INDIANA DEPARTMENT OF TRANSPORTATION

Driveway Permit Guide

Version 1.4

April 2024

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PREFACE

Physical obstructions and influence on traffic caused by the presence and use of access driveways to property along the highways make it necessary that they be controlled for the safe movement of normal highway traffic. This Guide is designed to provide for a uniform approach to the orderly and safe movement of traffic into and out of private properties adjacent to Indiana Highways.

The geometrics and procedures outlined in this guide and their applications are to be used in conjunction with field investigation and engineering judgment; however, these approaches are not a substitute for the exercise of reasonable care on the part of the highway user. This guide should not be construed as an instrument to mandate the use of any procedures at a particular location. It is not intended to specify as a legal requirement any maximum or minimum standards as to size, number or location of driveways.

Any reference to requirements or standards is considered discretionary on the part of INDOT. Any reference to distances or measurements or locations as referenced in this guide will be construed to be typical in nature and intend to be used only as a standard for field applications.

Driveway geometrics, materials, and specifications as per the current Indiana Design Manual were current at the time of this publication but should be checked for revisions and changes that may have occurred. Users should consult design memoranda for revision details and policy updates.

The present edition is a general guideline. The applicant should be aware that the Indiana Department of Transportation (INDOT) reviews each driveway on an individual basis.

Traffic information in the form of a Traffic Impact Study (TIS) or Traffic Operational Analysis (TOA) is typically needed before design begins. Consult the appropriate INDOT District Permits Department to determine the appropriate scope of work required.

INDOT values each individual's civil rights and wishes to provide equal opportunity and equitable service for the citizens of this state. As a recipient of federal funds, INDOT is required to conform to Title VI of the Civil Rights Act of 1964 (Title VI) and all related statutes, regulations, and directives, which provide that no person will be excluded from participation in, denied benefits of, or subjected to discrimination under any program or activity receiving federal financial assistance from the U.S. Department of Transportation (DOT) on the grounds of race, color or national origin. Pursuant to Title VI, INDOT is required to include certain nondiscrimination language and assurances into its agreements, which includes permits, and it is INDOT's responsibility to ensure the assurances of nondiscrimination are properly included and executed as part of permits issued. See APPENDIX: CLAUSES FOR TRANSFER OF REAL PROPERTY in this guide.

Also See 23 CFR 200

FOREWORD

This guide is presented for the purpose of explaining the application rules for access to state highways and to help the applicant navigate through the driveway permit application process. It also includes the legal basis for the exercise of this authority and explains the procedures to be followed when applying for a driveway permit.

State law requires the public to obtain permission from the governmental unit having jurisdiction over a street or highway to construct inside of the right of way line. INDOT has jurisdiction over the Indiana state highway system and has established a driveway permit process to be followed by all applicants.

The administrative requirements associated with the driveway access permit application process for all state highways are governed by the promulgated rules of Title 105, Article 7 of the Indiana Administrative Code (IAC): Permits for Highways (see Appendix A).

The purpose of access control is to protect the state highway mainline through-traffic from indiscriminate conflicting movements, promote safety, and maintain mobility, along the roadside.

The policies, standards, and procedures stated herein have been established to achieve traffic safety on state and federal highways throughout the state. Other governmental units may wish to use this material as a guideline.

Application for a driveway permit must be made via the INDOT Electronic Permit System (EPS). Contact your INDOT District Office for assistance if needed.

The 2023 Driveway Permit Guide has been partially revised with input from INDOT subject matter experts. All technical information references the most up-to-date rules and standards. Where practicable, references have been linked to the appropriate resources and source documents. Flow diagrams for each type of driveway permit have been updated to aid applicants in completing their driveway permit application.

GENERAL

Regulation and control of driveway connections is necessary to provide efficient and safe operation on highways and to utilize the full potential of highway investment. Landowners adjacent to highways have certain rights of access consistent with their needs.

INDOT is authorized to determine and establish such requirements and restrictions for driveway approaches as may be necessary to provide for the drainage of the highway, preservation of the highway and the safety and convenience of traffic on the highway. A permit application will be considered by INDOT and, if in accordance with properly established regulations and requirements, a permit may be granted subject to appropriate conditions and provisions contained therein. All work associated with the approved permit must be performed to the satisfaction of INDOT.

PUBLIC ROADS

Approaches to residential subdivisions, industrial parks, commercial shopping malls, and similar developments where the new or improved approach will be dedicated to public right-of-way, will be considered a public road approach. Design and construction of a public road approach must conform to the Indiana Design Manual.

The American Association of State Highway and Transportation Officials' (AASHTO) manual, "A Policy on Geometric Design of Highways and Streets" more commonly known as the Green Book, should be used as an additional reference. The most current edition of the Green Book can be obtained directly from AASHTO and is available to order in hard copy or as a downloadable PDF.

INDOT Standard Drawings, Series E 610-PRAP for Public Road Approaches, should also be reviewed for design requirement applicability. The INDOT Access Management Guide describes how and when to use a wide range of access management techniques to address common traffic and access related problems. The current Indiana Design Manual is the source document from which technical information was extracted to produce this document and therefore, in all cases, the Indiana Design Manual should be considered the reference standard for all design considerations.

SECTION 1: DEFINITION OF TERMS

In the interpretation of these regulations, the words "will" or “must” are to be interpreted as being mandatory. The words "should", "desirable”, or words of similar importance are to be interpreted as being the recommendations of INDOT and, where the content so indicates, as denoting a factor or principle to be considered by the applicant in determining the location or construction of a driveway on state highway right of way before a permit is issued.

In as much as the shoulders of all highways will not be surfaced, driveways, for the purpose of said definitions, are constructed to extend to the outside edge of the traveled way of any highway.

Acceleration Lane:

A speed change lane, including taper, for the purpose of enabling a vehicle entering a roadway to increase its speed to a rate at which it can safely merge with through traffic.

Access:

A location that allows vehicular and/or pedestrian traffic to cross the highway right of way line and is positioned at the connection of a driveway with the approach at the right of way line.

Access, Control of:

The condition where vehicular traffic movement from abutting property to the highway is fully or partially controlled.

Additional Disclosure Form:

A document used to record all persons with an interest in the land and the project including mortgages, lessees, owners of option, lien holders, and holders of other encumbrances- who must join the applicant in the application. Additional Disclosure Form (State Form 23237, R/3-00)

Agreement to Execute Access Control Document:

A document that conveys the rights to INDOT for the balance of property frontage owned by the applicant. The document relinquishes future rights of access along the highway right of way other than openings allowed to remain and specifically identified on the approved permit plans. Agreement To Execute an Access Control Document

Applicant:

A person, partnership, company, corporation, association, or agency making application for a permit to perform work on an approach.

Application:

A formally prepared request for a permit that is presented by an applicant on an electronic or paper permit form to INDOT seeking permission to perform work on highway right of way.

Approach:

A way or place improved for vehicular or pedestrian traffic on the highway right of way that joins the pavement edge of the highway with a driveway or pedestrian walkway.

Auxiliary Lane:

A portion of the roadway adjoining the traveled way for parking, speed changing, turning storage for turning, weaving, truck climbing or for other purposes. For example, a right turn lane.

Average Annual Daily Traffic (AADT):

The total traffic volume passing a point or segment of a highway facility, in both directions, for one year, divided by the number of days in that year.

Average Daily Traffic (ADT):

The total traffic volume during a given time period (in whole days), greater than one day and less than one year, divided by number of days in that time period.

Buffer Area (Border Area):

The area between the outside edge of shoulder or curb and the right of way line.

Channelizing Island:

An area within the roadway not for the vehicular movement; designed to control and direct specific movements of traffic to definite channels. The islands may be defined by paint, curbs, or other devices.

Commercial Approach:

An approach that joins the highway with a driveway to private property used for commercial purposes and to public property.

Conflict:

An event involving two or more moving vehicles approaching each other in a traffic flow situation in such a way that a traffic collision would ensue unless at least one of the vehicles performs an emergency maneuver.

Conflict Point (Conflict Area):

An area where intersecting traffic either merges, diverges, or crosses.

Consultant Consent Form:

A document that authorizes a consultant to submit documents and plans necessary for the applicant to obtain a permit from the Indiana Department of Transportation. Consultant Consent Form

Corner Clearance:

The distance from an intersection of a public or private road to the nearest access connection, measured from the closest edge of the pavement of the intersection road to the closest edge of pavement of the connection along the traveled way.

Crossover:

A paved or graded crossing in the highway median that allows vehicles to cross or to turn across the highway.

Deceleration Lane:

A speed changing lane, including taper, for the purpose of enabling a vehicle to leave the through traffic lane at a speed equal to or slightly less than the speed of traffic in the through lane and to decelerate to a stop or to execute a slow speed turn.

Department:

INDOT acting directly or through its duly authorized officers and agents.

Design Hour Volume (DHV):

The traffic volume for the design hour in the peak direction of flow, usually a forecast of the relevant peak hour volume, in vehicles per hour (VPH).

Driveway:

An access point abutting INDOT right of way that is used for vehicles to access a commercial driveway, public road or private driveway.

Driveway Angle:

The angle between the highway centerline and the driveway centerline measured in a clockwise direction.

Driveway Approach Width:

The maximum length parallel to the highway that can be used practicably by a vehicle to perform a circular maneuver that is tangent to paths that are parallel to the highway before turning and parallel to the driveway after turning.

Driveway Flare:

A triangular pavement surface that transitions the driveway and the highway pavement for facilitating turning movements.

Driveway Permit Form (via Electronic Permits System or EPS):

A document that initially is considered the application for a driveway permit and becomes the permit upon approval of the proposed driveway approach work. The first page of the permit will contain basic information needed to locate and record the permit work and lists standard general provisions along with driveway permit special provisions. The permit should be applied for by the owner of the property's fee simple title. EPS Login

Driveway Return Radius:

A circular pavement transition between the driveway and the highway for facilitating turning movements.

Driveway Permit Special Provisions:

Special provisions specific to driveway permits that must be followed.

Driveway Permit Application Package:

All necessary documents from applicant needed for review and approval including deed(s) or recorded ALTA survey or plat, 20-year title search, stamped plans if required, and any special covenants. A traffic impact study or traffic operational analysis is often part of the permit package.

Driveway Width:

The narrowest width of driveway measured perpendicular to the centerline of driveway.

Egress:

The exit of vehicular traffic from abutting properties to the highway.

Electronic Permit System (EPS):

EPS can be used to apply for an online permit, pay permit application fees, check the status of a permit application, and provide additional information that may be requested. Electronic Permitting System (EPS)

Expiration Date:

The last calendar day that the valid permit is in effect and the date by which the approach must be in compliance with all conditions of the permit.

Field Approach:

An approach that joins the highway with a driveway to private property that is vacant, in an unimproved condition, or a farm field.

Future Traffic Signal Covenant:

INDOT may require the owner and his/her successors, or assignees, or the owner of other lands ("Adjacent Owner") to design and install a traffic signal at a designated location when the minimum traffic volume warrants, or other requirements for the installation of a traffic signal are met. A traffic signal analysis may be required and will be performed in accordance with the Indiana Manual on Uniform Traffic Control Devices (MUTCD).

Frontage Width:

The distance along the highway right of way line in front of an abutting property.

Gradient (Grade):

The rate or percentage of change in slope either ascending or descending from or along the highway. Grade is to be measured along the centerline of the roadway or access.

Highway:

A roadway under the jurisdiction of INDOT that is designated as a state road, a U.S. route, or an interstate.

Ingress:

The entrance of vehicular traffic to the abutting properties from a highway.

Interchange:

A facility that grade separates intersecting roadways and provides directional ramps for access movements between roadways. The structure and the ramps are considered part of the interchange.

Issue Date:

A calendar day that the permit is granted to the applicant.

Level of Service (LOS):

LOS is a qualitative stratification of performance measures representing quality of service. There are six levels ranging from A to F. LOS A represents the best operating conditions from the traveler's perspective and LOS F the worst. Roadways are typically designed not to provide LOS A conditions during peak periods but instead to provide some lower LOS that balances individual travelers' desires against society's desires and financial resources. Nevertheless, during low-volume periods of the day, a system element may operate at LOS A.

Limited-Access Facility:

A highway or street designed for through traffic, over, from, or to which owners or occupiers of abutting land or other persons have either no right or easement or a limited right or easement of direct access, light, air, or view because their property abuts upon the limited access facility or for any other reason. The highways or streets may be parkways from which trucks, buses, and other commercial vehicles are excluded or freeways open to use by all customary forms of highway and street traffic.

Maintenance Agreement:

An agreement between an applicant or owner and INDOT that outlines who takes care of what items associated with the permit. For example, landscape maintenance or maintenance of an asset such as a multi-use path.

Median:

The portion of a divided highway separating the traveled way for traffic proceeding in opposite directions.

Notice:

A certified letter from INDOT addressed to the owner(s) of the real estate stating that the approach(es) for a driveway(s) emanating from the real estate is unauthorized and providing the approximate location of the approach(es), a statement of any substandard elements of the approach(es), the action to be taken by the owner and the deadline for completing the prescribed action.

Permit:

A legal document in which INDOT gives written permission to an applicant after the applicant has applied for driveway access, if approved by INDOT.

Permit Bond:

A document used to guarantee that work performed on the right of way by the applicant (principal) will be completed as required by conditions and provisions of the permit. The bonding company (surety) is bound by the bond to ensure that permit construction is satisfactorily completed should the permittee (principal) fail to satisfy all conditions and requirements of the approved permit. The minimum bond amount accepted will be $10,000 or an amount sufficient to cover all work within INDOT right of way, whichever is greater. INDOT asks that the bond cover the estimated construction cost within the right of way plus 25 percent to cover construction variances. The bond must be on INDOT bond forms, notarized, and fully executed.

Permittee:

The applicant who receives the issuance of a permit by INDOT.

Perpetual Easement:

A recorded document that allows others to have rights to property (e.g., joint driveways, drainage, utility, etc.) that encumbers the land in perpetuity.

Private Approach:

An approach that joins the highway with a driveway to private property having a residence, barn, private garage or other improvements and is ordinarily used only by the owner or occupant of the premises, guests and necessary service vehicles.

Private Approach Reference Worksheet:

Customers submitting private driveway permit applications should print and complete the worksheet before logging into EPS. The worksheet will identify and help the customer retrieve all the field information needed to complete the online application. Private Approach Reference Worksheet

Purchased Limited Access:

Right of way along any highway designated by INDOT to be a limited-access facility and whose access rights have been acquired by INDOT.

Right of Way:

All land under the jurisdiction of and whose use is controlled by INDOT.

Right of Way Permit:

A permit for work within or that could impact conditions on state right of way.

Property Clearance:

The distance as measured from the edge of one property to the edge of an adjacent property.

Shared Use Agreement:

An agreement to assign maintenance or other responsibilities associated with features or assets that are in state right of way. Features or assets may include but are not limited to drainage, utilities, multi-use paths, or decorative lighting.

Shoulder:

The portion of the highway right of way contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of roadway base and surface courses. It is measured from the edge of pavement of the traveled way or, if present, auxiliary lane to the intersection of the shoulder and fill or ditch slopes.

Sight Distance:

The distance visible to the driver of a passenger vehicle measured along the normal travel path of a roadway to a specified height above the roadway when the view is unobstructed to traffic.

Storage Length:

Additional lane footage added to a deceleration lane to store the maximum number of vehicles likely to accumulate during a peak period so as not to interfere with the through travel lanes.

Title Evidence:

Documentation in the form of a certified search covering a period of 20 years, current title insurance or certified letter from abstractor or title insurance agent certifying fee simple ownership of property.

Traffic:

Pedestrians, ridden or herded animals, vehicles, and other conveyances either singly or together while using any highway for purposes of travel.

Traffic Control Devices:

Such devices include, signs, barricades, pavement markings and signalization used to direct traffic in safe and orderly use of the highway.

Traveled Way:

The portion of roadway used for the movement of traffic, excluding shoulders and auxiliary lanes.

Traffic Impact Study (TIS):

A TIS is a type of traffic impact analysis and provides estimated traffic generated from a proposed land use(s), along with peak hour estimates and directional distribution to reveal the proposed land use(s) impact on a state route(s). A recommendation is part of the study – for example, will a right-turn lane or signal be warranted? INDOT will review and approve the study and recommendations. The TIA should be done prior to an application being submitted in EPS. Prior to starting a traffic impact analysis, the applicant must contact INDOT to discuss the scope of the analysis. See Section 7 of this guide for additional information and links to other resources. See also Indiana Administrative Code (IAC), Title 105, Article 7: Permits for Highways - Section 7

Traffic Operational Analysis (TOA):

INDOT may determine that, due to traffic scope, a less complex study of traffic factors is required than a TIS. A TOA is an abbreviated TIS that focuses on the build-year traffic conditions with and without the proposed development. In contrast, a TIS analyzes both the build and horizon year traffic conditions. Applicants must contact INDOT to discuss the traffic scope before submitting a TIS or TOA. See Applicant's Guide to Traffic Impact Studies. See also Indiana Administrative Code (IAC), Title 105, Article 7: Permits for Highways - Section 7

Turning Radius:

The radius of an arc that approximates the turning path of a vehicle.

Unauthorized Approach:

An approach that has been constructed, reconstructed, altered or modified; that remains incomplete, or has become substandard for any reason, such as change in land use; that is not approved nor authorized to exist in its present condition by INDOT.

Weaving Maneuvers:

The crossing of traffic streams moving in the same general direction accomplished by merging and diverging.

SECTION 2: TYPES OF DRIVEWAY PERMITS

Driveway permits are separated into seven types:

- Major Commercial
- Major Public Road Approach
- Minor Commercial
- Minor Public Road Approach
- Sub-Minor Commercial
- Private Driveway
- Field Entrance.

Each of the permit types require approach specific information, and all applications should follow appropriate policies, procedures, and standards. See Section 6 of this guide for Approach Class descriptions.

MAJOR COMMERCIAL DRIVEWAY PERMIT:

This type of approach connects the highway to the private property used for commercial purposes or to a public property that attracts enough traffic to require auxiliary lane(s) or any improvements or modifications to INDOT infrastructure, as determined by INDOT. The location for this type of approach can be in either an urban or rural area.

In EPS, the permit type will be **Driveway**, and the permit subtype will be **Major Commercial**.

MAJOR PUBLIC ROAD APPROACH:

This type of approach connects the highway to public right of way in the form of a city street or county road and attracts enough traffic to require auxiliary lane(s) or any improvement or modification to INDOT infrastructure, as determined by INDOT. Examples include approaches to residential subdivisions, industrial parks, commercial shopping malls, or similar developments. Once construction is complete, the new or improved approach must be dedicated to public right of way and relinquished to the appropriate public agency, municipality or authority. The location for this type of approach can be in either an urban or a rural area.

In EPS, the permit type will be **Driveway**, and the permit subtype will be **Major Road Approach**.

MINOR COMMERCIAL DRIVEWAY PERMIT:

This type of approach connects the highway to private property used for commercial purposes, or to a public property that attracts more than 25 vehicles per day, but not enough traffic to require auxiliary lane(s) or any other improvement or modification to INDOT infrastructure, as determined by INDOT. The location for this type of approach can be in either an urban or rural area.

In EPS, the permit type will be **Driveway**, and the permit subtype will be **Minor Commercial**.

MINOR PUBLIC ROAD APPROACH:

This type of approach connects the highway to public right of way in the form of a city street or county roadway and does not attract enough traffic to require auxiliary lane(s), or any other improvement or modification to INDOT infrastructure, as determined by INDOT. Once construction is complete, the new or improved approach must be dedicated to public right of way and relinquished to the appropriate public agency, municipality or authority. The location for this type of approach can be in either an urban or rural area.

In EPS, the permit type will be **Driveway**, and the permit subtype will be **Minor Road Approach**.

SUB-MINOR COMMERCIAL DRIVEWAY PERMIT:

This type of approach connects the highway to private property used for commercial purposes, and which does not attract more than 25 vehicles per day, as determined by INDOT. The location of this type of approach can be in either an urban or rural area. Sub-Minor Commercial Drive should be constructed in accordance with INDOT standard drawings series E-610-DRIV and can be a Class 1, 2, 3 or 4 drive.

In EPS, the permit type will be **Driveway**, and the permit subtype will be **Sub Minor Commercial**.

PRIVATE DRIVEWAY PERMIT:

This type of approach connects the highway to private property having a residence, barn, or private garage, in improved or unimproved condition, used by the owner or occupant of the premises, guests, and necessary service vehicles. The location for this type of driveway can be in either an urban or rural area.

In EPS, the permit type will be **Driveway**, and the permit subtype will be **Private**.

FIELD ENTRANCE:

This type of approach connects the highway with a driveway to private property that is vacant, in an unimproved condition, or a farm field. The location for this type of approach is most often located in a rural area.

In EPS, the permit type will be **Driveway**, and the permit subtype will be **Private**.

SECTION 3: APPLICATION

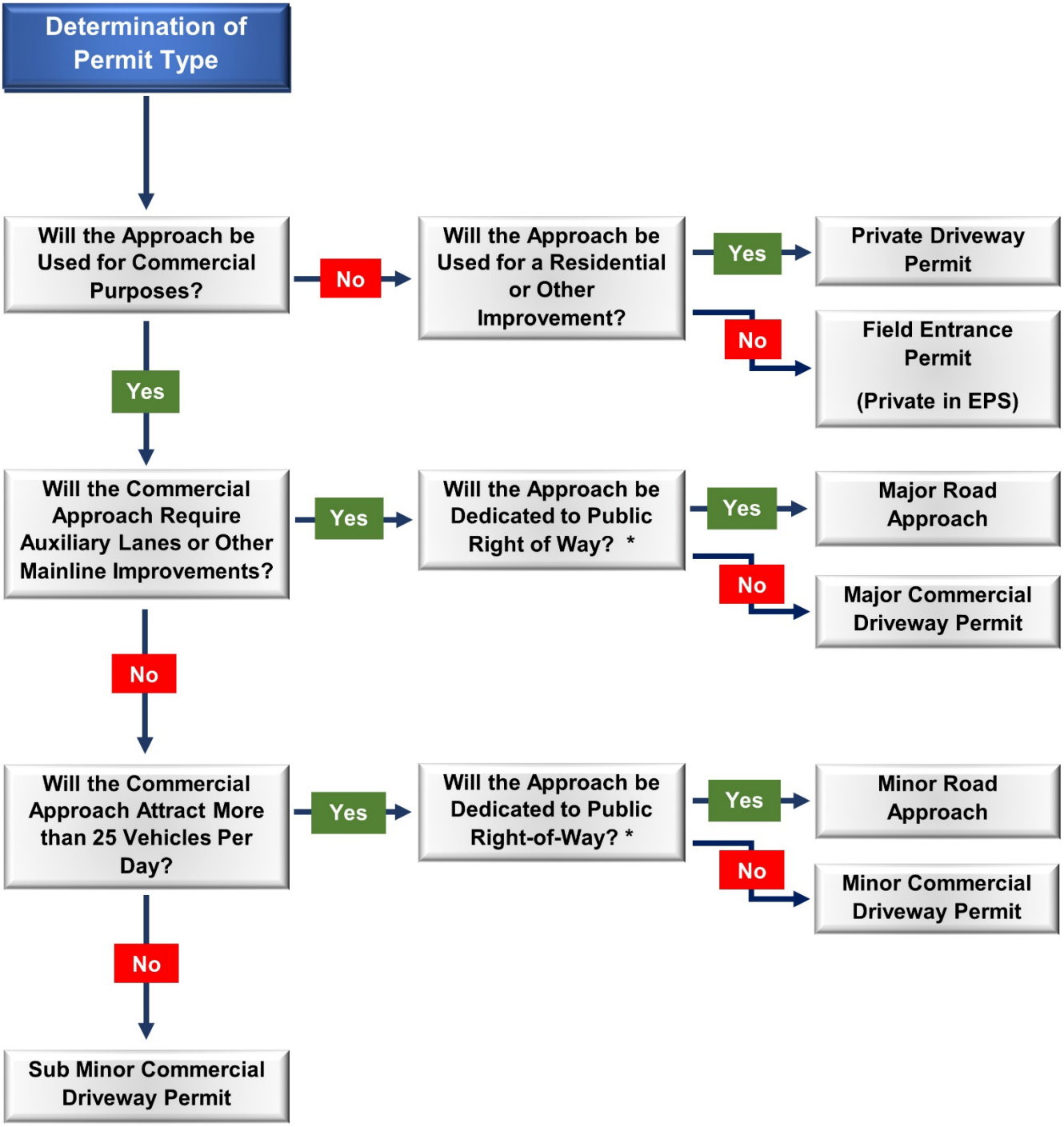
Any person, partnership, company, corporation, association, local municipality or agency intending to construct an access on the state's right of way will make an electronic application to INDOT via the Electronic Permit System (EPS). The application will be reviewed by the INDOT District that has jurisdiction for the location where the driveway is to be constructed**.** An approved permit must be obtained before any construction can begin on state right of way. Work near right of way that could affect highway assets or conditions, such as drainage, is also prohibited without an approved permit.

