied when minimum safe sight distance cannot be attained. When a permit is

denied, access may be obtained, at the owner's expense and subject to HCHD approval in one of the following ways:

2. Negotiating with adjacent property owners to acquire access to the subject parcel through easements which facilitate lawful permitted access;
3. Constructing an approved frontage road serving the subject property and connecting with the roadway at a location where a safe driveway can be permitted; or
4. Realignment or reconstruction of the existing roadway to correct the sight distance deficiency. This possibility would require execution of a Road Improvement Agreement.

At intersections or railroad crossings where the HCHD owns limited access right-of-way to provide a clear vision area, no driveway shall enter or cross any part of that clear vision area. Where the HCHD has an easement for such clear vision area, driveways shall not be permitted through the clear vision area.

These standards shall be used unless HCHD engineering judgment determines that another value is more suitable for a particular site or a special condition is approved by the HCHD

G. Residential Driveway Standards

The design features described herein with their appropriate illustration of various driveway features as shown in Figure 1 shall be used by the Applicant in dimensioning a proposed residential driveway on plans accompanying driveway permit applications. The dimensions to be used for various driveway design features, shown as a standard with a working range of dimension, are given in Table 7. These standard dimensions shall be used unless conditions warrant a deviation. The HCHD may specify particular dimensions so a particular driveway system will accommodate vehicle movements normally expected without creating undue congestion or hazard on the roadway or to provide reasonable access.

A residential driveway shall be paved between the edge of the pavement and the existing or proposed sidewalk. If there is no existing or proposed sidewalk, the surfacing shall extend at least 10 feet from the edge of pavement. For a residential driveway, either curb cuts or curb returns shall be required as determined by the HCHD, based on the current HCHD standards for curb and gutter and shall be standardized unless otherwise authorized.

Residential driveway dimensions

1. The design feature dimensions of a residential driveway shall conform to those given in Table 7.

Table 7: Residential Driveway

Design Features	**Curbed Roadway**	**Uncurbed Roadway**
	Standard	Standard
	Range	Range
Intersecting Angle		
A	90°	90°
	80 to 100 °	80 to 100 °
Driveway Width		
B	12 ft.	12 ft.
	10 to 20 ft.	10 to 20 ft.
Entering Radius		
C	15 ft.	15 ft.
	5 to 15 ft.	10 to 20 ft.
Exiting Radius		
D	10 ft.	10 ft.
	5 to 10 ft.	5 to 20 ft.

Curb Cut
R
26 ft.
20 to 40 ft.
Not Applicable

The standard shall be used unless engineering judgment determines that another dimension within the range is more suitable for a particular site or a special condition is approved by the HCHD.

B. Commercial & Industrial Driveway Standards

The INDOT Driveway Manual shall be used by the applicant in dimensioning a proposed commercial driveway or driveway system on plans accompanying the driveway permit application. The HCHD may specify certain dimensions so a particular driveway system will accommodate vehicle movements normally expected without creating undue congestion or hazard on the roadway or to provide reasonable access.

If the roadway carries one-way traffic, dimensions may be altered so that the prohibited movements are discouraged. If the driveway system is on the left-hand side of a one-way roadway, the dimensions used shall be based on the same principles as used on right-hand side driveways.

A divided commercial driveway shall have a curbed island separating the entrance and the exit drive. The radii forming the edges on this island shall be designed to accommodate the largest vehicle that will normally use the driveway. HCHD may deny divided commercial driveways in areas where left turn interlock problems may develop or where otherwise deemed necessary by HCHD.

To facilitate vehicle movements between a roadway and private property when the major vehicle movement at a commercial establishment is approximately parallel to the roadway, such as at a service station or drive-in bank. The HCHD may permit dual service driveways.

A directional commercial driveway is a special case and the driveway shall be designed individually to facilitate the desired turning movements and to discourage prohibited movements. Radii shall be as approved by the HCHD, based on the driveway intersecting angle and on the turning path of the largest vehicle that will normally use the driveway.

C. Agricultural Field Driveway Standards

One farm field entrance may be permitted for each 1000 feet of frontage of cultivated land, timber land or undeveloped land. Additional driveways may be permitted when a single driveway will not provide adequate access due to topographic conditions.