APPLICATION REQUIREMENT:

A new driveway permit application will be required when a relocation, alteration or remodel of an access, approach and/or crossover, or any change in the character of the use of the access approach and/or crossover is proposed. The granting or denial of such application will be governed by the same regulations and judged by the same standards as an application for a permit for an entire new access, approach, and/or crossover.

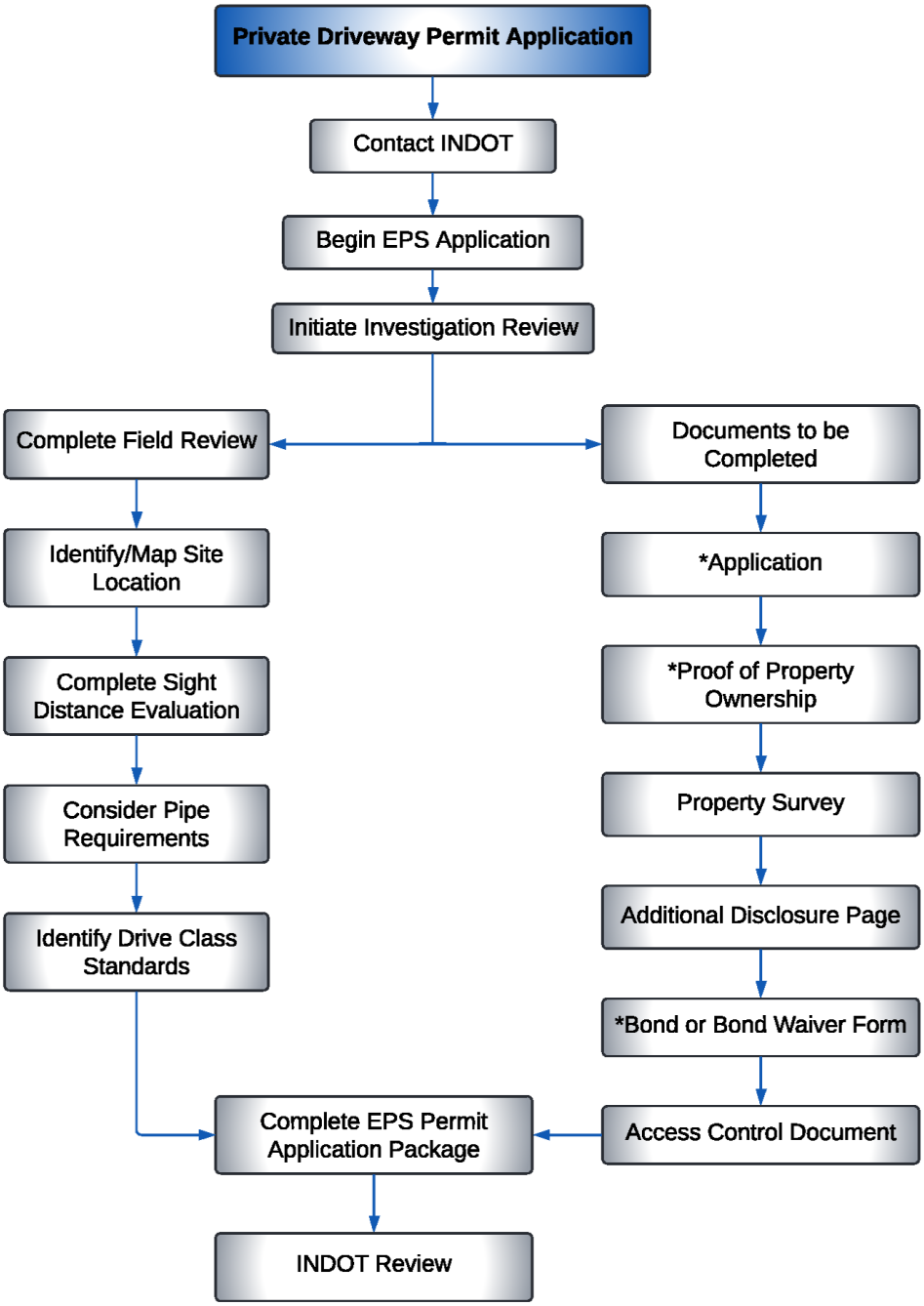
DETERMINATION OF PERMIT APPLICATION TYPE:

The appropriate forms, detail, and level of review is dependent upon the type of driveway permit required. The flow charts below illustrate the process and documentation that could be required for each of the different permit types. Not all documents shown in the flow charts may be required, and more detailed information and instructions are provided throughout this Driveway Permit Guide. Because the type of permit application and documentation required will be determined by INDOT, the applicant should contact INDOT prior to submitting an application via EPS.



*Dedicated to Public Right of Way means that the approach will connect INDOT right of way to public right of way in the form of a city street or county road. Examples include approaches to residential subdivisions, industrial parks, commercial shopping malls, or similar developments.

FIGURE 3.1: PERMIT TYPE DECISION TREE



**Required Documents, Others to be Confirmed by INDOT*

FIGURE 3.2: PRIVATE DRIVEWAY PERMIT PROCESS

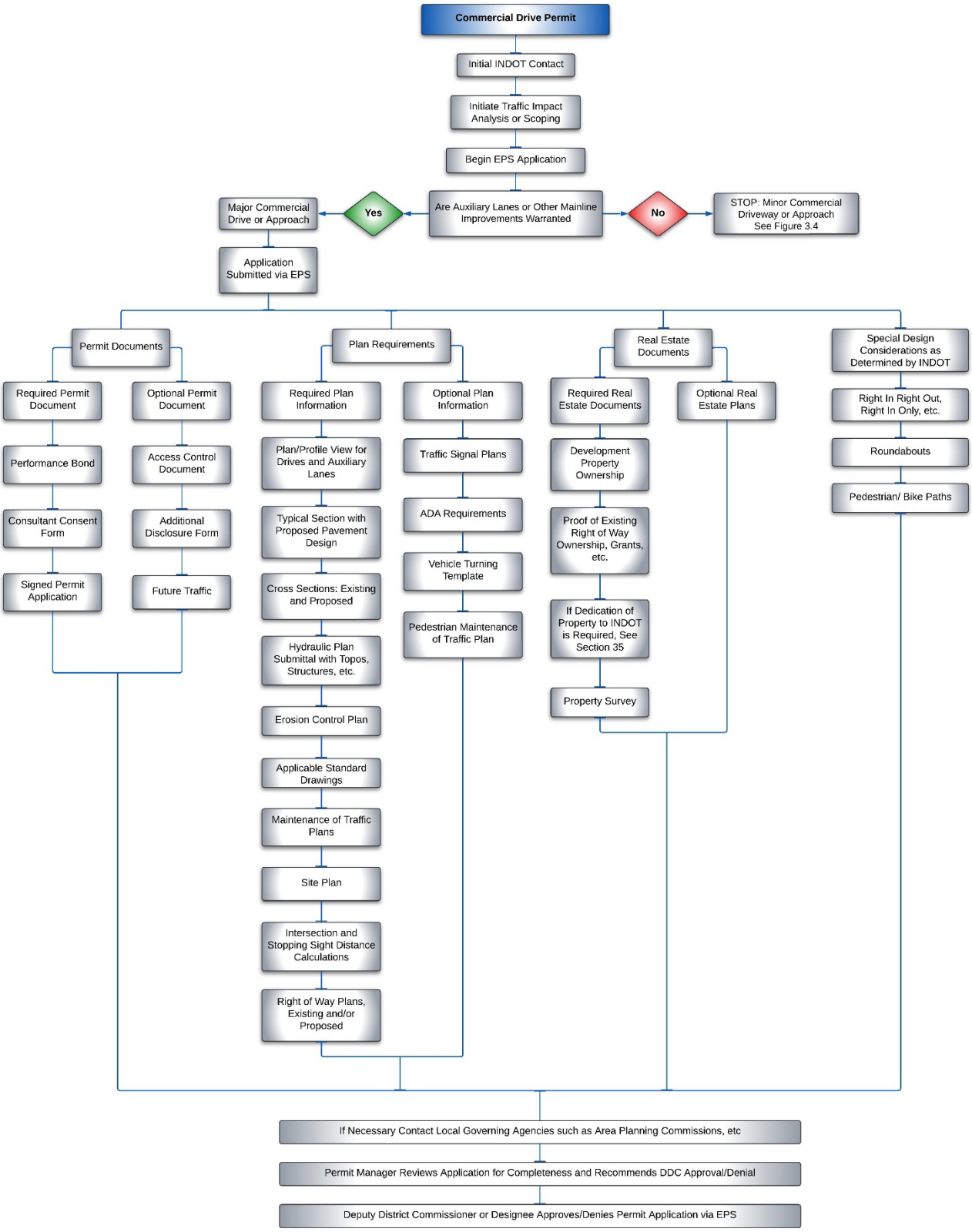


FIGURE 3.3: MAJOR COMMERCIAL DRIVE OR PUBLIC ROAD APPROACH PERMIT PROCESS

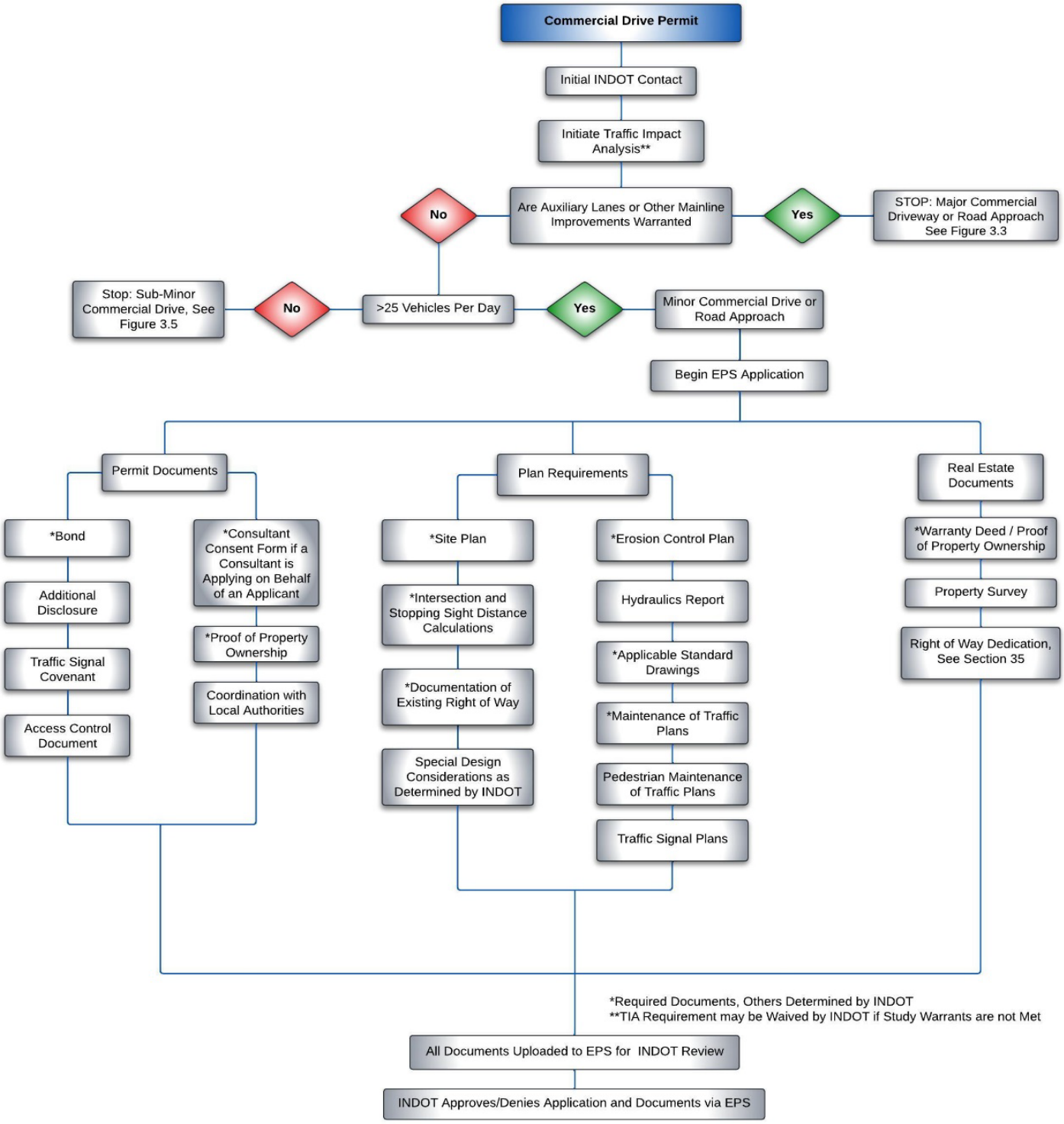


FIGURE 3.4: MINOR COMMERCIAL DRIVEWAY OR PUBLIC ROAD APPROACH PERMIT PROCESS

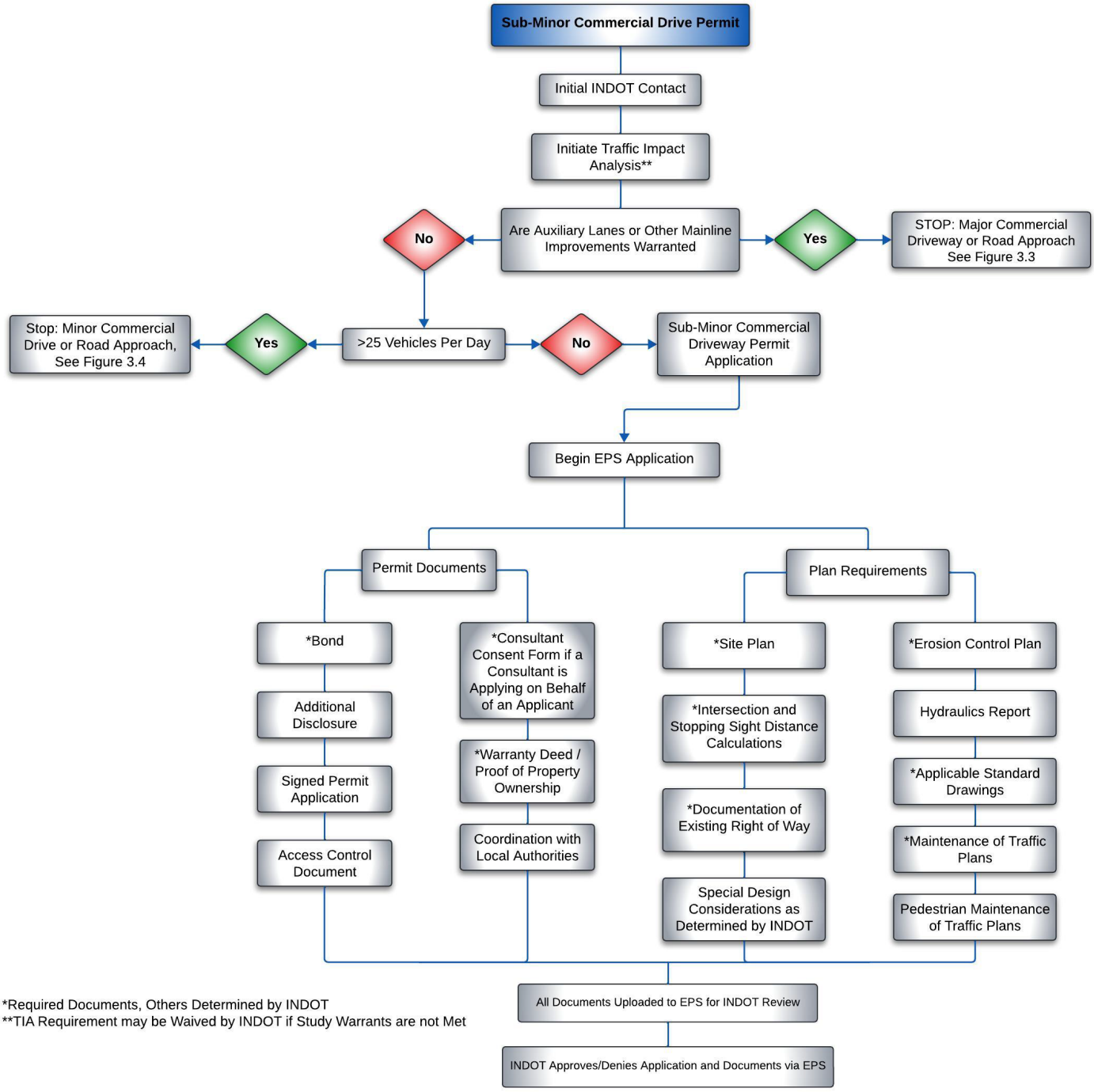


FIGURE 3.5: SUB-MINOR COMMERCIAL DRIVE PERMIT PROCESS

APPLICATION PREPARATION:

The required forms and accompanying documentation will be determined by INDOT. This process is intended to result in a Driveway Permit Application Package that is complete and clearly describes and records the proposed work to be performed on or near state right of way by the applicant. The application will include plans, documents, and other information necessary for INDOT to determine if a new or improved approach should be permitted. The application will also provide a clear record that can be reviewed in the future for investigative purposes.

The application will include immediately proposed and future work affecting all locations of access to the applicants' property and adjacent parcels in which an interest is held by the applicant.

INITIAL CONTACT/MEETING WITH INDOT:

It is best for an applicant to contact INDOT prior to submitting a permit application via EPS. Applicants can make initial contact by telephone, e-mail, mail, or in person at a district office. The purpose of this initial contact is to determine the location of the proposed driveway or approach, the appropriate INDOT District responsible for the application review, and the INDOT permit investigator the application will be assigned to. Contact information for INDOT district offices is listed on page 34 of this guide.

Once an INDOT permit investigator has been identified, the applicant should contact the investigator to meet with and discuss the permit application. This meeting can be via phone or in person. The district may choose to waive this requirement at their discretion. This meeting will identify the type of driveway permit required, what subject matter experts INDOT may need to be involved in the review process, what information and documentation should be submitted by the applicant and determine if an initial site visit to the proposed drive location is necessary. This meeting is intended to help set expectations and avoid unexpected circumstances.

See the INDOT website for an interactive map of districts and subdistricts.

EPS AND PERMIT PACKAGE:

All applications must be submitted via EPS. Application requirements such as necessary forms, plans and accompanying documentation will be determined by INDOT. Permit forms, and instructions for completing them, can be obtained from the INDOT Permits website, the permit investigator, or from an INDOT district or subdistrict office. Complete and accurate information is essential to expedite permit processing and approval.

INDOT TECHNICAL REVIEW:

Upon the applicant's completion of the Driveway Permit Application Package, the INDOT Permit Investigator will review the application in a timely manner. The application may also be subject to technical review by other INDOT subject matter experts, including, but not limited to Traffic, Real Estate, Design, Pavement, Hydraulics, and Utilities. Revisions, modifications, or additional information are often required after technical review. Requests for modifications or revisions will be made by INDOT via EPS. The applicant's timely submittal of requested revisions via EPS is essential to expedite the review process.

Many circumstances or potential issues can be identified and discussed during the applicant's preliminary meeting with INDOT. If there are unique circumstances associated with a permit application, INDOT Central Office may be asked for final review and/or approval. A proposed break in limited access right of way, proposed access within 0.5 miles of interstate corridors, nonstandard or complex geometry, (e.g., roundabouts,) or large-scale site development are examples of circumstances where INDOT Central Office will be involved.

All issues or concerns must be resolved prior to the permit being approved or work beginning on or near INDOT right of way.

EPS will serve as the official record during the application process. All communications and final approval of the permit will be tracked via the EPS program.

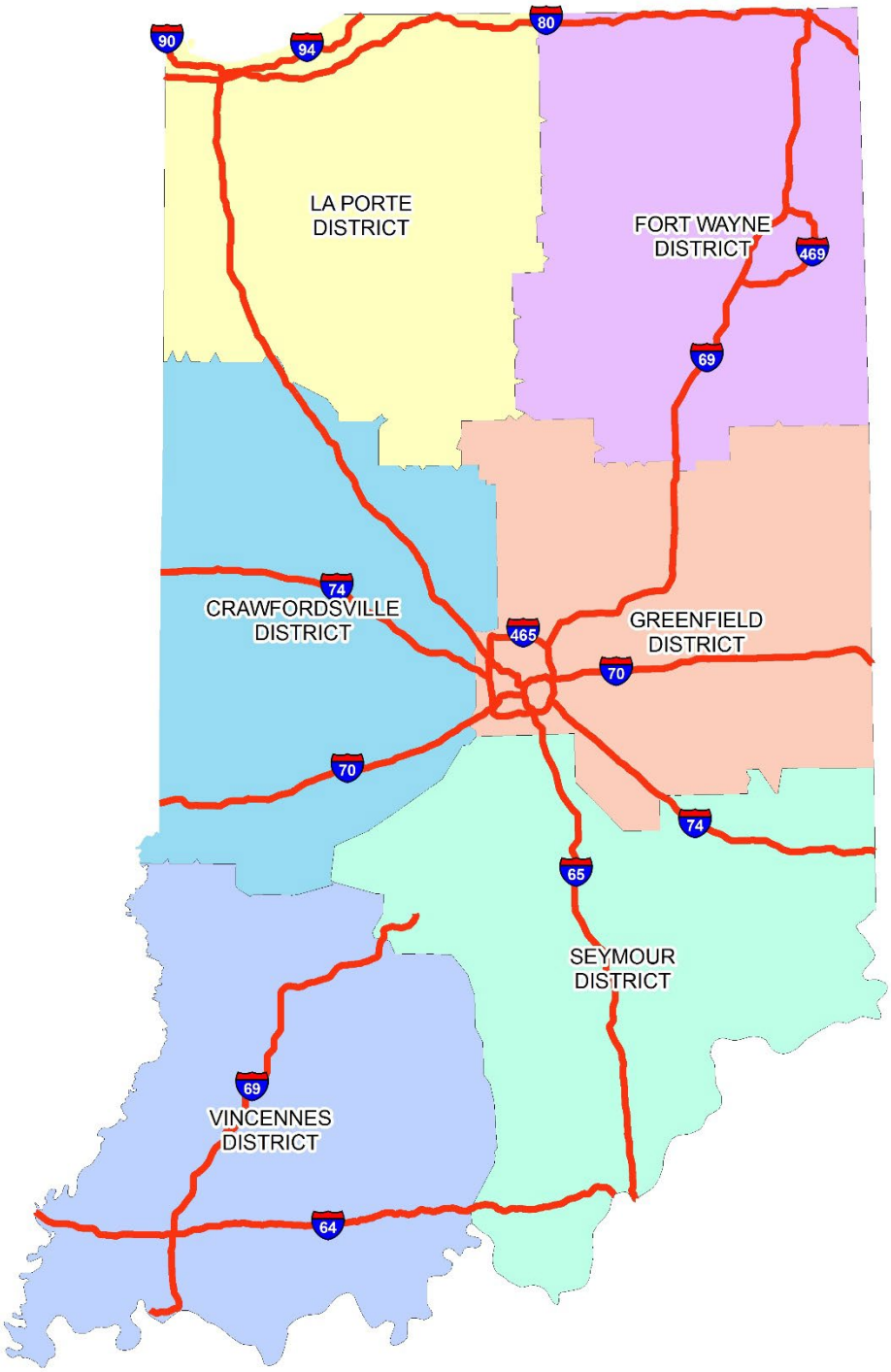


FIGURE 3.6: INDOT DISTRICT OFFICE INDIANA REGIONAL MAP

1. **Crawfordsville District**

   41 West 300 North
   Crawfordsville, IN 47933
   Phone: 855-INDOT4U
   Fax: 765-364-9226
   http://www.in.gov/indot/2701.htm

2. **Fort Wayne District**

   5333 Hatfield Road
   Fort Wayne, IN 46808
   Phone: 855-INDOT4U
   Fax: 260-471-1039
   http://www.in.gov/indot/2703.htm

3. **Greenfield District**

   32 South Broadway
   Greenfield, IN 46140
   Phone: 855-INDOT4U
   Fax: 317-462-7031
   http://www.in.gov/indot/2704.htm

4. **LaPorte District**

   315 E. Boyd Blvd.
   LaPorte, IN 46350
   Phone: 855-INDOT4U
   Fax: 219-325-7434
   http://www.in.gov/indot/2705.htm

5. **Seymour District**

   185 Agrico Lane
   Seymour, IN 47274
   Phone: 855-INDOT4U
   Fax: 812-522-7658
   http://www.in.gov/indot/2706.htm

6. **Vincennes District**

   3650 South U.S. Highway 41
   Vincennes, IN 47591
   Phone: 812-895-7300
   Phone: 855-INDOT4U
   Fax: 812-895-7479
   http://www.in.gov/indot/2707.htm

INDOT Next Level Customer Service
WWW.INDOT4U.COM

855 INDOT 4U
855-463-6848

SECTION 4: PRIVATE DRIVEWAY APPLICATION AND CULVERT REPLACEMENT

INSTRUCTIONS TO APPLY FOR A PRIVATE DRIVEWAY PERMIT

This type of approach connects the highway to private property having a residence, barn, or private garage, in improved or unimproved condition, used by the owner or occupant of the premises, guests, and necessary service vehicles. The location for this type of driveway can be in either an urban or rural area.

The application should be submitted online via EPS. In EPS, the permit type will be Driveway, and the permit subtype will be Private.

The applicant should upload a copy of the recorded property deed, including legal description, for the parcel the proposed driveway will serve to the attachments section of the EPS application. The applicant's name in EPS must match the name of the property owner of record.

A bond may not be required for this type of permit application. The applicant should contact the permit investigator or appropriate district office to verify bond and form requirements. District and investigator contact information can be found on the INDOT Permits Website and on Page 33 of this guide.

Once an application has been submitted and received by INDOT, the assigned permit investigator will conduct a site visit. The desired driveway location should be marked or flagged by the applicant. To the extent feasible within the frontage limits, the driveway should be located at the point of optimum safety, separation and sight distance along the highway. The permit investigator will determine the best location for the driveway during application review and the site visit. The driveway must meet all INDOT design requirements. See the Indiana Design Manual Chapter 46-11.0; Drive Design and the INDOT Standard Drawings Series E-610-DRIV.

INSTRUCTIONS TO APPLY FOR A PERMIT TO REPLACE AN EXISTING DRIVEWAY CULVERT

This type of permit application is applicable when the applicant is replacing a failing or insufficient culvert for an existing driveway, and work associate with the culvert replacement is the only work intended within INDOT ROW. Characteristics of the driveway (such as, but not limited to, width and location), cannot be altered in any way. If changes to the driveway are desired, a new driveway permit is required.

In EPS, the permit type for a culvert replacement is **Below Ground Occupancy**, and the permit subtype is **Miscellaneous**.

A copy of the recorded property deed, including legal description, for the parcel on which the culvert is located, should be uploaded to the attachments section of the EPS application. The EPS applicant name will need to match the name of the property owner of record.

Depending on circumstances, a bond may not be required for this type of permit application. The applicant should contact the permit investigator to verify bond requirements. District and investigator contact information can be found on the INDOT Permits Website and on Page 33 of this guide.

CULVERT PIPE REQUIREMENT FOR A PRIVATE DRIVE OR FIELD ENTRANCE

Culvert pipes are required for all private drives and field entrances, unless otherwise approved by INDOT. There are three acceptable pipe material options for private driveways and field entrances:

- Corrugated Metal Pipe (12” minimum pipe cover)
- Reinforced Concrete Pipe (12” minimum pipe cover)
- Corrugated Plastic Pipe with a Smooth Inside (24” minimum pipe cover)

Culvert pipes must meet all INDOT design requirements, be at least 15” in diameter, and have flared metal end sections or end sections as required for roadside safety per the IDM.

SECTION 5: APPLICATION REQUIREMENTS FOR MAJOR & MINOR COMMERCIAL DRIVEWAY & ROAD APPROACH APPLICATIONS

The permit application should be accompanied by clear drawings in the form of a pdf, prepared by a professional engineer registered in Indiana, by a registered architect, or by a registered land surveyor. For convenience, a list of INDOT prequalified consulting firms can be found here.

The permit application package should include the following information and documentation in detail:

- Plan Sheets or Drawings – Plans should be prepared by a professional engineer registered in Indiana, by a registered architect, or by a registered land surveyor, and should include:
    - driveways and approaches including dimensions for width, length, angle of intersection, radii, and any other measurements necessary to show the geometrics of the driveway(s) and approach(es)
    - the rate of slope or grade of pavement for approaches and driveways, and typical cross sections
    - the type of approach and driveway pavement material (stone, concrete or hot mix asphalt (HMA) pavement including depth of lifts)
    - the existing drainage patterns (including existing contours) and structures, including size and kind
    - the width dimension of highway right of way
    - the width and type of highway pavement
    - the highway right of way and applicant's property lines
    - the design of and distance from any intersecting roads, streets, railways, or crossovers to the centerline of the proposed driveway
        - Plans must include all features within five hundred (500) feet in each direction of the applicant's property line, on both sides of the highway, when the posted speed limit is less than 40 mph, and within seven hundred (700) feet in each direction of the applicant's property line when the posted speed limit is 40 mph or greater.
    - the design of, and distance from the nearest interstate interchange to the centerline of the proposed drive, if there is a ramp terminal within fifteen hundred (1,500) feet in any direction of the applicant's property lines
        - Plans are to be drawn to an engineer's 50 scale.
    - the highway posted speed limit and all existing traffic control equipment serving the highway, including but not limited to signalization devices, lighting, pavement markings, guardrail, and sign structures
    - the proposed treatment of right of way areas adjacent to and between approaches

    - appropriate symbols such as a north arrow, direction of lane travel and direction of drainage flow, a legend defining abbreviations and graphic representations of existing and new conditions, objects, materials, etc.
    - slopes designed in accordance with the Indiana Design Manual
    - other plan elements when applicable such as:
        - cross sections that include both original and proposed for right turn lane and cross over removal
        - right turn lane analysis as per the Indiana Design Manual, Chapter 46-4.01(01), Figure 46-4A and Section 15 of the INDOT Permit Manual.
        - left turn analysis as per the Indiana Design Manual, Chapter 46-4.01(02), Figure 46-4C and Section 16 of the INDOT permit manual
        - passing blister design as per the Indiana Design Manual, Chapter 46-4O and criteria in the INDOT permit manual
- Pavement Marking and Signing Plan – Plan showing all existing and proposed pavement markings and signs with details including type, material, color, proposed location, etc.
- Development Site Plan – Site plan showing parking, interior driveways, buildings, and other improvements, including distance from right of-way line.
- Hydraulic Calculations Submittal – Hydraulic calculations should include the new drainage patterns including the effect on downstream department facilities and private property, and structures including size, kind, invert pipe elevations, and inlet elevations.
    - INDOT Hydraulics has launched an online Driveway Permit Training Course. The course was developed for consultants submitting driveway permits with drainage that could impact drainage on state right of way. INDOT Hydraulics requires the course be completed and the consultant become prequalified for this type of work before drainage design submittals can be reviewed or approved. The training course takes roughly an hour to complete, is available at no cost, and is taken online at the applicant's convenience. Instructions to Access INDOT Hydraulics Training Courses
- Verification of Ownership - A copy of the recorded deed, including legal description, for the property to be served by the proposed driveway. A copy of the recorded deed, including legal description, for any adjacent property also controlled by the permit applicant.
- Traffic Control or Maintenance of Traffic Plan – Plans showing all traffic control needed during work activity displaying necessary signs, barricades, detour signs, and warning devices will be provided whenever work is to interfere with normal traffic.
    - Traffic control must be in accordance with the Construction and Maintenance Section of the Indiana Manual on Uniform Traffic Control Devices.

- Geotechnical Report – The geotechnical report must be prepared by an approved INDOT consultant.
- Pavement Design Report - The pavement design report must be prepared in accordance with the Indiana Design Manual and by a Prequalified Consultant from the List of INDOT Prequalified Consultant Firms.
- Turning Template – A turning template demonstrating ingress/egress to assure a vehicle does not encroach onto adjacent travel lanes per Chapter 46-2A of the Indiana Design Manual
- Intersection Site Distance Calculation - Plot intersection site distance as per the Indiana Design Manual, Chapter 46-10.0 Figure 46-10 G, H
- Stopping Site Distance Calculation – Plot stopping sight distance as per Indiana Design Manual, Chapter 42-1.02, Figure 42-10A
- Traffic Impact Analysis – TIS or TOA
- Erosion Control and/or Storm Water Quality Control Plan
- Completed Forms or Agreements when Applicable:
    - Additional Disclosure Form SF 23237 (R3/3-00)
    - Permit Bond SF 41523 (R4/3-00)
    - Permit Application SF 41769 (R5/3-00) via EPS
    - Traffic Signal Covenant (Agreement)
    - Consultant Consent Form
    - Access Control Document

Failure to provide appropriate or complete information will result in delays in application review and approval, and possible overdesign due to wrong assumptions. Not all documents and forms listed above are required for every commercial driveway or road approach permit application. Plan requirements and documentation will be verified by INDOT during the applicant's initial meeting.

SECTION 6: TYPES OF APPROACH CLASSES

Approaches are designated as belonging to one of the following seven classes pursuant to the Indiana Design Manual, Chapter 46-11.01(1).

TABLE 6.1: APPROACH TYPE AND DRAWING STANDARDS BY APPROACH CLASS

APPROACH CLASS	TYPE OF APPROACH DESCRIPTION	INDOT STANDARD DRAWING
CLASS I	A **RESIDENTIAL DRIVE** provides access to a single-family residence, duplex, or apartment building with not more than four dwelling units and along a roadway with a raised curb. The location for this class of approach is usually in an urban area. A hard pavement surface, curbs, and sidewalks are common elements in the construction of these approaches.	E 610-DRIV-01 E 610-DRIV-02 E 610-DRIV-03 E 610-DRIV-09 E 610-DRIV-15 E 610-DRIV-14
CLASS II	A **RESIDENTIAL DRIVE** provides access to a single-family residence, duplex, or apartment building with not more than four dwelling units and along a roadway with paved or unpaved shoulder and no raised curb. The location for this class of approach is usually in a rural area. A pipe continuing drainage along the highway ditch line is a common element in the construction of these approaches.	E 610-DRIV-01 E 610-DRIV-03 E 610-DRIV-10 E 610-DRIV-11 E 610-DRIV-14 E 610-DRIV-15 E 610-DRIV-16 E 610-DRIV-18
CLASS III	A **COMMERCIAL DRIVE** provides access to an office, retail, or institutional building, or to an apartment building with five or more dwelling units. A drive that serves an industrial plant, but with a primary function to serve an administrator or employee parking lot, is considered to be a commercial drive. A commercial drive along a roadway with a raised curb. The location for this class of approach is usually in an urban area. A hard pavement surface, curbs, drainage structures, auxiliary lanes, tapers, and sidewalks are common elements in the construction of these approaches.	E 610-DRIV-01 E 610-DRIV-03 E 610-DRIV-04 E 610-DRIV-09 E 610-DRIV-14 E 610-DRIV-16 E 610-DRIV-17

Class IV (See note below)	A **COMMERCIAL DRIVE** provides access to an office, retail, or institutional building, or to an apartment building with five or more dwelling units. A drive which serves an industrial plant, but with a primary function to serve an administrators' or employees' parking lot, is considered to be a commercial drive. A commercial drive is a drive along a roadway with a paved or unpaved shoulder and no raised curb. The location for this class of approach is usually in a rural area. A hard pavement surface, auxiliary lanes, tapers, and a pipe continuing drainage along the highway ditch line are common elements in the construction of these approaches.	E 610-DRIV-01 E 610-DRIV-05 E 610-DRIV-10 E 610-DRIV-11 E 610-DRIV-14 E 610-DRIV-16 E 610-DRIV-17 E 610-DRIV-18
Class V	A **FIELD ENTRANCE** provides access to an unimproved property, i.e., a farm field with no buildings. Such a drive is located along a roadway with a paved or unpaved shoulder. The location for this class of approach is either in an urban or rural area. The main characteristics are that it serves a vacant lot, field, or unimproved property and draws only occasional vehicles. A graded surface and a pipe continuing drainage along the highway ditch line are common elements in the construction of these approaches.	E 610-DRIV-01 E 610-DRIV-06 E 610-DRIV-11 E 610-DRIV-15 E 610-DRIV-16
Class VI	An **INDUSTRIAL DRIVE** directly serves substantial numbers of truck movements to and from loading docks of an industrial facility, warehouse, or truck terminal. A centralized retail development, such as a community or regional shopping center, may have one or more drives especially so designed, signed, and located to provide access for trucks. This is also classified as an industrial drive. An industrial drive may be designed either as a public road approach or as an industrial drive. An industrial drive along a roadway with a paved or unpaved shoulder and no raised curb. The location of this class of approach can be either in rural or urban area. These drives serve heavy industrial property and truck stops.	E 610-DRIV-01 E 610-DRIV-07 E 610-DRIV-12 E 610-DRIV-14 E 610-DRIV-16 E 610-DRIV-17 E 610-DRIV-18
Class VII	An **INDUSTRIAL DRIVE** directly serves substantial numbers of truck movements to and from loading docks of an industrial facility, warehouse, or truck terminal. A centralized retail development, such as a community or regional shopping center, may have one or more drives especially so designed, signed, and located to provide access for trucks. This is also classified as an industrial drive. An industrial drive may be designed either as a public road approach or as an industrial drive. An industrial drive along a roadway with a raised curb is a Class VII drive. The location of this class of approach can be either in rural or urban area. These drives serve heavy industrial property and truck stops.	E 610-DRIV-01 E 610-DRIV-08 E 610-DRIV-03 E 610-DRIV-12 E 610-DRIV-13 E 610-DRIV-14 E 610-DRIV-16 E 610-DRIV-17

Note for Approach Edges for Class IV: Commercial Minor Driveway Approaches will be connected to either tapers of an existing auxiliary lane or to the highway traveled way pavement with returns of adequate radii.

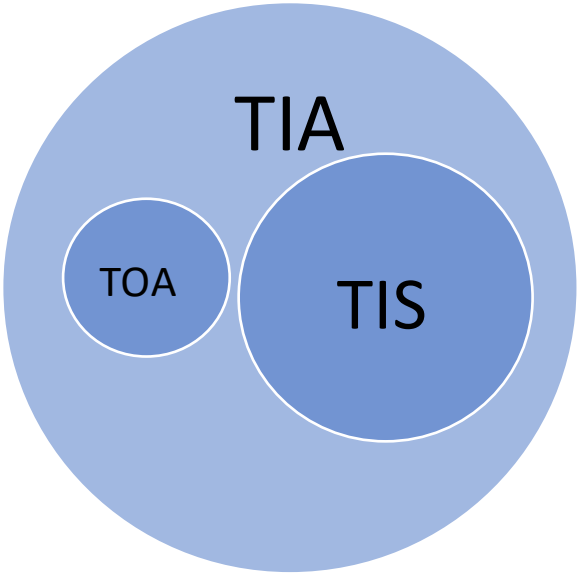
Tapers that improve the ingress and egress turning movement characteristics of the approach and that connect the radii, require returns to the highway when either of the following criteria are met:

- Highway Annual Average Daily Traffic (AADT) is greater than 4,000 vehicles per day, or
- approach AADT is greater than 40 vehicles per day.

Per INDOT Standard Drawing 610-DRIV-05 a taper would be provided at any Class IV driveway with a paved shoulder width greater than or equal to 8 feet. Tapers will not be required for those commercial drives where conditions do not exceed these criteria. In these instances, approach edges may be connected to the highway traveled way with returns of radii only. Questions can be discussed with the INDOT permit investigator.

SECTION 7: TRAFFIC IMPACT ANALYSIS

A Traffic Impact Analysis (TIA) is a specialized engineering study of the impact that a given land use type and intensity has on the nearby transportation system. A TIA makes it possible for mitigating measures to be taken in advance to provide for the "preservation of the highway and the safety and convenience of traffic on the highway". See 105 IAC 7-1-1



For developments that require further study of traffic impacts, an initial meeting will be set up between INDOT and the applicant to determine the scale and scope of the study. **This initial meeting is a critical step in the application process.** A TIA may consist of either a Traffic Operations Analysis (TOA) or a Traffic Impact Study (TIS). A TOA is an abbreviated TIS that focuses on the build year traffic conditions with and without the proposed development. In contrast, a TIS analyzes both the build and horizon year traffic conditions.

The Institute of Transportation Engineers (ITE) Trip Generation Manual should be used to estimate the land use thresholds to help determine whether a TIS or TOA may be required. INDOT may require a TIA in other unique scenarios as described in Chapter 6 of the Applicant's Guide to Traffic Impact Analysis.

All proposed developments should compare their land use intensity to the threshold values listed in Table 7.1. If the development's intensity is less than the value listed in the table, no TIA may be required. If the intensity is greater than the value listed in the table, further study of the traffic impacts associated with the proposed development will be required. When developments cannot be neatly grouped into one of the categories listed in Table 7.1, the requirement for a TIA will be decided by INDOT.

WARRANTS FOR A COMPLETE TRAFFIC IMPACT ANALYSIS

In addition to threshold values listed in Table 7.1, a formal TIA will be requested for a proposed development that meets any of the warrants described below:

- Warrant 1 – Land Use Intensity
  This warrant is satisfied when a development generates more than 100 trips during the street peak hour. Table 4.1 in the INDOT Applicant's Guide to Traffic Impact Study gives land use intensity values that are equivalent to 100 street peak hour trips.
- Warrant 2 – Level-of-Service Warrant
  This warrant is satisfied if the traffic generated by the proposed development causes the level-of-service of the adjacent streets/intersections to drop to "C" or lower or where nearby intersections presently operate at level-of-service D or below. Level-of-service determination should be in accordance with the procedures described in the Highway Capacity Manual, using data provided or approved by INDOT.
- Warrant 3 – Roadway Modifications
  This warrant is met when the proposed development is expected to significantly impact a roadway segment identified in the Transportation Improvement Program for improvement. This criterion is also met when the proposed development includes modifications to the roadway system. Modifications include addition of lanes to accommodate site-generated traffic, addition of exclusive turning lanes, acceleration/deceleration lanes, median openings, installation of traffic signals and other traffic control devices, etc.
- Warrant 4 – Special Cases
  This warrant is satisfied if the preliminary study reveals that the traffic generated from the proposed development will create safety, operational, or some other traffic problems. Whether or not a development meets this warrant should be decided at the initial meeting.

The TIA will be prepared by a professional with training and experience in traffic engineering and transportation planning. It must be prepared by, or under the supervision of, a professional engineer licensed in Indiana with experience in traffic engineering operations. The analysis must be conducted prior to finalizing the development design, and while there is still flexibility regarding site design. Prior to obtaining any permits, the applicant must receive INDOT acceptance of the completed TIA. Please see the list of INDOT Prequalified Consultants.

TABLE 7.1: THRESHOLD VALUES FOR TRAFFIC IMPACT ANALYSIS

LAND USE TYPE	THRESHOLD VALUES
Residential	150 Dwelling Units
Retail	15000 Square Feet
Office	35000 Square Feet or 3 Acres
Industrial	70000 Square Feet or 9 Acres
Educational	30000 Square Feet or 250 Students
Lodging	120 Occupied Rooms
Medical	46000 Square Feet

The TIA should conclude with a list of recommendations based on the findings of the analysis. INDOT will review the documentation and ask for revisions or grant approval of the recommendations listed in the TIS or TOA. INDOT has the authority to require improvements to the highway system that are not recommended in the TIS or TOA. After review of the TIA, INDOT will communicate recommendations to the applicant via email or letter. The applicant should upload the final TIA and INDOT recommendations to EPS during application submittal. These documents ensure a complete EPS record for INDOT review and future research.

TRAFFIC IMPACT ANALYSIS ADDITIONAL RESOURCES

For more information regarding preparation of a TIA see the Indiana Design Manual, the INDOT Access Management Guide, the Multimodal Transportation Impact Analysis for Site Development (MTIASD) - an ITE Recommended Practice, and the INDOT Applicant's Guide to Traffic Impact Analysis. The Applicant's Guide to Traffic Impact Analysis is intended to be a stand-alone document for those with experience in TIA preparation.

SECTION 8: AMERICANS WITH DISABILITIES ACT

In addition to assessing the number of driveways that may be incorporated into property frontage, care must be taken to ensure compliance with the Americans with Disabilities Act (ADA) during construction and in design of the driveway. Specifically, driveway design elements must account for ramps and curbs. Chapter 51 of the Indiana Design Manual provides detailed design information for ADA ramps and sidewalks. These design elements can be found in Chapter 4 of the United States Access Board, The Department of Justice 2010 ADA Standards for Accessible Design, and the Public Right of Way Accessibility Guidelines (PROWAG).

Note - If a sidewalk or other pedestrian facility will be temporarily closed due to construction associated with a permit, a pedestrian Maintenance of Traffic plan will be required.

SECTION 9: ACCESS MANAGEMENT

Regulating the maximum number of driveways per property frontage limits the number of conflict areas and provides drivers that are turning more time and distance to execute their maneuvers. The number of driveways should be kept to a minimum to safely and adequately serve the needs of the abutting properties.

Private and commercial drives located on the corner of a state arterial, and a state collector should be restricted to access on the collector only. Access should be limited to a single drive per property unless driveway separation distance can be achieved as shown in table 12.1. A property which has more than one frontage on a highway may be allowed one driveway per frontage, if proper separation distance can be maintained. This applies to all driveway permit applications regardless of the number of existing drives located on the property. If more driveways are desired by the applicant, they must demonstrate to INDOT that:

- The additional driveways will not create safety or mobility issues on the state-owned route,
- the additional drives are necessary to facilitate the internal traffic operations on the site, and
- the additional drive(s) meets the placement standards listed in this guide.

INDOT, at its sole discretion, will review and determine if the additional driveways will be allowed.

Access management is best implemented by applying criteria based on established traffic engineering and roadway design principles. However, there may be constraints in built-up areas that would limit the application of the access management criteria. Section 4.1 of the INDOT Access Management Guide provides guidance on access management techniques that can be used in situations where it is not possible to achieve the desired access criteria. They are commonly referred to as “retrofit” situations.

Where there are several adjacent roadside establishments, each with limited frontage or where there is a probability of such development, consideration will be given to constructing a frontage road for several driveways to reduce the number of separate connections to the highway. Frontage roads that parallel the highway will be allowed access points at minimum intervals of 500 feet. Frontage roads should be set back from the state highway in such a manner as to allow adequate storage for entering and exiting traffic.

Whenever separate parcels are assembled under one purpose, plan entity, or usage, the existing access driveways will be consolidated. This requires specific changes on commercial sites when they are assembled for development or re-development. The

consolidation is accomplished by voiding existing driveway permits upon alteration of the property functions. The new permit authorization depends on the developer's plans to use existing driveways and close or relocate other driveways. See Figure 9.1 and the INDOT Access Management Guide.

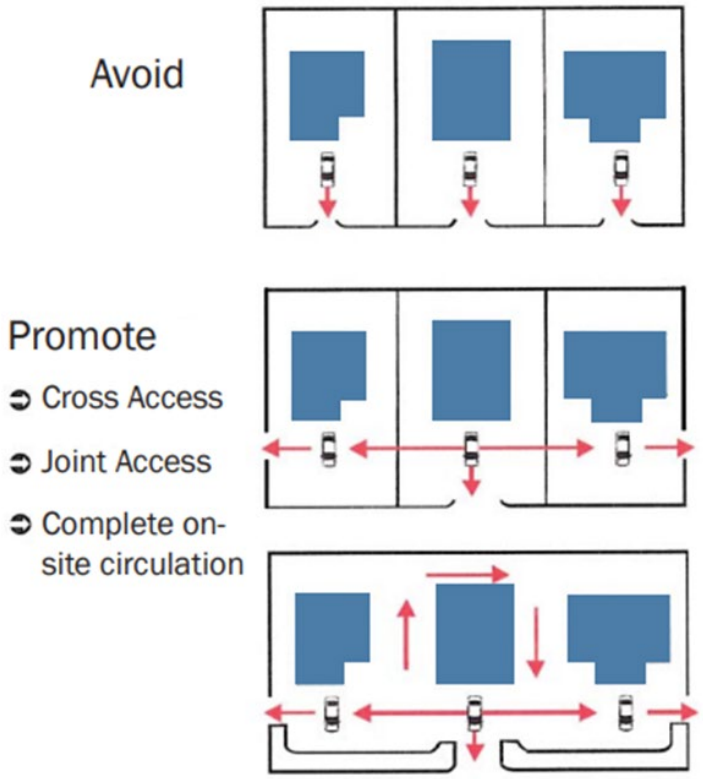


FIGURE 9.1: CONSOLIDATION OF EXISTING DRIVEWAYS

SECTION 10: JOINT DRIVEWAYS

If practical and agreeable to the property owners, the use of a joint drive offers one option to reduce the number of access points along the highway. The centerline of the joint drive should be located on the property line dividing the two owners. See Figure 10.1. This practice will not allow either owner the opportunity to deny or restrict access to the neighbor's property and, depending on the traffic volume, may improve traffic flow on the mainline highway. For a commercial drive, this may require providing a drive wide enough to handle two-way traffic. See Indiana Design Manual, Chapter 46 - Intersections at Grade

An approach to a driveway that serves adjacent property owners may be allowed. However, the application must be jointly prepared and submitted by the property owners. One property owner should assume the role of applicant and the other(s) will sign an Additional Disclosure Form.