Field entrances may be surfaced with stabilized gravel and may be uncurbed unless otherwise required by the HCHD.

The design feature dimensions of a farm field driveway shall conform to those given in Table 8 and as illustrated in Figure 2.

D. Utility Structure Driveway Standards

The design feature dimensions of a utility structure driveway shall conform to those given in Table 9 and as illustrated in Figure 2.

The standard shall be used unless engineering judgment determines that another dimension within the range is more suitable for a particular site or a special condition is approved by the HCHD.

The standard shall be used unless engineering judgment determines that another dimension within the range is more suitable for a particular site or a special condition is approved by the HCHD.

Design Features		Curbed Roadway		Uncurbed Roadway	
		Standard	Range	Standard	Range
Intersecting Angle	A	90 ft.	80 to 100 ft.	90 ft.	80 to 100 ft.
Driveway Width	B	20 ft.	15 to 40 ft.	20 ft.	15 to 40 ft.
Entering Radius	C	Not Applicable		20 ft.	5 to 40 ft.

Exiting Radius	D	Not Applicable		20 ft.	5 to 40 ft.
Curb Cut	R	26 ft.	20 to 50 ft.	Not Applicable	

E. Auxiliary Lanes & Tapers

Driveways serving large developments frequently generate large numbers of turning movements. On two-lane, two-way roadways, this situation can disrupt traffic operations and often makes shoulder maintenance difficult. INDOT Specifications shall be utilized in order to promote a uniform system to determine where right-turn lanes, left-turn lanes, or passing flares shall be required as a condition of permit issuance.

The applicant shall provide right-turn lanes or tapers as part of a commercial driveway system if the HCHD determines per INDOT standards or an approved traffic impact study that such right-turn lanes or tapers are required to minimize congestion or hazard on the roadway caused by vehicles entering the applicant's driveways. A right-turn lane shall be preceded by a taper. The current INDOT specifications shall be utilized for the design of turning lanes, flares and tapers.

The cross slope of a right-turn lane and tapers shall be 2%, unless otherwise determined by the HCHD.

F. Surfacing

Residential driveways will normally be surfaced to match the existing road surface type, i.e., HMA if the existing road is HMA or PCC if the existing road is PCC. When required by the HCHD, residential driveway approaches shall be paved with HMA Mixture 13A, placed according to INDOT specifications. Concrete driveway approaches shall use six inches minimum of PCC Grade P1. When reinforcement is specified, wire fabric reinforcement shall be used according to INDOT Standards.

A commercial driveway shall be paved and curbed to the right-of-way line and shall be an INDOT standards unless otherwise authorized.

When the public road to be accessed is paved the type of surfacing at commercial driveways depends upon the existing surface of the road and the potential axle loading of vehicles using the driveway.

When the public road to be accessed is unpaved commercial driveways may be surfaced with stabilized gravel. The minimum requirement for commercial driveways is ten inches of compacted dense-graded aggregate. If driveways are paved, the paving shall extend no closer to the road than one foot behind the driveway culvert location or five feet from the edge of the road, whichever is greater.

1. The surface of paved commercial driveways, including tapers without right-turn lanes, shall be concrete, hot mix asphalt or equivalent surfacing material. The thickness of the surface and the base to be used shall be sufficient to provide the bearing capacity needed to carry the proposed traffic loads. A three-inch (330 pounds per square yard) hot mix asphalt on eight inches of compacted gravel, or eight inches of hot mix asphalt on existing ground, or eight inches of non-reinforced concrete on sand, or equivalent surfacing material which meets current INDOT Standard Specifications For Construction may be considered acceptable for normal commercial driveway traffic loads over stable soil.

2. The pavement of all additional lanes such as turning lanes, and accompanying tapers, shall be the same material as the pavement of the existing road or applicable HCHD pavement cross section, whichever is greater. The cross slope of all additional lanes and all tapers shall be a continuation of the cross slope of the existing road pavement unless otherwise specified by the Permit Section.

3. The surface of road shoulder adjacent to all additional lanes and tapers shall be of the same material as the surface of the contiguous existing road shoulder and shall conform to the current ____ Standard Specifications for Construction. The shoulder area between adjacent commercial driveways serving the same property which are less than 200 feet apart (centerline to centerline) must be paved as directed by the Permit Section.