A Perpetual Easement and Maintenance Agreement should be recorded on both properties to ensure the optimum use and condition.

A copy of the recorded easement must be uploaded to EPS as part of the permit applicaiton.

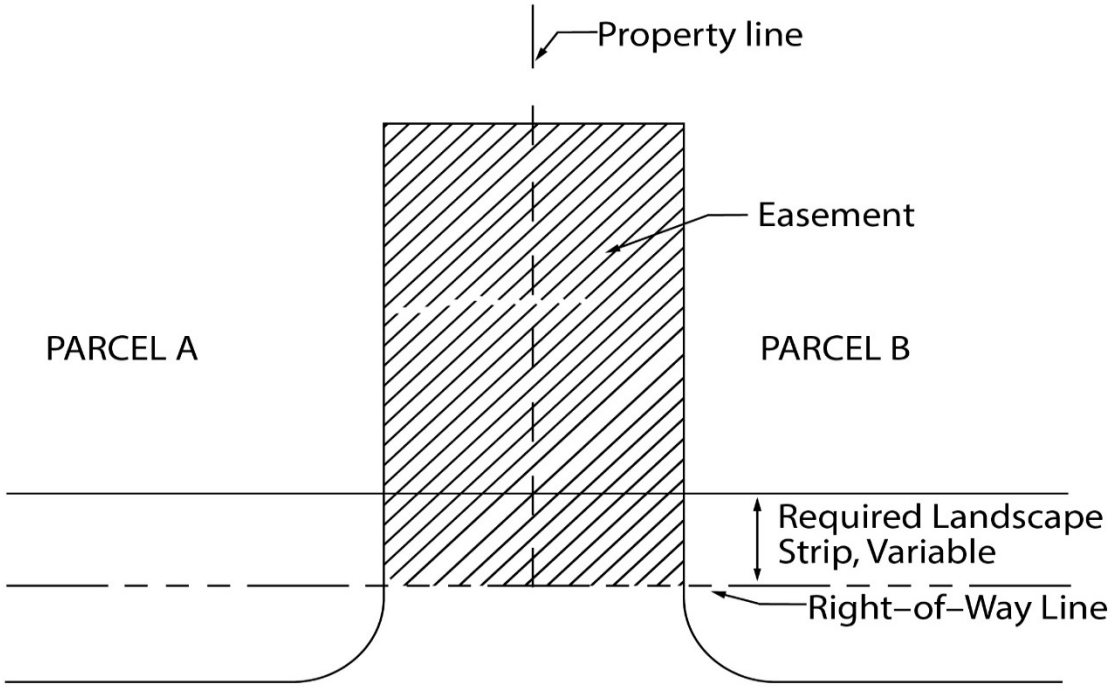


FIGURE 10.1: JOINT DRIVEWAY

SECTION 11: LOCATION OF DRIVEWAYS

Driveways will be located as to result in no undue interference with, or hazard to, the free movement of normal vehicular traffic and so that areas of traffic congestion will not be created on the highway. In accordance with this principle, driveways will be located where the highway alignment and profile are favorable. There should be no sharp curves, steep grades, or sight distance restrictions. To the extent feasible within the frontage limits, any driveway should be located at a point of optimum sight distance along the highway. An application may be denied if adequate sight distance cannot be obtained.

Where a driveway is provided to a commercial establishment, the right of way and the adjacent borders will be reasonably clear so that either the establishment itself or the appropriate sign located outside the right of way can be seen at a sufficient distance. This will enable proper and safe maneuvering by the motorist desiring to enter the establishment. Signs and other appurtenances will conform with IDM clear zone requirements even when located outside of right-of-way.

Where longitudinal separation distance cannot be met, the applicant should maximize longitudinal spacing between adjacent driveways. See Section 12 of this guide for separation distance requirements.

Full access driveways will not be permitted within the physical or functional area of an intersection. The functional area of an intersection is the longitudinal limits of an auxiliary lane plus 100 feet beyond the auxiliary lane taper.

Partial access driveways will not be permitted within the physical area of an intersection. Approval of a partial access driveway situated within the functional area (the longitudinal limits of an auxiliary lanes plus 100' beyond the auxiliary lane taper,) of an intersection is not preferred and will be at the sole discretion of INDOT. See Figure 11.1 for an illustration of physical and functional areas of an intersection.

For proposed driveways near signalized intersections, four-way stops and other intersections where mainline traffic must stop, the minimum distance from the intersection to the proposed driveway should be equal to or greater than the 95th percentile queue length during the peak hour. This will prevent blockage of driveways upstream of the intersection due to standing traffic queues. Other separations standards listed in this guide also apply.

For proposed driveways near roundabout intersections, the minimum distance from the intersection to the proposed driveway should be equal to or greater than the 95th percentile queue length during the peak hour, the sight distance criteria for Intersection Sight Distance (ISD), or Stopping Sight Distance (SSD), whichever is greater. (Design speed will be based on the posted mainline speed limit and not the roundabout advisory

speed.) Driveways will not be permitted as the fifth leg of a roundabout. Gaps in an existing raised median near roundabouts and other major intersections will not be provided for driveways.

See Indiana Design Manual Figure 42-1A for Stopping Sight Distances and Figures 46-10A to –10K for Intersection Sight Distance tables.

For proposed driveways near unsignalized intersections where mainline traffic is unrestricted, corner clearance distances need only be sufficient to ensure adequate and unrestricted turning movements by driveway traffic as described in Section 12 of this guide.

These basic Access Management Principles are described in more detail within the Indiana Access Management Guide Sections 1.4 and 3.3.1.

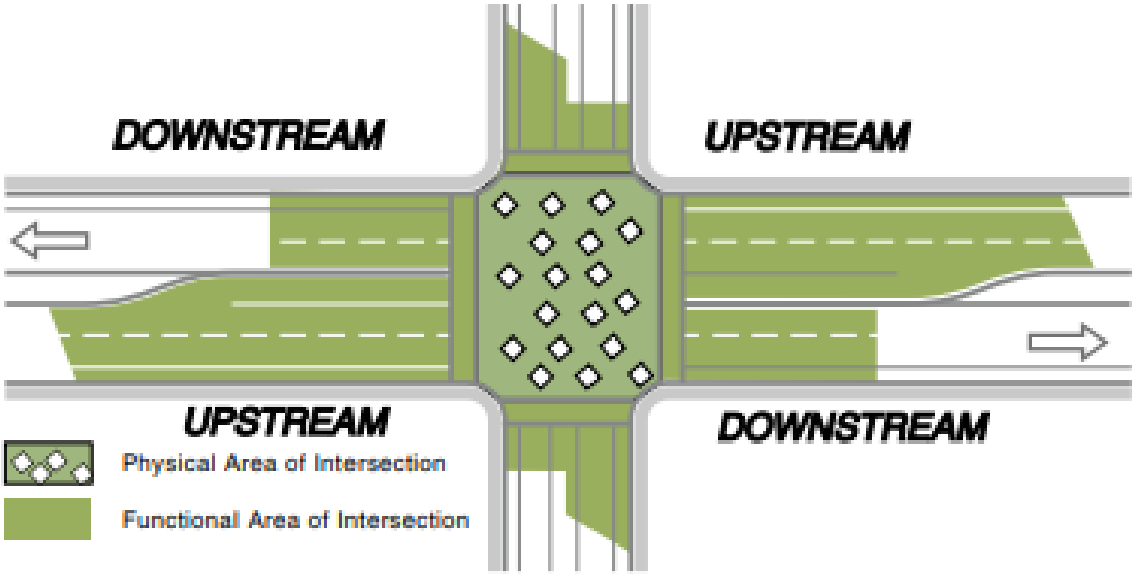


FIGURE 11.1: PHYSICAL AND FUNCTIONAL AREA OF AN INTERSECTION

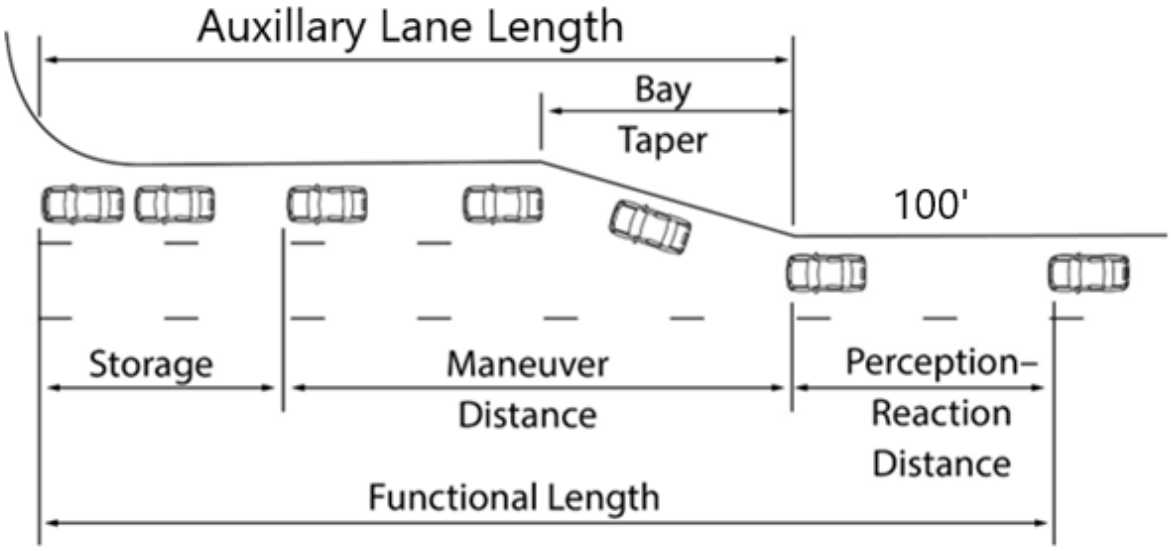
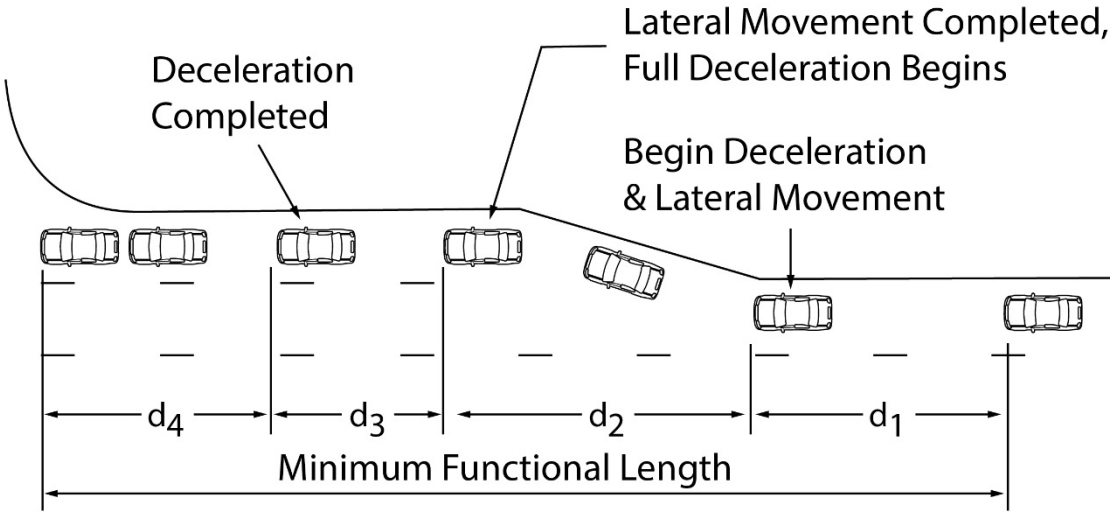


FIGURE 11.2: ELEMENTS OF THE FUNCTIONAL AREA OF INTERSECTION



d_1 = distance traveled during perception–reaction time

d_2 = distance traveled while driver decelerates and maneuvers laterally

d_3 = distance traveled during full deceleration and coming to a stop or to a speed at which the turn can be comfortably executed

d_4 = storage lenght

FIGURE 11.3: DETERMINANTS OF INTERSECTION MANEUVER DISTANCE

If opposing commercial drives cannot be built directly opposite one another, and space allows, a minimum separation distance must be as described in Section 12 of this guide. Where traffic signal warrants may be satisfied, a driveway should be situated opposite a three-leg intersection, if possible. A proposed full access driveway within the functional limits of an existing signalized intersection is discouraged. See Figure 11.1 for more information regarding the functional limits of an intersection. If an existing signalized intersection is present, and the proposed driveway warrants a traffic signal, the minimum spacing between the proposed signalized driveway and the existing signalized intersection is 1320 feet. For more information regarding traffic signal spacing see Section 12 of this guide or Chapter 46 of the Indiana Design Manual.

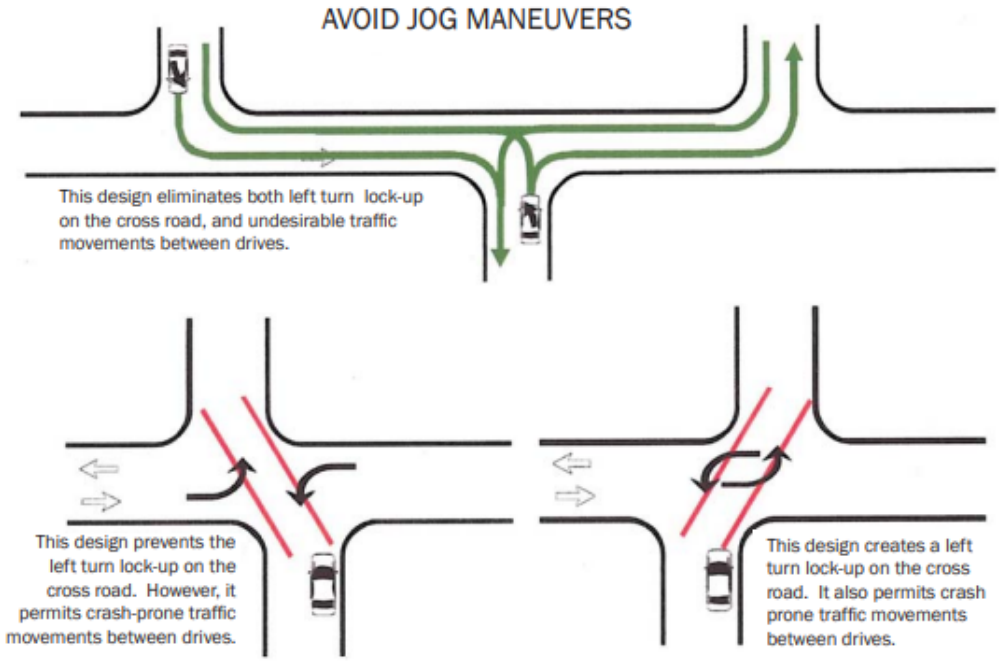


FIGURE 11.4 LOCATION OF OPPOSING DRIVEWAYS

SPACING RELATED TO INTERSTATE RAMP TERMINALS: GENERAL NOTES

Approaches near interstate ramp terminals are of particular interest to INDOT. The safety and traffic operation of interstate interchanges is of primary importance and takes precedence over the needs of nearby developments. When an interstate ramp terminal is located within 2,640 feet of the proposed approach, additional requirements must be met.

The INDOT Corridor Development Office will be invited to participate in meetings regarding new or modified drives within 2640 feet of an interstate ramp terminal and will review the TIA and plan submittals.

When a TIA is being prepared for a development within 2640 feet of an Interchange ramp terminal, the horizon year will be 20 years from the build date and the traffic growth rate will be provided by the INDOT Office of Technical Planning. The Interstate ramp terminals will be analyzed as a part of the TIS.

Most interstate interchanges have Limited Access Right of Way (LARW) extending along the crossroad for 600 feet or further. INDOT, in coordination with the Federal Highway Administration (FHWA), has purchased the access rights for this LARW to protect the safety and operation of the interchange. Interstate LARW will generally not be broken for a development. The applicant may request that the interstate LARW be broken for a new approach, but this break is not a property right and INDOT and FHWA may deny this request for any reason. Any requests for breaks in interstate LARW must be routed through the INDOT Corridor Development Office to the INDOT Director of Traffic Engineering and FHWA.

Access points of any kind will not be allowed to be located directly opposite an interstate ramp regardless of whether there is LARW in place. This configuration can lead to wrong-way entry to the interstate.

The distance to an interstate ramp terminal will be measured from the nearest edge of the approach to the start of a turn lane or auxiliary lane for the interchange. If the interchange has no auxiliary lanes or turn lanes, the distance will be measured to the start of the radius for the ramp approach. The table below lists the minimum separation distances for approaches near interstate interchanges. These distances apply in addition to the other spacing requirements listed in this guide.

TABLE 11.1: MINIMUM SEPERATION DISTANCE FROM INTERCHANGES

	Rural Two-Lane Crossroad	Rural Multi-Lane Crossroad	Urban Two-Lane Crossroad	Urban Multi-Lane Crossroad
Right-In, Right-Out 3-Legged Intersection	750’	600’	600’	600’
Right-In, Right-Out, Left-In 3-Legged Intersection	750’	1000’	600’	1000’
Full Access 3-Legged Intersection	1320’	1320’	1000’	1320’
Right-In, Right-Out 4-Legged Intersection	750’	600’	600’	600’
Full Access 4-Legged Intersection	1320’	1320’	1000’	1320’

SECTION 12: SEPARATION DISTANCE

The distance between driveways, (regardless of which side of the highway they are on) must be such to allow driveway vehicles to safely accelerate, decelerate, and cross traffic streams without excessive interference with through traffic or traffic using adjacent driveways. Thus, the minimum spacing is related to the operational characteristics of the highway and interactions between adjacent driveways. Such interactions include conflicts between vehicles entering the traffic stream simultaneously from adjacent driveways and blocking of the adjacent driveways by left-turn queues. Table 12.1 shows the minimum spacing for various highway speeds. The spacing is the clear distance between the near edges of the driveway throats. If driveways are located directly opposite each other, the spacing requirements do not apply.

TABLE 12.1: MINIMUM SEPARATION OF ADJACENT DRIVEWAYS

Highway Speed (mph)	Minimum Spacing (feet)
30	200
35	250
40	305
45	360
50	425
55	495

NOTE: For back-to-back or multiple commercial drives that require turn lanes, drive spacing should allow for design of such turn lanes in accordance with Section 18 (Turn Lanes on Highways) of this guide.

If the drive spacing cannot be met, then full access drives should be discouraged, and alternative access management practices should be used.

ACCESS SPACING AND RELATED CRITERIA: GENERAL NOTES

Spacing for all unsignalized intersections per AASHTO stopping sight distances is based on speed. Signalization is allowed only at state highway intersections with public streets and Major Commercial driveways. Note that all signals must meet the IMUTCD warrant criteria to be considered.

Chapter 46 of the Indiana Design Manual gives information concerning the minimum acceptable deviation from the ideal signalized intersection spacing. Other direction on traffic signal design is also given in the Indiana Design Manual. Table 12.2 outlines spacing guidelines related to separation distance from a nearby public road.

See also the Indiana Design Manual, and INDOT Access Management Guide – Section 3.1

TABLE 12.2: PUBLIC ROAD MINIMUM SEPERATION

	Desirable Conditions		Limiting Conditions	
Speed (mph)	Maneuver Distance [2,6] (ft.)	PIEV[3,4] Plus Maneuver Distance[5,6] (ft.)	Maneuver Distance[5,7] (ft.)	PIEV[6] Plus Maneuver Distance (ft.)
20	70	130	70	100
25	110	185	105	140
30	160	250	145	190
35	215	320	190	240
40	275	395	245	305
45	345	475	300	365
50	425	570	365	440
55	510	670	435	515
60	605	780	510	600
65	710	900	590	685
70	820	1,025	680	785

SECTION 13: PROPERTY CLEARANCE

Driveway property clearance is the distance from the proposed driveway to the closest adjacent property line. The recommended driveway property clearances outlined in Table 13.1 are preferred. Because a minimum separation of 25 feet is necessary to allow a motorist to perform maneuvers from one driveway to another, 25 feet is the minimum acceptable driveway property clearance when clearances in Table 13.1 cannot be met. Property clearance should be measured from the adjacent property line to the point where the driveway radii ties into the state highway. See Figure 13.1.

TABLE 13.1: RECOMMENDED PROPERTY CLEARANCE

Highway Speed (mph)	Property Clearance (ft)
20 mph	40 ft
25 mph	50 ft
30 mph	60 ft
35 mph	75 ft
40 mph	90 ft
45 mph	115 ft

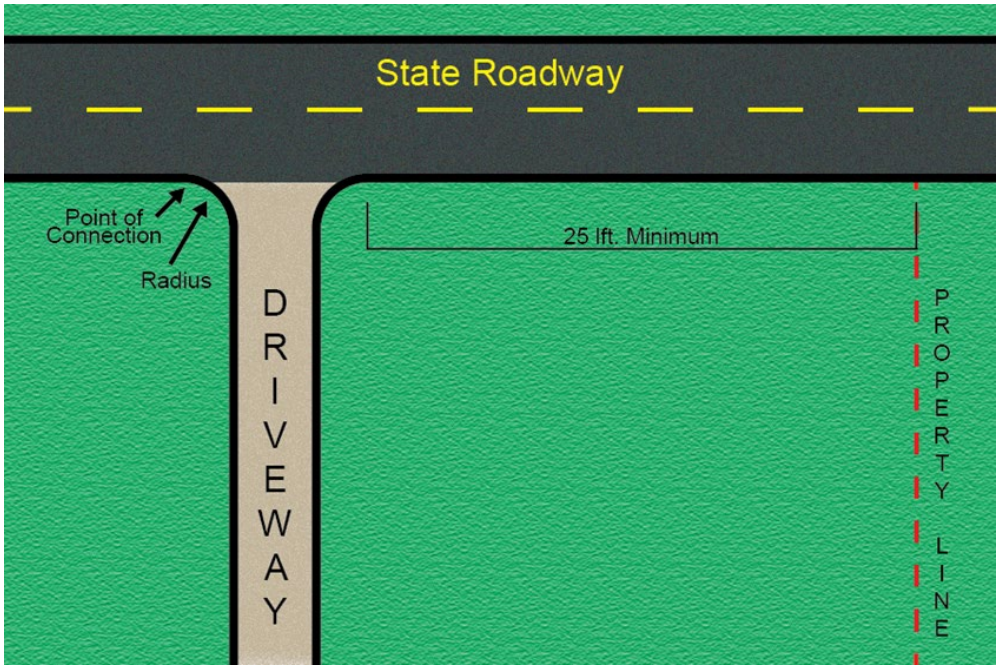


FIGURE 13.1: HOW TO MEASURE PROPERTY CLEARANCE

SECTION 14: SIGHT DISTANCE

To the extent feasible within the frontage limits, any driveway should be located at a point of optimum sight distance along the highway. For an at-grade intersection to operate properly, adequate sight distance must be maintained. The designer should provide sufficient intersection and stopping sight distance for a driver to perceive potential conflicts and to perform the actions needed to negotiate the intersection safely. See also the Indiana Design Manual, Chapter 46-10.0, 46-11.01(3), 42-1.0

Where a driveway is provided to a commercial establishment, the buffer area and the adjacent border will be reasonably clear so that either the establishment itself or the appropriate sign located outside the right of way can be seen at a sufficient distance to enable proper and safe maneuvering on the part of drivers entering the establishment.

The profile of the driveway and the grading of the buffer area will be such that a driver of a vehicle that is waiting on the driveway outside the edge of the traveled way can see sufficient distance in both directions along the highway to allow the driver to enter the highway without creating a hazardous situation. Inadequate sight distance may be a cause for denial of the permit application.

The minimum sight distance available on a roadway should be sufficient to enable a vehicle traveling at or near the design speed to stop before reaching a stationary object in its path. This distance is dependent on the height of the driver's eye above the road surface, the specified object height above the road surface, and the height of sight obstructions within the line of sight.

See Indiana Design Manual, Figure 42-1A for Stopping Sight Distances and Figure 46-10A to –10K for intersection sight distance tables.

SECTION 15: DRIVEWAY EXITING LANES

Frequently, left and right traffic turning movements share a single lane on the exiting driveway approach to the highway. When this occurs, vehicles with different movements do not have simultaneous access to highway traffic gaps; nor can more than one vehicle with the same movement use the same gap.

Left turn movements will generally experience longer delays than other movements because of nature and priority of movement. All vehicles in a shared lane experience increased delay over the condition in which left turns have a separate lane. All vehicles will experience some decrease in delay if a separate lane is provided for left and right turn movements.

However, depending upon highway traffic volume, exiting traffic volume and turning movement patterns, and the desired level of service, right turn vehicles may not be significantly better served by an exclusive lane. Figures 15.1, 15.2, 15.3, and 15.4 establish when it is beneficial to improve traffic flow by going from a shared lane to exclusive turn lanes.

For example, assuming the driveway approaches a two-lane highway with a 55 MPH posted speed limit, a 240 vehicle per hour (VPH) exiting traffic volume, with 80% left turn exiting maneuvers, can satisfactorily be served by a single exiting lane as long as mainline traffic volume is below 300 VPH (reference Figure 14.1). If mainline traffic volume is greater than 300 VPH, then dedicated right and left exit turning lanes should be constructed for operational efficiency. However, if only 20% of this exiting traffic volume makes a left turn, then mainline traffic volume can be up to 640 VPH before dedicated right and left turning exit lanes would be preferred over a single shared lane.

A minimum Level of Service C, as defined in the Highway Capacity Manual, is preferred. (Dedicated, exclusive lanes for right and left turning movements may also be considered if the applicant desires to provide a level of service above C). Highway traffic is assumed to be equally divided between each travel direction. The need for exclusive lanes is reduced when a “Yield” rather than a “Stop” condition exists or a right turn acceleration lane is provided. The need for exclusive lanes is increased when sight distance is restricted or when grade changes are present.

FIGURE 15.1, 15.2, 15.3, and 15.4: DETERMINATION OF BENEFIT OF A SHARED LANE VS EXCLUSIVE TURN LANE

FIGURE 15.1: 2-LANE HIGHWAY – 55 MPH

(NUMBER OF EXITING LANES)

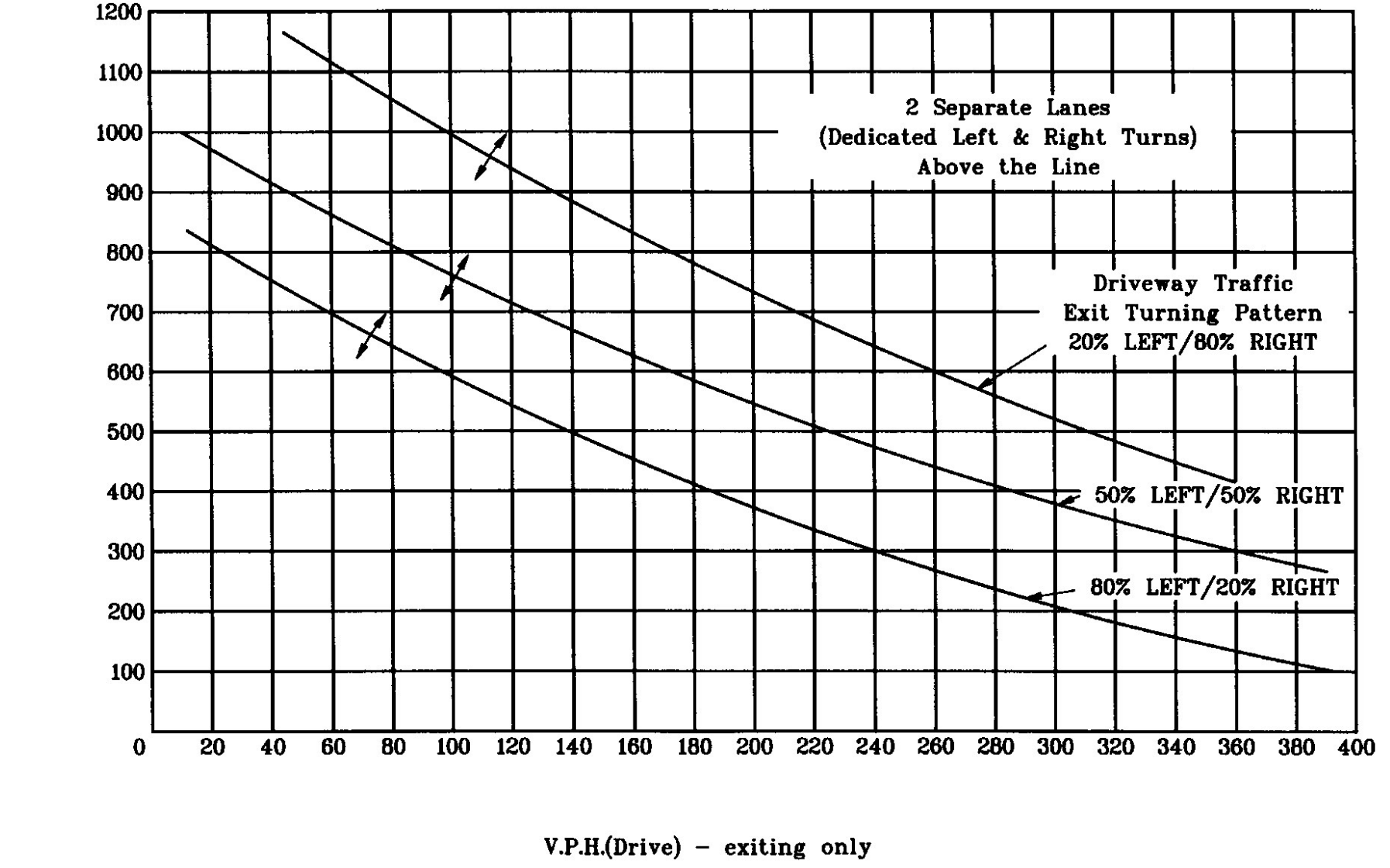


FIGURE 15.2: 2-LANE HIGHWAY – 30 MPH

(NUMBER OF EXITING LANES)

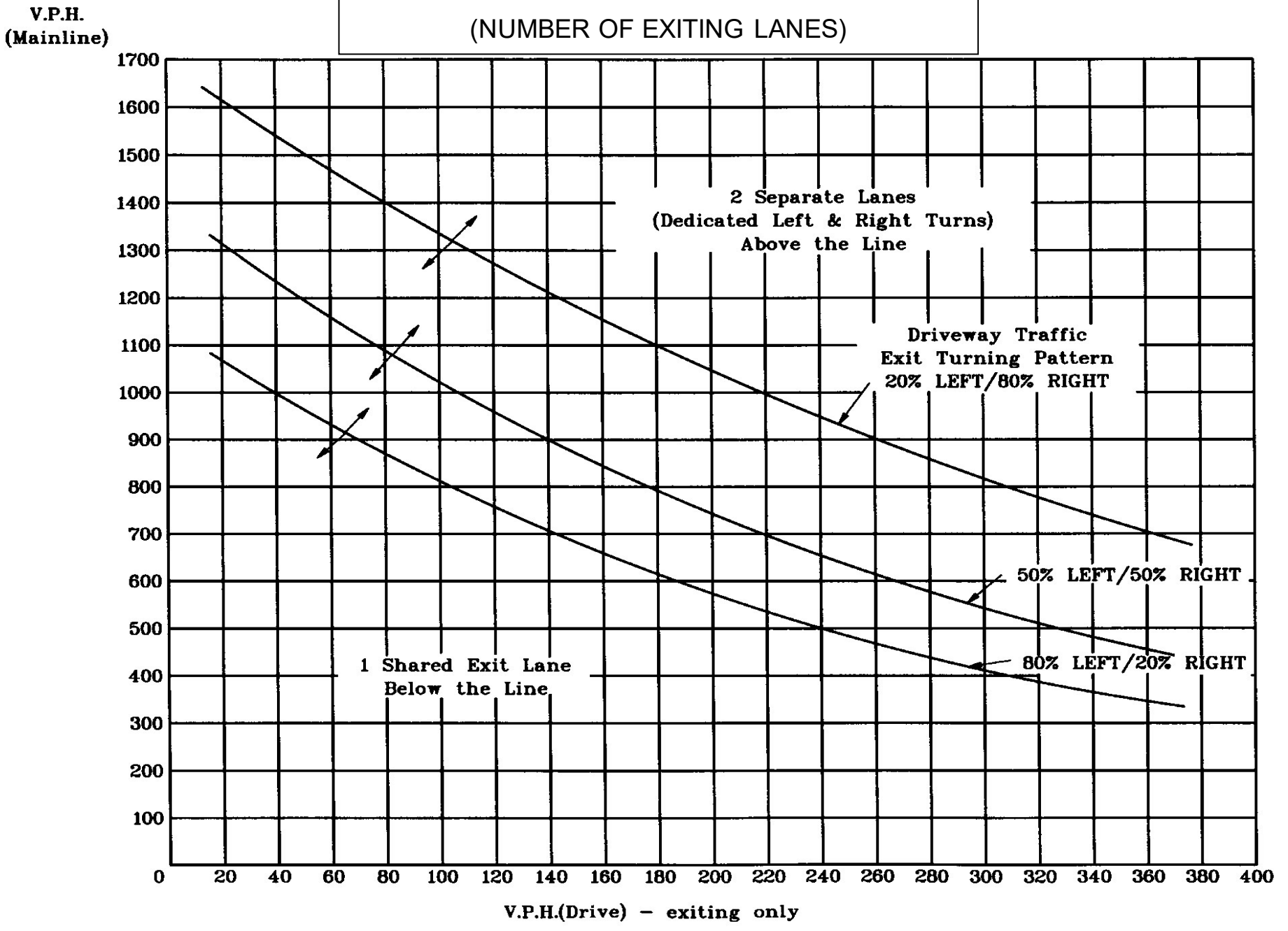


FIGURE 15.3: 4-LANE HIGHWAY – 55 MPH

(NUMBER OF EXITING LANES)

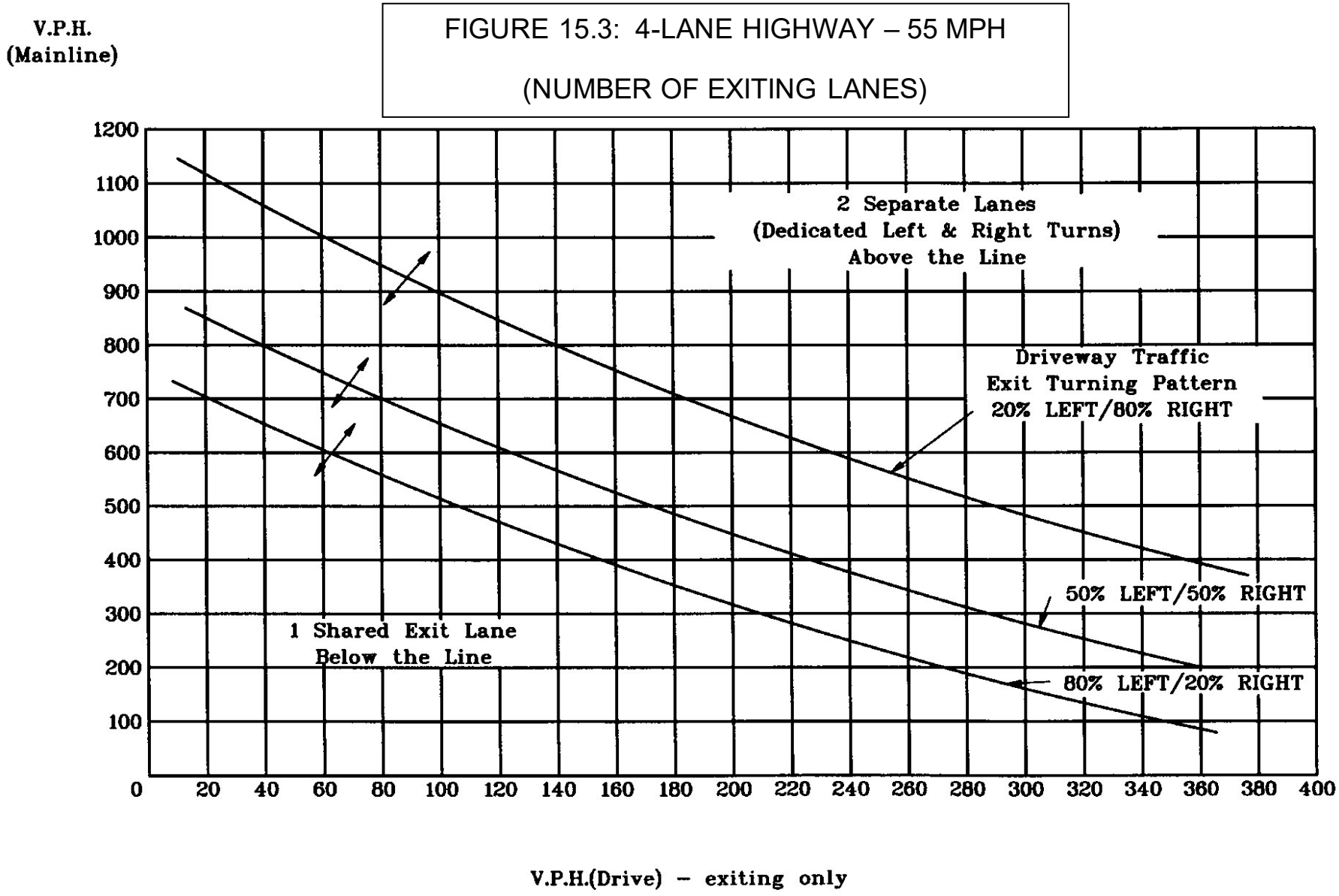
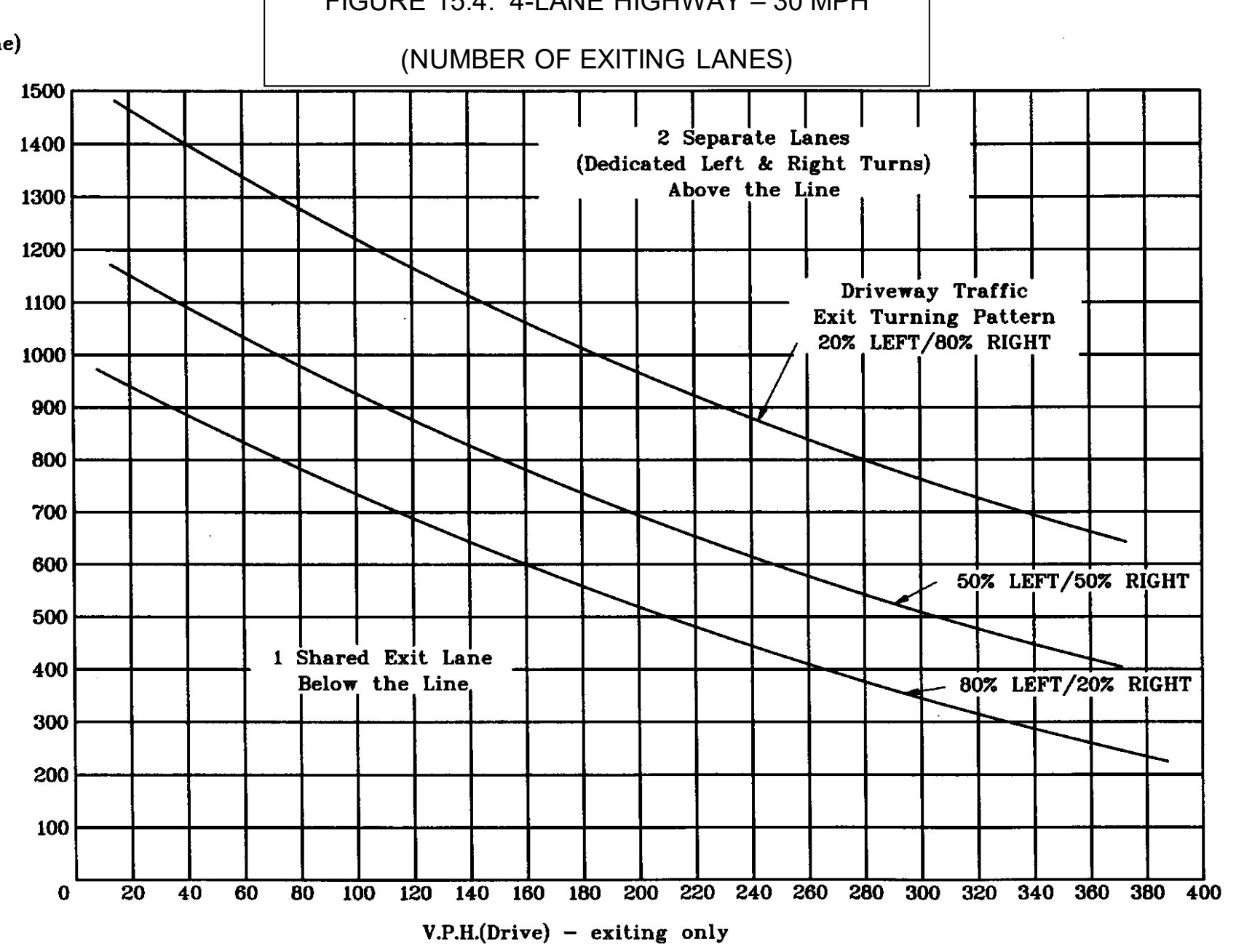


FIGURE 15.4: 4-LANE HIGHWAY – 30 MPH

(NUMBER OF EXITING LANES)



SECTION 16: DRIVEWAY WIDTH

Width of the proposed driveway is determined by a variety of parameters including highway and driveway operating conditions, driveway alignment angles, and approach-turning radii. The driveway opening width defines the area available for occupancy by driveway vehicles. Large driveway opening widths promote hazardous driving maneuvers unless driveway channelization is provided. A wide driveway opening can be occupied by multiple vehicles making simultaneous entering and exiting maneuvers.

Driveway width is an important design element with several criteria to consider. The width must be adjusted appropriately depending upon:

- One-way vs two-way access.
- Vehicle volume.
- Single vs multi-unit vehicles.
- Vehicle length and width.

The above criteria do not apply to the access(es) where additional lanes are required to facilitate traffic coming out of a driveway, or if the access is intended to become a public road.

When determining driveway width, the following criteria will apply.

- Driveway width should be measured perpendicular to the centerline of the drive.
- The proposed driveway width should be designed in accordance with INDOT Standard Drawings unless deviations are determined appropriate by INDOT.
- The width of a reconstructed driveway should be the same as the existing width but not less than the minimum width nor greater than the maximum width shown on the INDOT Standard Drawings.
- A Turning Template will be required to justify any design deviations from INDOT Standard Drawings for to the proposed driveway width or radii. Deviations may be approved at the discretion of INDOT.

The Indiana Design Manual Chapter 46-11.02 has additional specific guidance.

SECTION 17: CORNER RADII

Principal consideration when determining driveway corner radii are:

- Availability of right of way.
- Safety and ease of vehicle movement.
- Pedestrian movement and safety.

Typically, sufficient right of way is available to construct the proposed driveway approach entirely within state right of way; but, if necessary, because of dimensional configuration requirements of minimal highway right of way, the approach can be expanded back onto the applicant's property. Increased corner radii at the driveway approach provides for smoother right turns, reduces driveway throat width, and reduces the negative effect that right turns have on capacity of through traffic. Increasing a radius, however, can adversely affect pedestrian safety by increasing exposure to traffic.

Driveways with wide approach corner radii will allow design vehicles approaching in the same lane to stop side by side (see Figure 17.1). This may reduce or eliminate the adverse impact where several turning movements share the same lane. However, large radii (i.e., radii in excess of 40 feet) often create placement problems for traffic signals and other control devices.

Corner radii should be designed in accordance with INDOT Standard Drawings and the Indiana Design Manual, Chapter 46-11.02.

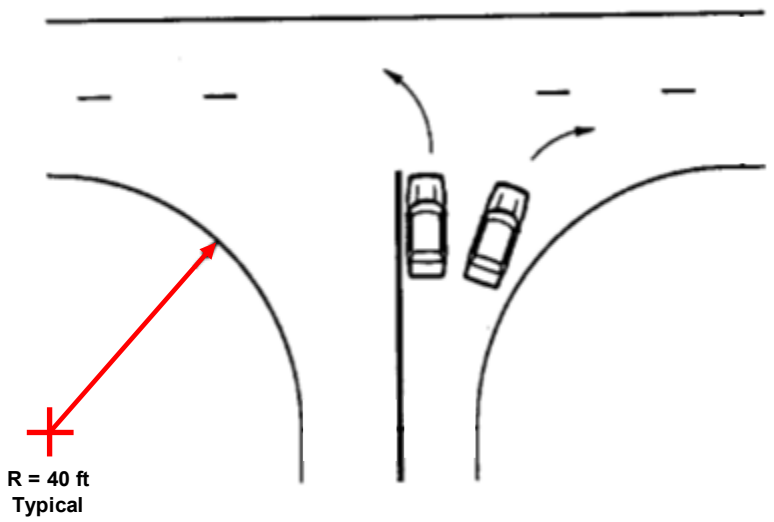


FIGURE 17.1: IMPACT OF INCREASING CORNER RADIUS

Corner radii design should be based on the largest standard or typical vehicle type that would regularly use the driveway (i.e., the presence of an infrequent large truck is not a controlling factor where the driveway traffic is predominately passenger cars). Consideration should be given to the turning maneuver by the design vehicle. Where it is desirable for vehicles to turn at a higher speed (i.e., for high-volume turns or turns off high-speed highways), larger radii maybe appropriate. Geometric elements such as angle of intersection, curvature, grades, auxiliary lanes, cross section, and adjacent driveways must also be taken into account.

IDM, Chapter 46-2.0 summarizes the operational characteristics of various radii for a range of design vehicles.

SECTION 18: TURN LANES ON HIGHWAYS

Turning movements that are made from lanes shared with through traffic can cause delays and adversely impact the safety of the roadway. The addition of a right- or left-turn lane can significantly improve operations and intersection safety. A turn lane will be required, at the applicant's expense, when the criteria listed in Chapter 46-4.01 of the IDM are satisfied.

Construction of a turn lane that does not meet criteria listed in IDM, Chapter 46-4.01 may be permitted if the applicant can demonstrate the turn lane will not adversely affect highway operations. INDOT will make all final determinations regarding construction of a right- or left-turn lane.

Specific requirements for turn lanes are contained in IDM, Chapter 46-4.01, 4.02, 4.03. Methodology outlined in the AASHTO Green Book rather than the Indiana Design Manual may be used to determine turn lane length.

At a three-legged intersection, when requirements for a left-turn lane are not met, a passing blister may be required as follows:

- If the Annual Average Daily Traffic (AADT) of the two-lane state facility is more than 5000,
- If the AADT of the two-lane state facility is 5000 or less and there are more than 20 left-turning vehicles during the peak hour.

A passing blister should be designed in accordance with IDM, Chapter 46-4.03.