4. If a roadway is uncurbed, the following driveway surfacing and curbing requirements apply:
    a. A commercial driveway, along a paved road, shall be paved and curbed either to the right-of-way line or to the point of curvature between the driveway edge and the larger radius, point b in Figure 1, except a commercial driveway may be uncurbed where there is a proper ditch and other adequate roadside control or delineation, as determined by the HCHD. The curb ending adjacent to the roadway shall be located at least 13.5 feet from and parallel to the edge of the pavement.
    b. A commercial driveway approach off a gravel road shall be gravel.

The surface of a paved driveway, excluding right-turn lanes, shall be concrete, bituminous or equivalent surfacing materials. The thickness of the surface and the

base to be used shall be sufficient to provide the bearing capacity needed to carry the proposed traffic loads.

E. Curbing

Curbing shall either be the same detail as any existing curb or shall conform to the current HCHD standards for curb and gutter.

If the road is uncurbed, the grade of the driveway between the road edge of pavement and the edge of the shoulder shall conform to the slope of the shoulder.

The curb height shall be tapered from full height at the edge of pavement to zero-height at any sidewalk if the driveway grade meets the grade of the existing sidewalk.

The driveway curb shall either match the existing roadway curb or shall conform to the current HCHD standards for curb and gutter.

The driveway curb height shall be constant if there is no existing or proposed sidewalk or if an inclined sidewalk is permitted by the HCHD.

The driveway curb height may be tapered to zero height at the sidewalk if the driveway grade meets the grade of an existing or proposed sidewalk.

F. Shoulders

The surface of the shoulder adjacent to a right-turn lane and tapers shall be of the same materials as the roadway shoulder and conform to the INDOT Standard Specifications for Construction.

If the distance between two paved commercial driveways serving the same property is less than 200 feet, measured between adjacent ends of the curb endings, the applicant shall pave the shoulder between the driveways, unless otherwise determined by the HCHD.

G. Drainage

Design of drainage facilities shall conform to the current edition of the INDOT Drainage Manual.

A driveway or road approach, including any new lanes or tapers, shall be constructed so that the existing drainage is not adversely affected. The drainage and the stability of the road sub grade shall not be altered by driveway construction or roadside development. Roadway drainage shall be carried to the outside edge of the pavement.

Drainage from adjacent private property in excess of assumed agricultural runoff from natural ground contours shall not be discharged directly into the road drainage system. Drainage from paved areas of the driveway within the right-of-way shall be directed outside the right-of-way unless adequate enclosed drainage facilities are available or are provided by the Applicant as part of the driveway construction.

All culvert pipe used shall be of a size adequate to carry the anticipated natural flow of the ditch. The culvert size shall be approved by the HCHD and shall be not less than 12 inches inside diameter. All culverts, catch basins, drainage channels and other drainage structures required within the road right-of-way shall be manufactured or constructed and installed in accordance with the current INDOT Standard Specifications for Construction. The minimum length of the culvert may be determined as the sum of the width of the driveway and the distance needed to provide slopes to adjacent fore slope and back slope with a maximum transverse slope of 1 on 6 for locations susceptible to high-speed impacts. On low-volume or low-speed roads, where a crash history does not indicate a high number of run-off-the-road occurrences, a steeper transverse slope up to 1 on 4 may be considered. The use of headwalls on culvert ends will not be permitted. The use of sloped end sections or mitered ends are required on all culverts 18 inches diameter and greater. Sod, rip-rap or other suitable material shall be placed at all culvert ends and slopes to prevent erosion.

ONCE THE APPLICATION HAS BEEN RECEIVED AND REVIEWED THE HUNTINGTON COUNTY HIGHWAY
DEPARTMENT WILL PERFORM A PRE-INSPECTION TO DETERMINE IF A CULVERT IS REQUIRED. THIS WILL BE MARKED ON THE FIRST PAGE.