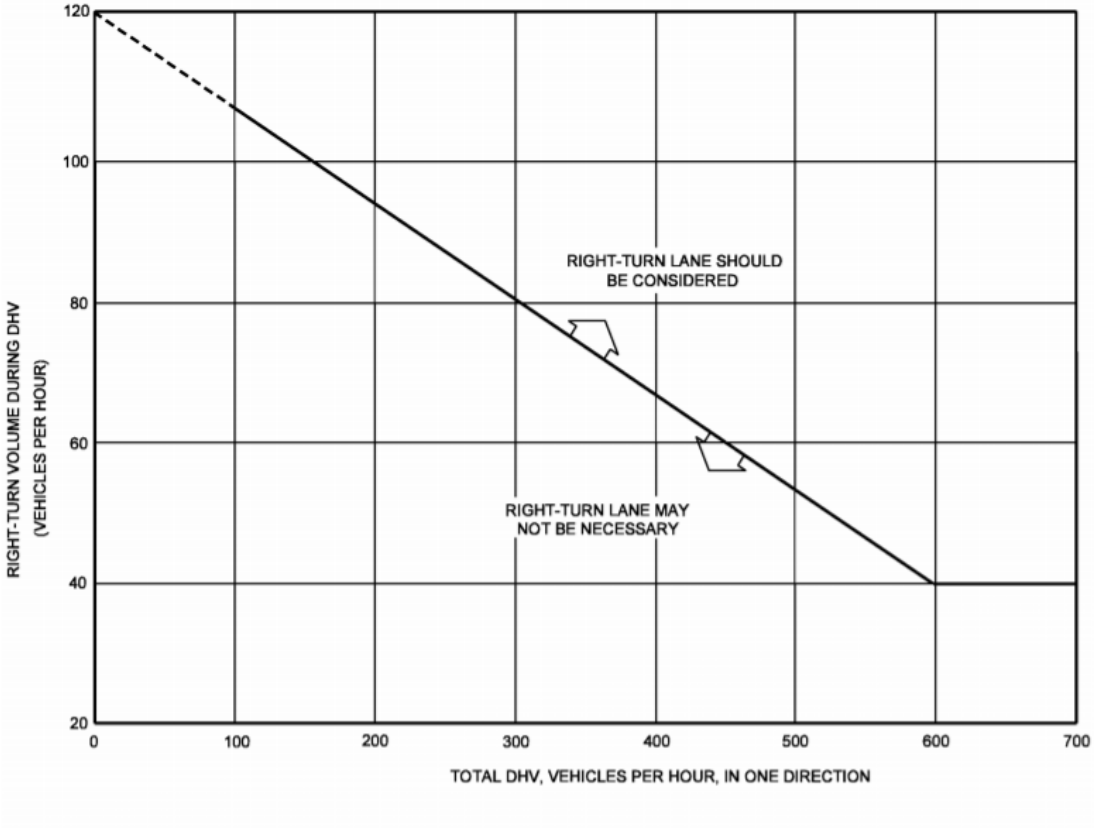
It is important to note that the AASHTO Green Book minimum values may not be used to supersede state or federal code requirements, e.g., National Truck Network or the Americans with Disabilities Act (ADA). Highways that are on the National Truck Network must use 12-foot lanes. In Indiana, the National Truck Network is comprised of those routes designated as federal-aid primary as of June 1, 1991. The National Truck Network is an available layer on the INDOT Roadway Inventory Map.

RIGHT TURN LANES ON TWO-LANE HIGHWAYS

A right-turn lane will be constructed to allow mainline vehicles to safely decelerate and enter the approach without creating unnecessary congestion to highway through traffic. A right-turn lane will be required when one or more of the following conditions are met:

- At an unsignalized intersection on a two-lane urban or rural highway which satisfies criteria outlined in Figure 18.1.

- At an unsignalized intersection on a high-speed four-lane urban or rural highway that satisfies the criteria outlined in Figure 18.2.
- At an intersection where capacity analysis determines a right turn lane is necessary to meet level-of-service criteria.
- For uniform intersection design along the highway if other intersections have right-turn lanes; or
- At an intersection where the accident experience, existing traffic operations, sight distance restrictions (i.e., intersection beyond a crest vertical curve), or engineering judgment indicates a significant conflict related to right-turning vehicles.



NOTE: For highways with a design speed below 50 mph with a DHV < 300 and where right turns >40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

FIGURE 18.1: GUIDELINES FOR RIGHT TURN LANES ON TWO-LANE HIGHWAYS

LEFT TURN LANES ON TWO-LANE HIGHWAYS

A left-turn lane will allow mainline vehicles to safely decelerate and enter the approach without creating unnecessary congestion to highway through traffic. A left-turn lane will be required when one or more of the following conditions are met:

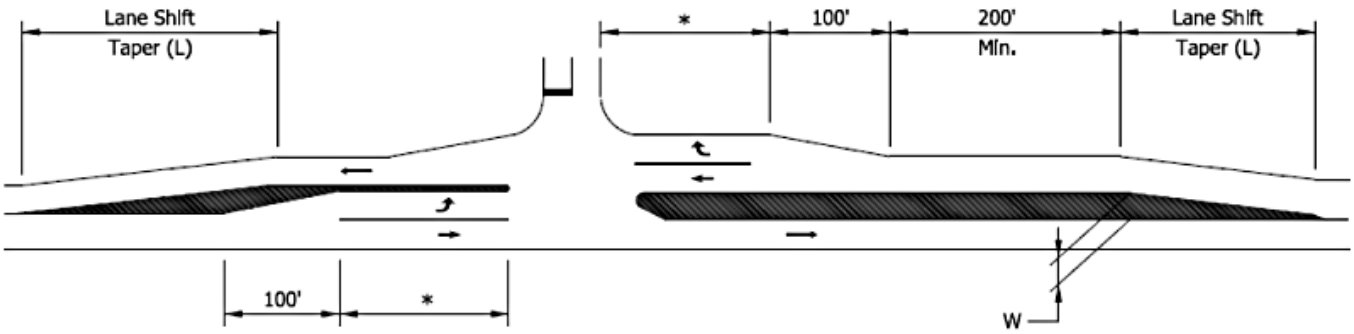
- At each intersection on an arterial, where practical.
- At each intersection on a divided urban or rural highway with a median wide enough to accommodate a left-turn lane, provided that adequate spacing exists between intersections. Note, the requirements for median openings in this guide still apply.
- At an unsignalized intersection on a two-lane urban or rural highway that satisfies criteria shown in Figure 18.1, Volume Guidelines for Left-Turn Lane on a Two-Lane Highway.
- At an intersection where capacity analysis determines a left-turn lane is necessary to meet level-of-service criteria, including multiple left-turn lanes.
- At a signalized intersection where the design-hour left-turning volume is 60 vehicles per hour or more for a single turn lane, or where capacity analysis determines the need for a left-turn lane.
- For uniformity of intersection design along the highway if other intersections have left-turn lanes in order to satisfy driver expectancy.
- At an intersection where the crash experience, traffic operations, sight distance restrictions (e.g., intersection beyond a crest vertical curve), or engineering judgment indicates a significant conflict related to left-turning vehicles or
- At a median opening where there is a high volume of left turns, or where vehicular speeds are 50 mph or higher. Note, the requirements for median openings listed in this guide still apply.

Left turns lanes should be designed in accordance with IDM, Chapter 46-4.01

TABLE 18.1: VOLUME GUIDELINES FOR LEFT-TURN LANES ON A TWO-LANE HIGHWAY

Operating Speed (mph)	Opposing Volume (veh/h)	Advancing Volume (veh/h)			
		5% Left Turns	10% Left Turns	20% Left Turns	30% Left Turns
40	800	330	240	180	160
	600	410	305	22	200
	400	510	380	275	245
	200	640	470	350	305
	100	720	515	390	340
50	800	280	210	165	135
	600	350	260	195	170
	400	430	320	240	210
	200	550	400	300	270
	100	615	445	335	295
60	800	230	170	125	115
	600	290	210	160	140
	400	365	270	200	175
	200	450	330	250	215
	100	505	370	275	240

Channelized left turn lanes will be designed in accordance with Figure 18.2, IDM, Figure 46-4M



Design Speed,S (mph)	Taper Rate
20	10:1
25	10:1
30	15:1
35	20:1
40	30:1
45	45:1
50	50:1
55	55:1
60	60:1

W= Horizontal lane shift, ft

$L = W \times S$ $(S \geq 45$ mph)

$L = W \times \frac{S^2}{60}$ $(S < 45$mph)

*See Section 46-4.02 for minimum turn-lane length.

Taper Rate = S for $S \geq 45$ mph)

Taper Rate = $\frac{S^2}{60}$ for $S < 45$mph)

CHANNELIZED TURN LANE FOR 2-LANE HIGHWAY

Figure 46-4M

FIGURE 18.2: CHANNELIZED LEFT TURN LANE FOR TWO-LANE HIGHWAY

The decision to design either a channelized left turn lane or a passing blister should be based on crash history, right of way availability, through and turning-traffic volumes, design speed, and available sight distance. A channelized left-turn lane should be provided if the left-turning volume is high enough that a left-turn lane is warranted as discussed in IDM, Chapter 46-4.01 Turn Lane Warrants.

RIGHT-TURN LANES ON FOUR-LANE HIGHWAYS

A right-turn lane should be constructed to allow turning vehicles to safely decelerate and to enter the approach without creating unnecessary congestion to highway through traffic. A right-turn lane will be required if one or more of the following conditions are met:

- on rural or urban highways where traffic satisfies the criteria in Figure 18.3,
- where capacity analysis determines a right-turn lane is necessary to meet level-of-service criteria, or
- where crash data, existing traffic operations, sight distance restrictions (e.g., intersection beyond a crest vertical curve), or engineering judgment indicates a significant conflict related to right turning vehicles.

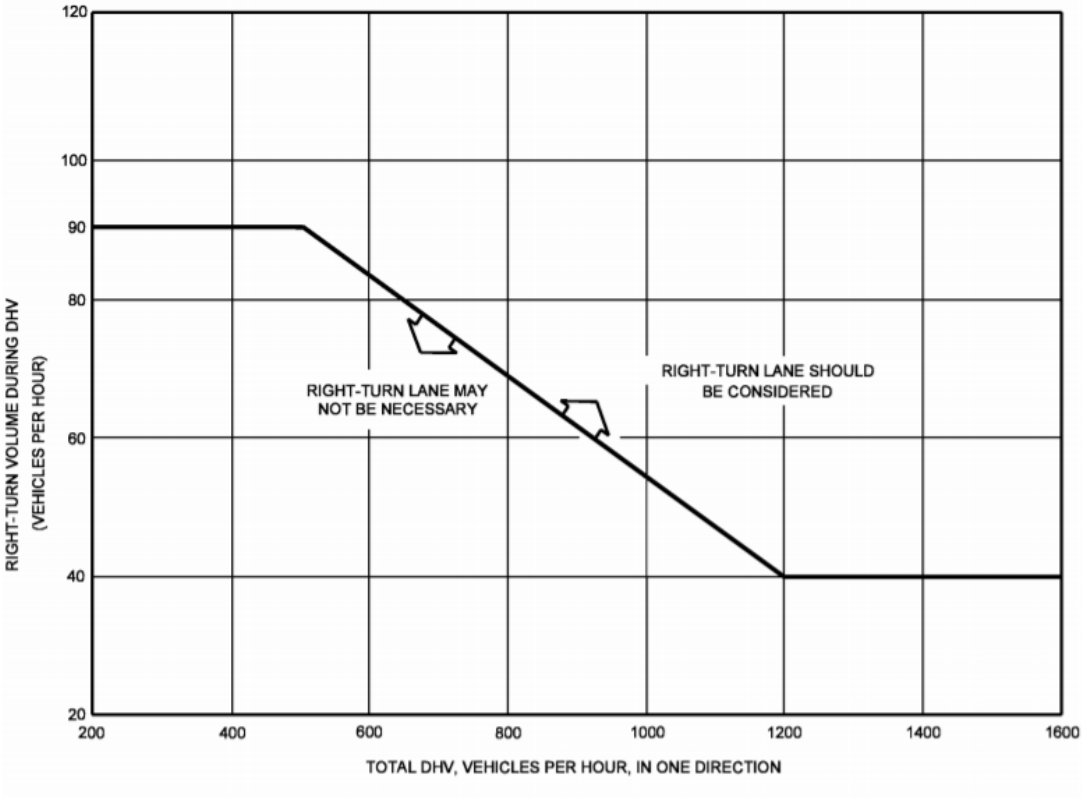


Figure is applicable only on highways with a design speed of 50 mph or greater.

FIGURE 18.3: GUIDELINES FOR RIGHT TURN LANES ON FOUR-LANE HIGHWAY

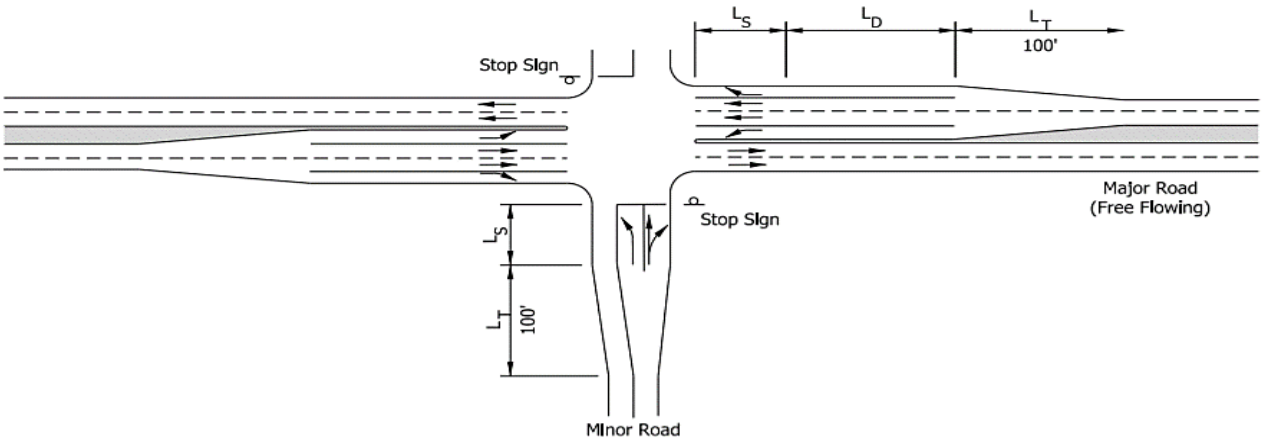
LEFT TURN LANES ON FOUR-LANE HIGHWAYS

A left-turn lane will be constructed to allow turning vehicles to safely decelerate and enter the approach and without creating unnecessary congestion to highway through traffic. A left-turn will be required when one or more of the following conditions are met:

- on rural or urban divided highways where, median width is equal to or greater than 24 feet, regardless of traffic volume,
- where an approach is constructed opposite an existing T-intersection making it a four-legged intersection (required for both approaches),
- where a capacity analysis determines a left-turn lane is necessary to meet level of service criteria, or
- where crash data, existing traffic operations, sight distance restrictions (e.g., intersection beyond a crest vertical curve), or engineering judgment indicates a significant conflict related to right turning vehicles.

DESIGN OF TURN LANES

Auxiliary Lanes, including the right turn lane, will be designed in accordance with Figure 18.4. IDM, Figure 46-4I



NOTE: The schematic of the major road (free flowing) also applies to all legs of a signalized intersection.

KEY: L_T = Taper Length (100' or more)

L_D = Deceleration Length

L_S = Storage Length

FIGURE 18.4: TURN LANES

TABLE 18.2: FUNCTIONAL LENGTH OF TURNING LANE

Classification	Functional Length
Rural Arterials	$L_T + L_D + L_S$
Urban Arterials Other Facilities Stop or "T" Facilities	$L_T + L_D + L_S$ (Desirable) $L_T + L_S$ (Minimum)

LD is a consideration only at a free-flowing leg of a stop-controlled intersection or signalized intersection, or at a free-flowing turning roadway with a turn lane.

Taper Length (L_T): For tangent approaches, INDOTs practice is to use a 100-foot straight-line taper at the beginning of the auxiliary turn lane, or a 150-foot straight-line taper at the beginning of dual turn lanes for an urban street. On curvilinear alignments, the entrance taper should typically be designed with a constant rate of divergence throughout the curve. With all alignments, the entrance taper should at least be 50 feet.

Storage Length of Unsignalized Intersections (L_S): The recommended storage lengths at unsignalized intersections for right and left-turn lanes are provided in the Table 18.3 Indiana Design Manual Chapter 46, Figure 46-4L

TABLE 18.3 STORAGE LENGTH FOR UNSIGNALIZED INTERSECTION

Turning DHV (VPH)	**Storage Length, L_s (ft)**
60 or less	50 to 75
61-120	100
121-180	150
180 or more	200 or greater

STORAGE LENGTH FOR SIGNALIZED INTERSECTIONS (L_S)

For a signal cycle of less than two minutes, the storage length should be based on two times the average number of vehicles that would store per cycle during the design hour.

For a signal cycle of two minutes or more, the storage length should be based on 1.5 times the average number of vehicles that would store per cycle during the design hour. Average vehicle length is assumed to be 20 feet.

LENGTH OF DECELERATION (L_D)

For rural facilities, the deceleration distance, L_D, should meet the criteria given in Table 18.4. These values should be adjusted for grades and are given in Table 18.5 IDM, Chapter 46, Figure 46-4J. This distance is desirable on an urban facility. However, this is not always feasible. Under restricted urban conditions, deceleration may have to be accomplished entirely within the travel lane. For this situation, the length of turn lane will be determined solely based on providing adequate vehicle storage, i.e., L_D = 0 ft.

See IDM, Chapter 53, Figure 53-2 Geometric Design Criteria for Rural Arterial for passing blister and right and left-turn lane designs.

TABLE 18.4: DECELERATION DISTANCE FOR TURN LANE

Design Speed (mph)	Desirable L_D, Full-Width Auxiliary Lane L_D (ft)
60	530
55	480
50	435
45	385
40	320
35	280
30	235
25	200

TABLE 18.5: GRADE ADJUSTMENT FACTORS

Grade Adjustment Factor for Downgrade, G_d				
$0 \le G_d < 2$	$2 \le G_d < 3$	$3 \le G_d < 4$	$4 \le G_d < 5$	$5 \le G_d \le 6$
1.00	1.10	1.20	1.28	1.35
Grade Adjustment Factor for Upgrade, G_d				
$0 \le G_d < 2$	$2 \le G_d < 3$	$3 \le G_d < 4$	$4 \le G_d < 5$	$5 \le G_d \le 6$
1.00	0.95	0.90	0.85	0.80

Note: The grade-adjustment factor multiplied by the length L_D provided above will provide the deceleration-lane length adjusted for grade. The adjustment factor applies to each design speed.

SECTION 19: PASSING BLISTER ON TWO-LANE HIGHWAYS

On two-lane highways with a design year AADT of 5,000 or greater- If the traffic does not warrant a dedicated left turn lane, the construction of a passing blister should be considered to relieve congestion due to left-turning vehicles.

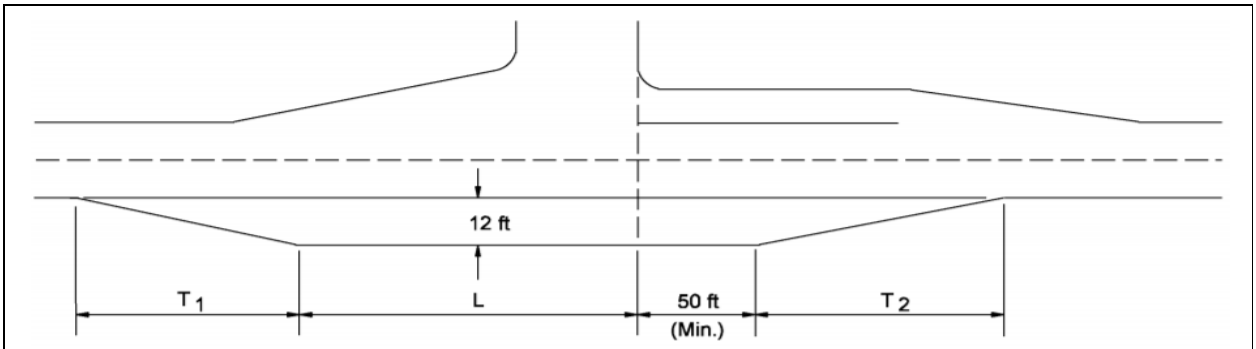
The decision on whether to use either a channelized left-turn lane or a passing blister should be based on accident history, right-of-way availability, through- and turning-traffic volumes, design speed, and available sight distance. A channelized left-turn lane should be provided if the left-turning volume is high enough that a left-turn lane is warranted as discussed in IDM, Chapter 46-4.01.

On two-lane highways with a design year AADT less than 5,000, the construction of a passing blister should be considered only if one or more of the following conditions are met:

- There is an existing passing blister.
- There are 20 or more left-turning vehicles onto the approach during the design hour.
- Accident reports or site evidence (such as skid marks in the through lane displaying emergency braking) indicate potential problems with vehicles turning into the approach.
- The shoulder indicates heavy use (e.g., dropped shoulder, severe pavement distress).

Passing blister design will include appropriate treatments to drainage, side slopes, and other private or commercial approaches within the area disturbed by proposed construction. Where adequate right of way is not available to construct the passing blister, conditions will be fully identified, explained, and documented as a part of the permit application package. Figure 19.1 illustrates and provides design criteria for a passing blister. An alternative design should be considered if successive passing blisters overlap each other or are within close proximity to each other.

National Highway System (NHS) Routes require 12 foot lane width. INDOT: Functional Classification & Urban Area Boundary Map



Minimum dimensions for passing blisters

Design Speed (mph)	Ta (ft)	L (ft)	T2 (ft)
30 or less	150	150	150
Greater than 30, but less than 50	200	150	200
50 or greater	300	200	300

Note: For shoulder widths adjacent to the passing blister, see auxiliary widths in Chapters 53 and 55 of the Indiana Design Manual

FIGURE 19.1: TYPICAL PASSING BLISTER FOR A TWO-LANE HIGHWAY

SECTION 20: PAVEMENT DESIGN REQUIREMENTS

SURFACE REQUIREMENTS

All commercial driveways, (including sub minor) will be constructed of hard surface, (Hot Mix Asphalt (HMA) or concrete) within state right of way. Residential driveways may be gravel and field entrances may be stabilized soil. Care should be taken in the design of parking areas and frontage roads to alleviate possible track out of gravel or debris onto mainline pavement. See Table 20.1: Pavement Criteria VS Respective Vehicular Traffic.

The cross slope, or crown, of driveways and turn lanes should be 2% for HMA pavement or concrete pavement. If the existing shoulder is HMA, then the new shoulder should also be HMA with a minimum thickness of 6 inches. A new shoulder must match the existing mainline shoulder width with a 4% slope.

PAVEMENT DESIGN FOR AUXILIARY LANES

When a right-turn lane, left-turn lane, or passing blister (auxiliary lane) is proposed, INDOT will require the proposed lane(s) or shoulder, be constructed out of the same material and depth as existing mainline pavement, to result in a homogenous pavement surface.

An existing shoulder shall not be used as new mainline pavement unless core samples determine that the existing shoulder is the same depth as the mainline pavement section.

There are three acceptable methods to prepare a pavement design report for INDOT review and approval:

- Match existing pavement,
- utilize criteria and methods outlined in the Indiana Design Manual (IDM), Chapter 601, Figure 601-5C, or
- submit a complete pavement design report in accordance with the IDM, Part 6 - Pavement Design

The sections below outline the general procedures for each of these methods.

MATCH EXISTING PAVEMENT

The design process to match existing pavement may vary depending on the type of pavement (HMA or concrete), design criteria, and site conditions. However, the following can be referenced as a general procedure:

- Investigate and collect information about the existing pavement structure, condition, performance, and drainage. This investigation may include, but is not limited to, review of as-built records, core sampling, and visual inspection.
- Determine the future traffic load and design life for the proposed auxiliary lane. This may require estimating the Equivalent Single Axle Loads (ESAL) and the growth factors for future traffic volume.
- Prepare a complete pavement design report that documents assumptions, inputs, outputs, and recommendations for the proposed project. The report should include elements such as a project description, plan view, cross sections, details, calculations, and specifications. The report should include a Mechanistic Empirical Pavement Design Guide (MEPDG) run that verifies the pavement thickness recommended is acceptable for the roadway traffic. The pavement report should also include a final summary that outlines criteria identified during the investigation that supports the proposed project design.
- Prepare a Geotechnical Report to determine what type of subgrade treatment is recommended. The Geotechnical Report must be submitted by a Prequalified Consultant from the List of INDOT Prequalified Consultant Firms.
- Prepare a pavement core sample lab report. This lab report should be prepared by a prequalified consultant in accordance with INDOT Standard Testing Specifications to determine existing mainline materials and depth.
- Submit the Pavement Design Report, Core Sample Lab Report, and Geotechnical Report to INDOT for review and approval. INDOT will review to ensure accurate, complete, and consistent design calculations, compliance with applicable standards and guidelines, and evaluate the feasibility and constructability of the design alternatives.

The Pavement Design Report must be prepared by a Prequalified Consultant from the List of INDOT Prequalified Consultant Firms.

INDIANA DESIGN MANUAL CHAPTER 601, FIGURE 601-5C

The pavement design thickness can be chosen in accordance with Chapter 601, figure 601-5C of the IDM. The Pavement Design Report will include supporting data and a narrative that describes the applicable criteria from Figure 601-5C.

Applicable criteria will be determined by:

- Road Category
- Annual Average Daily Truck Traffic (AADTT) (Construction Year) along the state road
- Equivalent Single Axle Loads (ESALs) (millions)
- Pavement Type (i.e., concrete or HMA)

Below is the general procedure to utilize IDM Figure 601-5C to design a proposed auxiliary lane and prepare a pavement design report.

- Verify that the proposed project is eligible to use the standard pavement sections in Figure 601-5C. The permit project should be a standalone project for constructing auxiliary lanes with minimal or no increase in profile grade. The proposed auxiliary lane should not include any of the following elements:
    - underdrains
    - curbed roadway cross sections
    - inadequate cover over a buried structure
    - an existing shoulder used for maintenance of traffic.

  If the proposed project includes any of the elements above, the applicant must submit a complete pavement design report in accordance with the Part 6 - Pavement Design of the IDM
- Determine the ESAL category for the project based on the AADTT. Use IDM Figure 601-5C to find the corresponding ESAL category for the AADTT value.
- Select the appropriate pavement section and type based on the ESAL category and one of the following applications:
    - new/reconstructed full depth pavement, HMA mainline and adjacent shoulder;
    - new/reconstructed full depth pavement, HMA shoulder only;
    - new/reconstructed full depth pavement, composite mainline and adjacent shoulder,
    - new/reconstructed full depth pavement, or
    - PCCP mainline and adjacent shoulder.

  Use figure 601-5C in the IDM to find the recommended pavement section and type for each application and ESAL category.
- Provide transition milling or resurfacing for HMA pavement beyond the full depth pavement. The length and depth of the transition milling or resurfacing depend on the profile grade difference between the existing and new pavement sections. Refer to Chapter 601-5.03 of the IDM for more details on the transition milling or resurfacing requirements.
- Prepare a Geotechnical Report to support the recommended subgrade treatment.
- Prepare a complete pavement design report that documents assumptions, inputs, outputs, and recommendations for the proposed project. The report

should include elements such as a project description, plan view, cross sections, details, calculations, and specifications. The pavement report should include a final summary that outlines criteria identified during the investigation that supports the proposed project design.

- Submit the Pavement Design Report and Geotechnical Report to INDOT for review and approval. INDOT will review to ensure accurate, complete, and consistent design calculations, compliance with applicable standards and guidelines, and evaluate the feasibility and constructability of the design alternatives.

The Pavement Design Report must be prepared by a Prequalified Consultant from the List of INDOT Prequalified Consultant Firms.

PAVEMENT DESIGN IN ACCORDANCE WITH INDIANA DESIGN MANUAL PART 6

The process for pavement design is fully outlined in Part 6 of the Indiana Design Manual. The pavement design analysis should be based on sound pavement engineering principles, concepts, and economics, as well as geotechnical conditions, environmental conditions, pavement material properties, and traffic loadings. The ultimate goal of the pavement designer is to determine a pavement treatment that provides an appropriate level of service while yielding the least cost of ownership to INDOT, unless otherwise directed by INDOT pavement staff.

Once prepared in accordance with IDM, Part 6, the Pavement Design Report will be prepared by a prequalified consultant and submitted to INDOT for review and approval.

HOT MIX ASPHALT (HMA) CONSTRUCTION REQUIREMENTS

When HMA is used, the most current version of the INDOT Standard Specifications, Section 401 and or 402 should be followed. All pavement joints must have Liquid Asphalt Sealant and Joint Adhesive per INDOT Standard Specifications, Section 401.

If it is impractical to construct a homogeneous pavement surface, the abutting edge of the existing mainline pavement must have as smooth as possible interface with the new pavement (e.g., saw cut straight line and correct joint sealant used between the driveway and highway).

All materials and their placement should be in accordance with current INDOT Standard Specifications.

Where the taper of a proposed driveway will create hazardous or erratic traffic movements because of its proximity to an adjacent similar taper, the entire area

between said tapers must be paved thus forming a continuous full lane between the approaches of which said tapers are a part.

TABLE 20.1: PAVEMENT CRITERIA VS RESPECTIVE VEHICULAR TRAFFIC

The following are the pavement sections that should be used with respective vehicular traffic.

Vehicular Traffic Level	Desired	Minimum
Residential Driveways	See Standard Drawing E 610-DRIV	5" Compacted Aggregate
Field Entrances	See Standard Drawing E 610-DRIV	Graded Stabilized Soil
Public Road Approach	Hot Mix Asphalt (HMA) or Concrete	See Standard Drawing E610-PRAP
Auxiliary Lanes	Pavement Design Indiana Design Manual - Part 6	Geotechnical Report is Required to Support Sub-Grade Treatment Recommendation
Mailbox Turnouts	See Standard Drawing E 610-MBAP	See Standard Drawing E 610-MBAP
Commercial Driveways	See Standard Drawing E 610-DRIV	See Standard Drawing E 610-DRIV
Commercial Major & Minor Approach Crossover	Hot Mix Asphalt (HMA) or Concrete	See Standard Drawing E 610-DRIV
Commercial Sub-Minor & Private Approach Crossover	Hot Mix Asphalt (HMA) or Concrete	See Standard Drawing E 610-DRIV

SECTION 21: INTERSECTION ANGLE

The angle of an intersection should be 90 degrees from the tangent centerline of the driveway approach at the intersection of the centerlines. The angle of intersection constructed may be in a range from 70 degrees to 110 degrees if there are field conditions that make 90 degrees not feasible. The angle of intersection may be greater if traffic is directional (i.e., one way in or one way out) and there is no conflict in traffic movement patterns. See Indiana Design Manual, Chapter 46-1.02

SECTION 22: APPROACH GRADE

The profile grade of the approach from the edge of the pavement will slope down and away at the same rate as the highway shoulder grade. The approach will be constructed in a manner so that no surface water will drain onto the mainline highway. See INDOT Standard Drawing 610-DRIV for additional approach grade information.

SECTION 23: DRAINAGE AND HYDRAULIC SUBMITTAL

The applicant will provide drainage information, including development site plans and drainage calculations showing existing and proposed drainage patterns (including existing and proposed contours), to INDOT with verification that there are no adverse effects to drainage patterns in the vicinity caused by the development. Any increase of water flow to the right of way will be fully identified and explained.

In order to ensure that drainage information is being fully provided, the applicant must complete and upload to EPS the INDOT Driveway Permit Drainage Checklist

If the proposed development would result in an increase of flows to the state right of way, the minimum requirement is that the 50-year (2% Annual Exceedance Probability (AEP)) developed property run-off-rate will not exceed the 10-year (10% AEP) undeveloped property run-off-rate to the right of way. Thus, the entire 50-year (2% AEP) run-off will be detained on the property and released at the 10-year (10% AEP) undeveloped property run-off rate to the right of way. These criteria will be followed unless the development is within the jurisdiction of a local agency that has a more restrictive ordinance. In addition, the 100-year (1% AEP) developed property run-off-rate will not exceed the 100-year (1% AEP) undeveloped property run-off-rate to the right of way.

A less restrictive detention requirement may be allowed. This would require that there is no increase from the existing to proposed conditions in the peak runoff for the 10-year (10% AEP) and 100-year (1% AEP) storms. This would only be allowed when the site designer provides correspondence from the INDOT district personnel that there are no existing flooding concerns with INDOT facilities. If the local detention requirements are more restrictive, those requirements would still need to be met.

Detention structures and means of discharge must be adequately presented and explained on plans and in calculations provided to INDOT. No detention is allowed on state right of way.

Outlet control devices should be permanently installed structures. Removable pipe orifice plates are not allowed. Measures to prevent clogging should be considered for the outlet structure. A detail of the outlet control structure should be provided with the plans submitted for INDOT approval.

Detention analysis should be performed using TR-20 methodology using the HUFF Rainfall Distribution. Computer programs that use this methodology will be accepted. Critical storm analysis including multiple durations should be performed to determine the peak flow rate for both the existing and proposed conditions.

If the proposed development will utilize chemicals or other pollutants that could constitute an illicit discharge, the proposed design will include appropriate measures to prevent the release of these materials onto INDOT right of way. If the development is within a Municipal Separate Storm Sewer System (MS4), post construction water quality treatment should be provided to meet the local stormwater ordinance. If the development is not within a Municipal Separate Storm Sewer System (MS4), post construction water quality treatment should be provided for the runoff that drains to the state right of way following the most current INDOT Post Construction Stormwater Quality Standards.

The minimum-size opening for all drainage structures crossing under interstate routes and state routes with more than two lanes should be 36 inches in diameter for round pipes or 7.4 square feet for deformed pipes. The minimum size opening for all drainage structures crossing under two-lane routes is 15 inches in diameter for round pipes or 1.6 square feet for deformed pipes. The minimum pipe size under a driveway approach is 15 inches in diameter for round pipes or 1.6 square feet for deformed pipes. All pipes with diameters from 15 inches to 36 inches should have pipe end sections; pipes with diameters of 42 inches and greater should have concrete anchors. See Standard Drawing series 715.

All the drainage facilities in the proposed development that may impact state right of way should be designed to meet these serviceability levels. Storage volume in the roadway side ditches should not be considered in evaluating whether the required serviceability level will be met. Adjustments to existing highway storm sewer structures may be necessary, such as the relocation of an inlet displaced by a driveway approach. The relocated structure should be compatible with the other structures servicing that segment of highway. For example, pipes will not be smaller than structures upstream from their location.

Culverts should be analyzed using HY-8 version 7.2. The model should be provided with the submittal. See the INDOT Hydraulics web site for additional information.

Part 2 of the Indiana Design Manual (IDM) contains considerable information about design criteria for drainage structures. Any aspect of the project drainage to INDOT facilities that is not specifically covered in this section of the driveway guide will be designed in accordance with the IDM. Also, Standard Drawing Series 720 contains the design information for drainage structures commonly used along highways.

INDOT Hydraulics has launched a Driveway Permit Training Course. The course was developed for consultants submitting driveway permits with drainage that could impact drainage on INDOT right of way. INDOT Hydraulics requires the course be completed and the consultant become prequalified for this type of work before drainage design submittals can be reviewed or approved. The training course is available at no cost and is taken online at the applicant's convenience. Instructions to Access INDOT Hydraulics Training Courses

SECTION 24: STORMWATER QUALITY CONTROL AND ENVIRONMENTAL CONSIDERATIONS FOR PERMITS

CONSTRUCTION STORMWATER GENERAL PERMIT

The Construction Stormwater General Permit (CSGP) is a performance-based regulation designed to reduce pollutants that are associated with construction and/or land disturbing activities. CSGP coverage is required by the Indiana Department of Environmental Management (IDEM) when one acre or more of land is disturbed for construction activity. For more information and how to apply for permit coverage go to the IDEM CSGP Webpage or the Regulatory ePortal.

If it is determined that CSGP coverage is required, a Notice of Sufficiency from IDEM must be provided to INDOT via EPS before the driveway permit application can be considered for approval.

For questions about CSGP coverage contact stormwat@idem.in.gov.

EROSION AND SEDIMENT CONTROL PLAN

An Erosion and Sediment Control Plan is required for any Minor or Major Commercial Driveway Permit application or Minor or Major Road Approach application that does not qualify for CGSP coverage.

Details of a sufficient Erosion Control Plan should be developed in accordance with IDM, Chapter 205 – Temporary Erosion and Sediment Control and will typically include the following elements:

- A description of the project, including purpose, location, size, duration, and phases of the disturbed area.
- A site map showing the existing and proposed topography, land cover, soils, drainage patterns, water bodies, roads, utilities, and other features.
- A list of erosion and sediment control measures that will be implemented during and after the project, such as silt fences, mulch, vegetation, swales, basins, etc.
- A schedule for installing, inspecting, maintaining, and removal of the erosion and sediment control measures.
- A contingency plan for dealing with unexpected events or emergencies that may cause erosion or sedimentation.
- A monitoring and reporting plan for evaluating the effectiveness of the erosion and sediment control measures and documenting any issues or corrective actions performed by a trained individual as defined by CSGP Appendix B(66).

- A signature page indicating approval of the erosion control plan by the project owner, contractor, and engineer.

Different projects may require different erosion control plan details depending on the site conditions, the type of work, and local regulations.

The permittee must have the complete approved permit, including the Erosion and Sediment Control Plan, in their possession during on-site work operations and available for inspection by any authorized Department of Transportation employee or local official during work operations.

INDOT CONSTRUCTION STORMWATER TRAINING

INDOT Construction Stormwater Training is not required but is an available resource that provides an introduction to erosion and sediment control regulations and practices.

For more information about the course, registration, renewals, and active status please visit the training course information page.

INDOT ENVIRONMENTAL MITIGATION SITES

If the proposed driveway location will impact an INDOT Environmental Mitigation Site an alternate location must be identified. Mitigation Sites cannot be disturbed or altered in any way.

Please contact INDOT Ecology and Waterway Team Leads with latitude and longitude information for assistance with questions.

JURISDICTIONAL WATERWAYS

Jurisdictional wetlands and waterways cannot be dredged, cleared, filled, rerouted or otherwise altered without one or more permits from the US Army Corps of Engineers, IDEM and the Indiana Department of Natural Resources (IDNR) Division of Water. This includes the installation of temporary measures such as riprap, cofferdams and temporary crossings.

For additional information, please contact INDOT Ecology and Waterway Team Leads with latitude and longitude information.

OTHER ENVIRONMENTAL CONSIDERATIONS

Other environmental permits and waivers are not commonly required for driveway permit applications; however, it is the responsibility of the Permit Applicant to ensure that all necessary permits have been obtained prior to construction on or near INDOT right of way. Additional permits and waivers (if applicable) may include, but are not limited to:

- 401/404 Permits, dredge and/or fill of streams and wetlands.
- Construction in a Floodway (CIF) for work within a floodway.
- Temporary Impact Permit for stream crossings.
- Fish Spawning restrictions/waivers (no in-stream work April 1 – June 30).
- Swallows Special Provision (no disturbance May 7- Sept 7).
- Bat tree clearing restrictions (no clearing April 1 – Sept 30).

INDOT LINKS

INDOT Stormwater Management Field Guide

INDOT Environmental Services Ecology and Waterway Permitting

INDOT Environmental Services Stormwater Link

SECTION 25: CURBS

Approaches located along a curbed highway must also be suitably curbed. The proposed driveway must match the predominant curb design that exists along the highway. The curb treatment at the approach should be compatible with that used at other approaches in the vicinity. If there is no other existing curb in the area, the driveway's curb must be placed two feet from the edge of pavement.

The various types of curb treatments in use along highways are found in INDOT Standard Drawings, Series 605. Engineering judgement should be used when field conditions require deviations from standard drawing specifications.

Sidewalks should be included in the approach design as needed and must be compliant with the Americans with Disabilities Act (ADA). Chapter 51 of the Indiana Design Manual provides detailed design information for ADA compliant ramps and sidewalks. These design elements can also be found in Chapter 4 of the United States Access Board, The Department of Justice 2010 ADA Standards for Accessible Design, and the Public Right of Way Accessibility Guidelines (PROWAG).

SECTION 26: CHANNELIZING ISLANDS

Major driveways into developments such as shopping centers should be designed to prevent cross-traffic movement of internal traffic within 100 feet of the highway edge of pavement. This may be accomplished by the use of a raised or channelized island. Channelized island design should consider site-specific variables, including definition of vehicular path, separation of traffic movements, prohibition of movements, protection of pedestrians, and placement of traffic-control devices. The width of the island will be added to the proposed approach width. Islands will have a minimum width of 4 feet and a maximum width of 16 feet. The nose of the island will be set back 6 to 10 feet from any existing highway curb line, depending on the turning radius needed for a smooth ingress and egress to the approach. See IDM, Chapter 46-9.0

Traffic islands may also be used at intersections to guide traffic into proper channels through the intersection area. Channelization is generally employed to prohibit specific movements, to regulate traffic and indicate proper use of the intersection, to separate conflicts, to favor predominant turning movements, and to protect pedestrians. Channelizing islands should be installed when the intersection size, physical characteristics, or complexity is such that their use will eliminate or reduce unnecessary or undesirable conflicts or hazards to motorists or pedestrians and reduce potential disorder and confusion in traffic flow.

Advertising signs, landscaping and other decorative elements located within an island will adhere to all highway clear-zone requirements and will not create a sight distance obstruction for motorists. See INDOT Standard Drawings E 605-CNCC

A driveway channelizing island may be installed to discourage left turns. If one is installed in a driveway throat at its intersection with a roadway, then the channeling island will help to discourage left turns and limit basic crossing conflicts. See Appendix 4 of the INDOT Access Management Guide for this and other retrofit tools.

SECTION 27: MEDIAN OPENINGS (CROSSOVER)

A median crossover may be desirable to the applicant for convenient access to a development but can create additional safety risks for drivers. In most cases, new median openings in existing raised medians should not be permitted. When a median crossover is desired, the applicant must demonstrate that a median opening would be in the best interest of the motoring public. A crossover should not be considered unless it meets each of the following minimum requirements:

- The proposed opening is more than 400 feet (800 feet desirable) from any existing median opening.
- Evidence can be presented that a median opening would improve safety of the road for the traveling public.
- There is sufficient room for standard turning lanes and recovery tapers and the proposed opening will function properly.

A median opening is not a property right. INDOT may deny a request for a median opening even if the conditions listed above are satisfied. An existing median opening can be removed at any time if INDOT deems it a safety risk.

Median openings will be designed in accordance with IDM, Chapter 46-8.01.

Also see INDOT Standard Drawings E610-PRCO 01-07.

SECTION 28: MAILBOX TURNOUTS

Mailbox turnouts are an element of an approved driveway approach permit. As practical, mailboxes should be grouped, and turnouts combined with the driveway approach pavement. Mailboxes should be placed 2 feet center-to-center, and the turnout lengthened to accommodate the grouping.

Mailbox supports will not be larger than a 4-inch square timber other support having similar breakaway characteristics. Where a guardrail exists, the support will be placed behind the guardrail.

Specific mailbox design and location should be consistent with the IDM, Chapter 51-11.0 - Mailboxes

Acceptable geometric designs for mailbox turnouts are shown in INDOT Standard Drawings E 610-MBAP.See also INDOT Standard Drawing Series E 611-MBAS for Mailbox Assemblies.

SECTION 29: UTILITY PULL-OFFS

Utilities needing access to assets placed on state right of way should provide an adequate and safe pull-off area. The pull-off should be designed to allow service vehicles ample room to exit the highway travel lane completely. It should also be wide enough to allow vehicles to maneuver off the highway in a manner so that they do not back onto the highway travel lanes.

Utility pull-offs will be approved as Sub Minor Commercial Drives and should be designed in accordance with INDOT Standard Drawings as outlined in Section 2 of this guide. All Sub Minor Commercial Drives must be constructed of hard surface (HMA or concrete pavement).

Refer to INDOT Standard Drawings 610-DRIV.

SECTION 30: PARKING

It is necessary and important that roadside businesses or establishments provide sufficient parking or storage space to prevent storage or back-up of vehicles on state right of way. Adequate parking and storage space is of particular importance for businesses such as restaurants, truck terminals, drive-in banking, etc., where multiple vehicles enter and leave the area at one time. When the parking and storage area is inadequate, or buildings or other installations do not conform to the setback dimensions set forth in these regulations, the driveway(s) should be designed and located to prevent storage or back-up of vehicles on state right of way, as much as possible.

Where there are one or more accesses to an establishment on the corner of an intersection, parking will be prohibited along the highway for 30 feet from the physical limits of the intersection or between the intersection and the nearest driveway, whichever is the lesser distance.

SECTION 31: DETERMINATION OF INTERSECTION CONTROL TYPE

Traffic-control methods and intersection geometry may vary for approaches based on turning volumes, design speed, intersection geometry, location, topography, desired type of operations, and safety considerations. A TIA is essential to determine the appropriate intersection type and traffic control that may be warranted at a proposed or reconfigured approach. A TIA is a specialized engineering study of the impact that a given type and intensity of land use has on the nearby transportation system. A TIA makes it possible for mitigating measures to be taken in advance to provide for the preservation of the highway and the safety and convenience of traffic on the highway. See Section 7 of this guide for more information.

The following is a list of intersection traffic controls or intersection types may be considered during intersection design.

- Two-way stop
- All-way stop intersection (typically a four-way stop).
- Partial access intersection (e.g., right-in right-out, right-in only, right-out only etc.)
- Traffic-control signal
- Roundabout intersection
- J-Turn, Michigan Left, RCUT or other median U-turn type intersection
- Other alternative type intersection design

STOP-CONTROLLED INTERSECTIONS

Most driveway intersections will be stop controlled. Many of these intersections will require traffic on the minor roadway (the approach) to stop while traffic on the mainline does not, (two-way or one-way stop control). In some cases, however, traffic volume on the approach is high enough and mainline low enough that an all-way stop should instead be considered. Installation of an all-way stop will only be considered if criteria described in Section 2B.07 of the IMUTCD are met, and if introduction of the mainline stop condition will not have a negative impact on corridor continuity, safety, or mainline level-of-service. Approval of an all-way stop controlled intersection will be at the sole discretion of INDOT.

PARTIAL-ACCESS INTERSECTIONS

As discussed elsewhere in this guide, due to the proximity of a driveway to another intersection or because of some other geometric factor, full access cannot always be allowed for an approach. A partial access driveway may sometimes still be allowed in these locations. A partial access approach or intersection is an approach that physically prohibits one or more turning movements to or from the approach. The most common type of partial access intersection is the right-in, right-out intersection. The right-in, right-out intersection prevents through movements and left turns to or from the approach. Driveways located within the functional limits of an intersection, if allowed, will often be required to be partial access (right-in, right-out).

In all cases where a partial access intersection is required, a raised median or island will be required to channelize traffic. A flush painted island is not sufficient. If design and available right of way allow, a raised island can be placed at the mouth of the drive, or a raised median may be placed down the center of the mainline highway. See IDM, Chapter 46-9.0 and Section 26 of this guide for more information on Channelized Islands.

Partial-access intersections are typically stop controlled. A regulatory sign will be required for all prohibited movements.

ALTERNATIVE INTERSECTIONS

All intersections are planned points of conflict where vehicles cross paths or change directions. Any point where vehicles cross paths is an opportunity for a crash to occur. Traditional intersection types provide greater mobility but also have more conflict points than alternative intersection designs. Most alternative intersection designs contain fewer conflict points than traditional intersections. Applicants are encouraged to consider alternative intersections designs when choosing the traffic-control method for approach intersections.

Alternative Intersection designs are used across the country, with median U-turn and roundabout designs being the most common permit applications to INDOT. Different types of alternative intersections work best for different applications. The INDOT Intersection Decision Guide provides guidance when selecting among intersection design alternatives.

TRAFFIC-CONTROL SIGNAL

There may be an immediate or future need for a traffic signal at an access point for high-volume traffic generators such as shopping centers, industrial facilities, residential projects, and similar developments.

When properly used, traffic signals are valuable devices for control of vehicular and pedestrian traffic. A properly used traffic signal can increase the capacity of an intersection or corridor through orderly movement of traffic while reducing the frequency of certain types of crashes. Traffic signals can also be used to interrupt heavy traffic at intervals to permit traffic at the intersection to safely turn or cross.

Traffic signals are often considered a cure-all for all traffic problems at intersections and can lead to traffic signals being requested at locations where they are not warranted. A traffic control signal should not be installed unless an engineering study called a Signal Warrant Analysis indicates that installing a traffic control signal will improve the overall safety and/or operation of the intersection. A proposed traffic signal should satisfy one or more of the primary warrants listed in IMUTCD Chapter 4C. The IMUTCD provides the criteria and procedures that should be used to determine if the warrants are satisfied. Table 4C-2 in the IMUTCD can be beneficial for predicting the need for traffic signals at future developments where the hourly traffic volumes are unknown. In addition to the IMUTCD warrants, the information in IMUTCD Section 4B regarding alternatives to traffic signals should also be considered.

Since vehicular delay and the frequency of some types of crashes can be greater under traffic signal control than under stop-sign control, INDOT will not approve a request for a traffic signal that does not meet one or more of the signal warrants outlined in the IMUTCD Chapter 4C.

When there is a future need for a traffic signal as determined by a TIA approved by INDOT, the applicant will be required to sign a future-traffic signal covenant. Where a state-owned highway intersects a private drive or public road where large traffic volumes are generated from a private source, the private entity will be responsible for funding the design, installation and ongoing energy costs of the signal.

When intersection traffic conditions meet minimum warrants for traffic signal installation, as determined by INDOT, an signal covenant will be prepared between INDOT and the applicant giving the property owner permission to install a traffic signal. Any current or future installation of a traffic signal will be the responsibility of the applicant or subsequent property owner(s).

Failure to sign the above-mentioned agreement(s) may result in the denial of the permit application.

A request for an official action will be drafted by INDOT and sent to the appropriate District Traffic Engineer before installation of a proposed traffic signal. If the District Traffic Engineer concurs with the request to install a traffic signal, an Official Action will be drafted and sent to the District Deputy Commissioner for approval of the new traffic signal. A record of the executed official action will be uploaded by INDOT to the permit application in EPS.

Traffic signals will be designed according to the standards laid out in Chapter 502-3 of the IDM and Part 4 of the IMUTCD.

INDOT retains the right to remove any traffic signal on any state-owned highway at any time at its sole discretion. A traffic signal may be removed if intersection traffic conditions change significantly, and signal warrants are no longer met. The property owner will be notified of the removal in advance.