WITHIN 5 WORKING DAYS THE HUNTINGTON COUNTY HIGHWAY DEPARTMENT SHALL PROVIDE THE
PROPERTY OWNER WITH THE SIZE AND NUMBER OF CULVERTS TO BE INSTALLED AT THE LOCATION. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO INSURE THAT THEY OR THEIR CONTRACTOR INSTALL THE
CULVERT AT THE NECESSARY GRADE.
CULVERTS SHALL BE GALVANIZED CORRUGATED STEEL. HOWEVER, IN SOME CASES PLASTIC MAY BE USED IF THE PERMITTEE CONTACTS THE HIGHWAY DEPARTMENT AND RECEIVES APPROVAL FROM THE HIGHWAY
DEPARTMENT. THE LENGTH SHALL BE NO LESS THAN 20 FEET UNLESS APPROVED BY THE HIGHWAY
DEPARTMENT.

THE OWNER MUST CALL THE HIGHWAY DEPARTMENT ONCE THE CULVERT IS IN PLACE FOR A FINAL
INSPECTION. ALL INSPECTIONS MUST BE CALLED IN AT LEAST 48 HOURS IN ADVANCE. PERMITS WILL NOT BE ISSUED UNTIL THE FINAL INSPECTION HAS BEEN APPROVED BY THE HIGHWAY DEPARTMENT. THE FINAL
INSPECTION WILL DETERMINE IF THE APPROPRIATE PIPE HAS BEEN INSTALLED PROPERLY.

ANY CULVERT NOT PLACED IN ACCORDANCE WITH EXISTING GRADES WILL BE REPLACED AT THE
LANDOWNERS EXPENSE. ANY CULVERT PLACED USING INAPPROPRIATE SIZE OR MATERIALS WILL BE
REPLACED AT THE LANDOWNERS EXPENSE.

ANY MODIFICATIONS TO THE DRIVEWAY/CULVERT AFTER THE PERMIT HAS BEEN APPROVED AND
INSTALLATION ACCEPTED WILL NOT BE ALLOWED AND THE PROPERTY OWNER MAY BE REQUIRED TO
REMOVE AND REPLACE THE DRIVEWAY/CULVERT AT THEIR OWN EXPENSE

H. Profile/Grade

If the road is curbed, the grade of the driveway shall meet the existing edge of pavement.

If the road is uncurbed, the grade of the driveway between the road edge of pavement and the outside edge of the shoulder shall conform to the slope of the shoulder. Where the existing shoulder is less than six feet, the grade of the existing road bed or shoulder shall be carried to a point six feet off the edge of the existing roadway surface.

The grade of two-way, one-way, and divided commercial driveways shall not exceed a maximum of six percent (6%).

The grade of residential, utility, and field driveways shall not exceed a maximum of ten percent (10%).

Vertical curves (15-foot minimum) shall be provided at all changes of grade of four percent (4%) or more.

If a sidewalk elevation must be adjusted to meet the driveway, the slope of the sidewalk shall not exceed five percent (5%).

A driveway profile shall be determined using the following criteria:

1. If the roadway is uncurbed, the grade of the driveway between the roadway edge of pavement and the edge of the shoulder shall conform to the slope of the shoulder.

2. If the roadway is uncurbed or if the sidewalk is more than 10 feet from the edge of the pavement or if there is no sidewalk:

    a. The grade of a two-way, one-way or divided commercial driveway after it transitions from the shoulder edge shall not exceed 6%.
    b. The grade of a residential or utility structure driveway or field entrance shall not exceed 10% after it transitions from the shoulder edge.

3. If the roadway is curbed and if the sidewalk is 10 feet or less from the edge of pavement, the grade of a driveway, except a directional driveway, shall be the grade required to meet the sidewalk elevation; but if that grade would exceed the maximums specified in paragraph (2), the sidewalk shall be either tilted or inclined.

4. The grade of a directional driveway shall be designed so to provide vision of the roadway edge of pavement and the driveway surface for a distance of 100 feet along the driveway. For a driveway on an upgrade towards the roadway, a grade of 1.5% for a distance of 100 feet from the edge of the pavement is acceptable. Beyond this distance, the grade shall not exceed 6% and the differences in grades where there is a change of grade shall not exceed 3%.

5. Vertical curves, with a minimum length of 15 feet, shall be provided at a change of grade of 4% or more.

F. Parking and Storage

Adequate storage for vehicles parking or waiting to be serviced shall be provided so as not to interfere with pedestrian movements, vision requirements or traffic operations on the roadway.

Commercial establishments of a "drive-in" nature (drive-in restaurants, drive-in banks, auto washes, etc.) should provide adequate storage off highway rights of way for vehicles waiting to be serviced because vehicle storage on highway lanes or shoulders may constitute a traffic hazard in the public roadway.

G. Traffic Control Devices at Driveways & Roadway Approaches

The Applicant shall provide and/or maintain traffic control devices as required by the HCHD and per the current MUTCD Traffic Control Manual. The plans shall illustrate and specify all required traffic control devices. For private road approaches, a private road sign package including a stop sign and road name panel is required and shall be paid for, per the HCHD fee schedule, by the Applicant. The private sign package will be fabricated, installed and maintained by the HCHD at the completion of the private road approach construction.

At high-volume intersections, traffic safety and operations may be enhanced by the installation of a traffic signal. Traffic signal warrants shall be determined by reference to a traffic impact study completed by the Applicant's engineer. The installation of a traffic signal shall require approval of the HCHD. Although the warrants for the installation of a traffic signal may be satisfied, the HCHD may determine that a traffic signal would be detrimental to coordinated traffic flow, result in undue delay, impair traffic operations, or impair traffic safety on the county road. In this case, a traffic signal shall not be installed. If authorized by the HCHD, the traffic signal shall be designed in accordance with the current HCHD, INDOT, and MUTCD requirements.

All costs associated with a traffic signal installation necessitated by or approved in conjunction with any new or modified public road access shall be the sole responsibility of the Applicant. Prior to approval of an access facility with a traffic signal, the Applicant shall enter into a formal agreement with the HCHD. The agreement shall delineate the responsibilities of the HCHD and the responsibilities of the developer regarding the signal installation. The responsibilities of the developer shall include, without limitation, paying or causing to be paid all perpetual costs for the energy and maintenance of a traffic signal; paying or causing to be paid all costs for any future upgrading, revisions, modifications, and/or modernizations; providing the HCHD with indemnification; and such other provisions related to the traffic signal installation as the HCHD shall require. Ownership of the traffic signal shall remain with the HCHD. If a traffic signal is required to be a part of an interconnected traffic signal system, the developer shall be responsible for all costs associated with the interconnection, before or after the installation of the signal.

To facilitate progression of traffic in both directions at design speed through a system of traffic signals, spacing of signalized intersections of an arterial or major collector roadway with cross streets should be in multiples of at least one-quarter mile.

Signalization of driveways should only be considered if driveway traffic volumes or past crash experience warrants installation. With the approval of the HCHD, any warranted driveway signals may be located 600-700 feet from adjacent signals if the

driveways served form "T" intersections. Four-legged signalized driveway intersections should be avoided unless they are least one-quarter mile from adjacent signals. Driveway signals should also be interconnected and coordinated with any other signals, either existing at the time the driveway signal is installed or added later, within 1,500 feet of the signalized driveway.

Outside the public road right-of-way, the Applicant should provide and properly maintain approved permanent traffic control signs and pavement markings as necessary for the proper operation of the driveway intersection. All signs and pavement markings should conform to the current MUTCD. The plans shall indicate the signing and pavement markings required.

H. Road Improvement Agreement

When the Application and its supporting data demonstrate that traffic, safety, and/or road maintenance impacts of the proposed project or modified use will require road improvements as a condition of permit approval, the Applicant may decide, as a business decision, to agree to fund the road improvements. In such case the HCHD may require that the agreement of the parties be expressed in a written Road Improvement Agreement subject to the approval of the Board of Commissioners of Huntington County. The Road Improvement Agreement shall set forth all of the material terms of the parties agreement.

1. The need for road improvements shall be determined in accordance with the findings of a traffic impact study.
2. When road improvements are required as a condition of permit approval, the HCHD shall not issue the permit until all of the foregoing conditions have been met.
3. Should the Applicant decline to fund the road improvements necessitated by the impact of the Applicant's project, the application will be denied. The HCHD is without funds to expend on mitigation of the impacts on the public roads caused by new development or intensified use.

This Ordinance shall be in full force and effect immediately upon its passage and signing.

Adopted and approved this 13th day of December, 2010.

BOARD OF COMMISSIONERS OF
HUNTINGTON COUNTY, INDIANA

Kathryn Branham

Jerry P. Helvie

Tom Wall

ATTEST:

Kathy Juillerat, Huntington County Auditor