SECTION 32: AGREEMENT TO EXECUTE AN ACCESS-CONTROL DOCUMENT

The purpose of access control is to protect the state highway mainline through-traffic from indiscriminate conflicting movements, promote safety, and maintain mobility, along the highway. Limiting access to state right of way can be a useful design feature, intended to reduce potential points of conflict along the highway by controlling and consolidating driveway access points. This enhances both the safety and capacity of the highway as preference is given to through traffic. Points of congestion can be minimized and access points near major intersections or interchanges can be managed to reduce additional traffic introduced by driveways with insufficient separation from the intersection or interchange. Driveways for major development sites, which may eventually become signalized, can be better situated with respect to traffic-signal and intersection design.

In consideration for INDOT granting a driveway permit, the applicant may be required to sign an agreement to execute an access-control document conveying the access rights for the balance of the property frontage owned by the applicant. This document will be recorded at the County Recorder's Office in the county where the property is located.

SECTION 33: PERFORMANCE BOND

A permit bond is a performance bond issued by a qualified surety company and will be required for each application for a commercial driveway or approach. It ensures that the work will be completed in accordance with INDOT standards and specifications for the associated project(s).

The bond can be no less than $10,000. or an amount sufficient to cover all work within state Right of Way – whichever is greater. INDOT prefers that the bond amount cover the estimated construction cost within the right-of-way plus 25 percent to cover construction variances. If the bond amount is insufficient for the proposed work type and scale, a more appropriate bond amount may be required by INDOT.

The performance bond must be on INDOT Bond Forms and must include a fully executed power of attorney. The bond forms must be notarized and submitted (1) electronically via EPS as a scanned PDF attachment, and (2) submitted in hard copy, with original signatures and notarization, to the appropriate INDOT district office. Bond forms that are not fully completed, with all signatures, signers identified, and properly notarized with seal, will not be accepted. The bond will need to be issued to the permit applicant / property owner of record.

A performance bond in an appropriate amount may also be required on non-commercial drives.

Following are the categories for which the bond may be waived:

- **Government agencies:** Agencies of political subdivisions (federal, state, county, city or town) reporting to elected official.
- **Churches:** Community of religious peoples professing the same faith and observing the same ritual and ceremonies.
- **Schools:** Private and public institutions providing first grade or higher education.
- **Railroad companies:** Companies regulated by the Indiana Public Service Commission while performing normal maintenance or construction activities, to railroad facilities.
- **Closing existing driveways:** Any applicant whose approved permit will result in work solely for the purpose of closing existing driveway approach(es) to the state highway system from the property.

These exemptions are not to be based upon the tax-exempt or non-profit status of the applicant. A person or committee of persons elected by a group of people does not necessarily qualify as a governmental agency. Bond waiver determination will be at the sole discretion of INDOT. Applicants who are claiming an exemption must complete the Bond Waiver Form (State Form 35483) and upload it to the permit application in EPS.

SECTION 34: ALTERING LIMITED ACCESS RIGHT OF WAY (LARW)

State agencies have LARW to preserve the traffic and safety operational integrity of the State's roadway network and the significant financial investment of that network.

Changes to limited access control will be considered only for a compelling reason and when no viable alternative exists. This section of the driveway guide is an overview or summary regarding the process to request a change to access control within state limited access right of way. See the Limited Access Right of Way Break Guidance for more information.

The Limited Access Right of Way Break Guidance document outlines the requirements for the justification and documentation necessary to substantiate any proposed changes in access to LARW. The document also sets out steps to evaluate proposed access changes in a manner consistent with the vision, goals, and long-range transportation plans of the State.

Indiana Code 8-23-8-4(d) states: "A municipal street, a county or state highway, or other public way may not be opened into or connected with a limited access facility without prior consent of the authority having jurisdiction over the facility. Consent under this subsection may be given only if the public interest is served."

There is a cost associated with a change to LARW. INDOT will determine the value of the enhancement to the property in order to assure the State will receive adequate compensation for the proposed break. The INDOT Real Estate division will arrange for a "before and after" valuation analysis to determine if compensation is required due to the property being enhanced by the break.

Here are the steps to REQUEST a break or to alter access in LARW:

- Justification: Provide a detailed written explanation as to how and why the existing access points to State roadways and adjacent local roadways in the corridor do not provide the desired access.
- Documentation: Provide documentation necessary to substantiate the request.
- Review of acquisition documents: Verify that the impacted road is LARW. This should be done by INDOT Central Office.
- Drainage analysis: Ensure that the proposed break does not negatively modify drainage or storm water features. An analysis of present and future drainage is required.
- Traffic operational analysis: Complete a traffic operational analysis or full traffic impact study analysis. This should conclude that the proposed access change does not have an adverse impact on the safety and operation of the roadway now or in the future.

- Connection to public road: Each proposed access point must connect to a public road and provide for specific traffic movements.
- Consistency with local and regional plans: Each proposed access point must be consistent with local and regional land use and transportation plans and meet local zoning requirements.
- Approval documentation: When a new or revised access point is proposed to respond to a new, expanded, or substantial change in current or planned development or land use, the request must include documentation of approval from all approvers identified in the LARW Break Approval Form.
- Comprehensive corridor study: In corridors where potential exist for future multiple access breaks, a comprehensive corridor or network study must accompany the request.
- State Environmental Policy Act (SEPA) document: For Non-Interstate LARW breaks, requests for a new or revised access point must include a SEPA document addressing impacts to environmental resources.

These steps are subject to change, so consult with INDOT permit investigator to confirm the current policy as it will apply to specific projects. Changes to access control will be considered only for a compelling reason and when no viable alternatives exist.

SECTION 35: PROPERTY DONATION

Due to urban development and expanding infrastructure, construction of auxiliary lanes on existing roads is often a necessity. This is primarily due to increasing traffic volumes and the need to ensure smooth and efficient traffic flow. The process of expanding a road or adding turn lanes often requires more land than what is currently under the jurisdiction of INDOT or other local municipalities. The primary purpose of INDOT of acquiring right of way is to provide sufficient right of way to efficiently construct the proposed facility, to enable the safe operation of vehicles on the facility after it is constructed, and to allow for the satisfactory and efficient operation of maintenance equipment after construction. This is where property donation becomes crucial.

Property donation is a voluntary act where a property owner donates a portion of their property for public use. In the context of road expansion, this donated land can be used to accommodate construction of auxiliary lanes and roadway maintenance after construction. There are several reasons why this might be necessary:

- Space constraints: Existing roads, especially in urban areas, are often bordered by private properties. To add turn lanes, additional land on either side of the road may be required. If the government or transportation department does not own this land, they must acquire it somehow. Property donation is one such method.
- Cost efficiency: Purchasing land can be a costly and time-consuming process. Property donation, on the other hand, can be a more cost-effective solution.
- Community benefit: Donating property for road expansion can benefit the community as a whole by improving traffic flow and reducing congestion. It can also potentially increase the value of nearby properties by enhancing accessibility.
- Tax benefits: In some cases, property owners who donate land may be eligible for tax deductions or credits, providing a financial incentive.

Property donation plays a vital role in infrastructure development and urban planning. It allows for necessary expansions like additional turn lanes to be made without significant financial burden or lengthy acquisition processes, ultimately benefiting both individual property owners and the community.

Below is a list of items that are needed from the permit applicant for INDOT to begin the process of acquisition of donated property. Additional information may be required.

PRELIMINARY LIST FOR PROPERTY DONATION(S) ASSOCIATED WITH DRIVE PERMIT ADDITIONS

The requester will provide INDOT with the following items:

- Request letter (written explanation/reason for request)
- Proof of ownership (20-year title report / current abstract)
- Tax memo (proof that property taxes are paid up to date, included with the immediately previous bullet item)
- Legal description (Exhibit “A”) and Parcel Plat (Exhibit “B”) of the area/tract to be donated.
    - Note: A Limited Access description may be required if relinquishment of access rights is necessary for the request, as well as FHWA approval – requested by INDOT). In addition, the donated area must include the adjoining existing right of way if the donating party owns fee simple within the existing roadway.
- Completed environmental and archaeological report (may be required, property to be donated must be included in the report)
- Donation agreement (without offer; will be prepared and provided by INDOT, documents can be viewed on the INDOT Real Estate website.)
- Deed/transfer document (will be prepared by INDOT on Real Estate buying forms; Exhibits “A” and “B” cited above, will be attached prior to execution of document by requester)
- Corporate resolution authorization (or other documents/affidavits as applicable and requested by INDOT Real Estate division; these documents will be provided by INDOT for execution by requester)
- Completed real estate W-9 form (will be provided by INDOT Real Estate)
- Sales Disclosure Form (SDF) (SDF; will be prepared and provided by INDOT Real Estate)
    - Note: Although a donation, the SDF is still be necessary for INDOT records.

This is a preliminary list. Due to unknown conditions that are unique to individual properties, additional documents may be necessary.

SECTION 36: DESIGN EXCEPTIONS

INDOT's intent is that all geometric design criteria described in chapters 40 through 56 of the Indiana Design Manual be satisfied in order for INDOT to provide a highway system which satisfies the transportation needs of the state and provides a reasonable level of safety, comfort, and convenience for the traveling public. The permit applicant is responsible for satisfying these criteria in the proposed project design.

When all design criteria cannot be met by a proposed design, or when existing substandard criteria will remain after a project, a design exception is required. INDOT's procedures for identifying, justifying, and processing design exceptions are outlined in the IDM, Chapter 40-8.0 Adherence to Design Criteria.

Design exception requests should be submitted to INDOT as early as possible during the design process. Design exceptions submitted at a later stage may put the project at risk if the exception is not approved.

Documentation for design exception requests vary by project type, but in general will include:

- Project description
- Specific design criteria that will not be met
- Existing roadway characteristics
- Alternatives considered/variance from standard
- Crash analysis or comparison of the safety and operational performance of the roadway and other impacts such as right-of-way, community, environmental, cost, and access for all modes of transportation
- Ancillary impact
- Safety analysis
- Compatibility with adjacent sections of roadway
- Proposed mitigation measures

Deviations to ADA requirements are not eligible for a design exception. See IDM, Chapter 40-8.04 for more information.

SECTION 37: PERMIT APPLICATION PROVISIONS

The permittee must comply with all federal, state, and local laws, rules and regulations. The permittee will follow all guidelines, policies and procedures in this Driveway Permit Guide. The permittee will also follow and adhere to the General Right of Way Provisions outlined in Section 3.1 of the INDOT Permit Guide.

In reviewing these requirements the permittee should pay special attention to the requirements related to traffic control, damage to nearby or appurtenant structures, sidewalk, drive crossing and curb ramps requirements, drainage and culvert requirements and pavement protection and cutting requirements.

Failure to comply with this Driveway Permit Guide, and the General and Special Provisions of a permit, will result in revocation of the permit.

DRIVEWAY SPECIAL PROVISIONS

Permittees will comply with all applicable General Right of Way Provisions in section 3.1 of the INDOT Permit Guide as well as the following Driveway Special Provisions.

- **Subsequent change in use or character of drive:** Any subsequent change in the character of the use of the access, approach or crossover described in this permit due to any new developments on this or any adjacent parcels that use this access will require a new application for an INDOT driveway permit. Local zoning and planning agencies must also be contacted. The granting or denial of such new application will be governed by the same regulations judged by the same standards for a permit for a wholly new access, approach and/or crossover (Indiana Administrative Code Title 105: Article 7: Rule 1: Section 6: New application; when required).
- **Standards and independent consultant requirement**: All work to be completed on this permit will be in conformance to current INDOT Standards and Specifications. The Permittee will provide an independent consultant to conduct on-site inspection and testing. The independent consultant will be an INDOT certified inspector to conduct Construction and Management Engineering services for the permitted project. The independent consultant will provide all required documentation and test results to the Department of Transportation for review and approval.
- **Right-of-way Fence Replacement:** Any Right-of-Way replacement fence will be as follows:
    - The replacement fence will be constructed on the right-of-way alignment in accordance with current INDOT standards.
    - No advertising will be allowed on the fence.

    - The replaced fence will become the property of INDOT upon completion of installation.
- **Existing Drive Removal:** If this permit includes the removal of an existing driveway, then the location of the existing driveway must be restored to the overall original topography and/or better condition, re-establishing correct drainage patterns and a minimum of 12 inches of topsoil where required.
- **Driveway Pipe Installation:** The permittee will install a minimum 15-inch diameter corrugated metal driveway pipe with metal end sections under the driveway approach of adequate length to accommodate 4:1 side slope unless otherwise noted.
    - If no pipe is required at this time, INDOT reserves the right to require a 15-inch pipe with metal end sections if a drainage problem occurs in the future.
    - The cost of the pipe installation will be by the current Fee Simple property owner of the parcel on which the driveway is located at no expense to INDOT.
- **Pavement Markings:** All permanent pavement markings required due to the proposed construction will be installed by the permittee at the direction of the INDOT District Traffic Engineer.
    - All incorrect pavement markings will be removed by sand blasting or other INDOT approved non-destructive methods. Grinding will not be allowed.
    - The permittee will temporarily field mark the proposed pavement markings for review and approval by INDOT prior to placing the permanent pavement markings.
    - Please call INDOT's District Permit Supervisor three (3) days in advance to schedule an inspection.
- **Traffic Control (Temporary):** The Contractor will be responsible for the field layout, placement, operation, maintenance, and removal of temporary traffic control devices.
    - A worksite traffic supervisor certified by the American Traffic Safety Service Association (ATSSA) or approved equal certifying organization, will direct all field layout, placement, operation, maintenance, and removal of temporary traffic control devices.
    - The certified worksite traffic supervisor (CWTS) will ensure that all traffic control devices, except temporary concrete barrier, meet acceptable standards as outlined in the plans, specifications and ATSSA's "Quality Standards for Work Zone Traffic Control Devices" prior to installation.
- **Recorded Real Estate Documents:** Execution of and receipt of any required recorded Maintenance/Easement Agreement, Warrantee Deeds, Right-of-Way transfer Documents, an Access Control Document and/or a Future Signal Covenant and entire driveway construction must be completed to the satisfaction of INDOT before the bond will be released.

- **Right-of-Way Monuments:** Monuments will be placed by the applicant at no expense to INDOT at any and all locations in which there is a change in alignment of INDOT right-of-way line within the boundaries of this permit.
    - The monuments and the placement of the monuments will be in accordance with current INDOT standards and specifications as shown on the attached permit drawings and/or as specified by INDOT.
    - Please call INDOT's Permit Supervisor two (2) weeks prior to the start of work to schedule the survey crew.
    - INDOT's F District Survey Crew will reference the right-of-way marker location.
- **Concrete Form Inspection:** The permittee will contact the Permit Investigator at least three (3) days in advance to schedule an inspection when the concrete forms are in place if applicable to this permit.
- **Pavement Edge Trimming:** The edge of the existing paved shoulder will be trimmed and straightened where any new pavement approach is to be attached.
- **Drive Approaches:** The concrete approach will be finished one-half inch below the adjacent paved shoulder, if applicable. The permittee will place the required asphalt pavements in accordance with Section 400 and/or Section 600 of the Indiana Standard Specifications dated September 2016 for Bituminous Items (a copy of these sections will be provided upon request).
- **HMA weather limitations** as per section 402.12 must be strictly followed. No differences in pavement elevations between the mainline pavement and new pavement sections can be left in place over the winter.
    - If conditions do not allow the placement of the surface course or any other courses, the Permittee must contact INDOT for approval and direction.
    - If intermediate or base courses are used in place of any surface courses for the winter period, it will need to be milled and an acceptable surface course be placed in the spring, weather permitting and as per section 402.12.
- **Certified Hot Mix Producer Requirements**: A Certified Volumetric Hot Mix Producer will be used for the paving operations.
    - All mix designs will be submitted for approval by the District Materials and Testing Engineer two (2) weeks prior to producing the mix, if requested and required.
    - All other applicable Standards will apply from the sections noted.
- **Revocation for failure to meet standards:** Failure to follow these Standards will be cause for the revocation of the permit and/or all pavement items associated with said permit.
- **Failed Material:** All failed material will be removed and replaced to INDOT minimum standards.

- **Traffic Sign and Control Relocation:** Please contact the District Paint/Sign Supervisor three (3) days in advance of the start of work to receive instructions for the proper removal and resetting of all affected traffic control signs and equipment.

Timeframes for Contacting INDOT's District Office for a Commercial Drive Permit:		
WHEN	**WHAT ACTIVITY**	**WHO TO CONTACT**
2 weeks prior to work	Survey for right-of-way Monument Replacement	District Survey Crew
2 weeks prior to producing mix	When utilizing hot mix asphalt	District Materials and Test Engineer
3 days prior	Traffic sign and control relocation	District Sign/Paint Engineer
3 days prior	Concrete from Installation	District Permit Investigator
3 days prior	Pavement Marking Installation	District Permit Supervisor
If conditions prohibit installation	When paving during winter or inclement weather	District Permit Supervisor

TABLE 37.1: TIMEFRAMES FOR CONTACTING INDOT

DRIVEWAY ADDITIONAL SPECIAL PROVISIONS

Permittees will comply with all applicable General Right of Way Permit Provisions in Section 3.1 of the INDOT Permit Guide as well as the Driveway Special Provisions listed above, in addition to the following Additional Special Provisions when applicable:

- **Temporary Driveway Provision:** If the permit is for a temporary driveway, it will be closed, removed and the State right-of-way restored to the original or better condition on or before the expiration date of this permit. Restore the right-of-way to match the right-of-way by fine grading and mulch seeding all disturbed areas.
- **Asphalt Surface Required:** The access for a sub-minor commercial driveway must be asphalt surface.
- **Concrete Specifications for a sub-minor commercial drive:**
    - The permittee will contact the Permit Investigator at least three (3) days in advance to schedule an inspection when the concrete forms are in place if applicable to this permit.

- The edge of the existing paved should will be trimmed and straightened where the concrete approach is to be attached.
- The concrete approach will be finished one-half inch below the adjacent paved shoulder.
- The approach will be installed using Type-C ear construction as shown in the attached standard drawing.
- All permanent pavement marking required due to the proposed construction will be installed by the permittee at the direction of the INDOT District Traffic Engineer.
    - All incorrect pavement markings will be removed by grinding or sand blasting.
    - The permittee will temporarily field mark the proposed pavement markings for review and approval by INDOT prior to placing the permanent pavement markings.
    - Call INDOT's Permit Supervisor three days in advance to schedule an inspection.
- Please contact the District Paint/Sign Supervisor three (3) days in advance of the start of work, to receive instructions for the proper removal and resetting of all affected traffic control signs and equipment.

- **Removal of a Driveway:** If the permit is for the removal of an existing driveway, then the location of the existing driveway must be restored to the overall original topography and/or better condition, re-establishing correct drainage patterns, a minimum of 12 inches of topsoil where required.
  The permittee must comply with all applicable General Right of Way Permit provisions in section 3.1 of the INDOT Permit Guide and all applicable driveway provisions in section during the driveway removal process.

APPENDIX A: DRIVEWAY PROMULGATED RULES

Specific rules of the *Indiana Administrative Code (IAC), Title 105, Article 7: Permits for Highways*, has been copied for your convenience. Specifically, Rules 1, 1.5, and 2 are directly relevant to INDOT's Driveway Guide. Rules pertaining to outdoor advertising are not included. The full version can be found at Indiana.Gov Title 105.

INDIANA ADMINISTRATIVE CODE (IAC)

TITLE 105

ARTICLE 7: PERMITS FOR HIGHWAYS

Rule 1: Driveway access: Applications, Standards, Designs

SECTION 1: Purpose of rule

The Indiana Department of Highways is authorized to determine and establish such requirements and restrictions for driveway approaches as may be necessary to provide for the drainage of the highway, preservation of the highway and the safety and convenience of traffic on the highway. A written permit application will be considered by INDOT and, if in accordance with properly established regulations and requirements, a permit will be granted subject to appropriate conditions and provisions contained therein. All work on the permit will be performed to the satisfaction of INDOT.

SECTION 2: Definitions

"Access" means a location which allows vehicular and/or pedestrian traffic to cross the highway right of way line and is positioned at the connection of a driveway with the approach at the right of way line.

"Applicant" means a person, partnership, company, corporation, association, or agency making application for a permit to perform work on an approach.

"Application" means a formally prepared request for a permit which is presented by an applicant on a permit form to INDOT seeking permission to perform work on highway right of way.

"Approach" means a way or place improved for vehicular or pedestrian traffic on the highway right of way, which joins the pavement edge of the highway with a driveway or pedestrian walkway.

"Auxiliary lane" means a portion of the roadway adjoining the traveled way for parking, speed change, turning, storage for turning, weaving, truck climbing or for other purposes.

"Commercial approach" means an approach, which joins the highway with a driveway to private property used for commercial purposes and to public property.

"Crossover" means a paved or graded crossing in the highway median which allows vehicles to cross or to turn across the highway.

"Department" means the Indiana department of highways acting directly or through its duly authorized officers and agents.

"Driveway" means a way or place not on INDOT right of way which is used for vehicles.

"Expiration date" means the last calendar day that the valid permit is in effect and that the approach must be in compliance with all conditions of the permit.

"Field approach" means an approach which joins the highway with a driveway to private property that is vacant, in an unimproved condition, or a farm field.

"Highway" means any roadway under the jurisdiction of INDOT that is designated as a state route, a US route or an interstate.

"Issue date" means a calendar day that the permit is granted to the applicant.

"Limited access facility" means a highway especially designed for through traffic and over, from, or to which owners or occupants of abutting land or other persons have no right or easement or only a limited right or easement of direct access, light, air, or view by reason of fact that their property abuts such limited access facility or for any other reason.

"Median" means the portion of a divided highway separating the traveled way for traffic proceeding the opposite direction.

"Notice" means a certified letter from INDOT addressed to the owner(s) of the real estate stating that the approach(es) for a driveway(s) emanating from the real estate is unauthorized and providing the approximate location of the approach(es), a statement of any substandard elements of the approach(es), the action to be taken by the owner and the deadline for completing the prescribed action.

"Permit" means a legal document in which INDOT gives written permission to an applicant to perform work on the highway right of way.

"Permittee" means the applicant following the issuance of a permit by INDOT.

"Private approach" means an approach, which joins the highway with a driveway to private property having a residence, barn, private garage or other improvements and is ordinarily used only by the owner or occupant of the premises, guests and necessary service vehicles.

"Purchased limited access" means rights-of-way along any highway designed by INDOT to be limited access facility and whose access rights have been acquired by INDOT.

"Right-of-way" means all land under the jurisdiction of and whose use is controlled by INDOT.

"Shoulder" means that portion of the highway right-of-way contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of roadway base and surface courses. It is measured from the edge of pavement for traveled way or, if present, auxiliary lane to the intersection of the shoulder and fill or ditch slopes.

"Title evidence" means documentation in the form of a certified search covering a period of twenty (20) years, current title insurance or certified letter from abstractor or title insurance agent certifying fee simple ownership of the property.

"Traffic" means pedestrians, ridden or herded animals, vehicles, and other conveyances either singly or together while using any highway for purposes of travel.

"Traffic control" means devices such as signs, barricades, pavement markings and signalization used to direct traffic in safe orderly use of the highway.

"Traveled way" means the portion of roadway used for the movement of traffic, excluding shoulders and auxiliary lanes.

"Unauthorized approach" means an approach which has been constructed, reconstructed, altered or modified; which remains incomplete, or has become substandard for any reason, such as change in land use; that is not approved nor authorized to exist in its present condition, under present traffic pattern, by INDOT.

SECTION 3: Classification of entrances and approaches

All approaches will be divided into five (5) classes as follows:

CLASS I - Private Approach - Raised curb used.

CLASS II - Private Approach - Flush shoulder only, no raised curb.

CLASS III - Commercial Approach - Raised curb used.

CLASS IV - Commercial Approach - Flush shoulder only, no raised curb.

CLASS V - Field Approach - Either raised curb or flush shoulder.

SECTION 4: Types of permits; limited access, commercial and private driveways

The driveway approach applications will be designated and defined as being one of the following types of permits:

Limited access driveway - Any change to an existing access, approach, and/or crossover or the construction of a new access, approach and/or crossover along a purchased or declared limited access highway.

Commercial major driveway - Any change to an existing access, approach and/or crossover or the construction of a new access, approach and/or crossover which connects the highway to private property used for commercial purposes or to a public property and which attracts enough traffic to require auxiliary lanes as determined by INDOT.

Commercial minor driveway - Any change to an existing access, approach and/or crossover or the construction of a new access, approach and/or crossover which connects the highway to private property used for commercial purposes or to a public property and which does not attract enough traffic to require auxiliary lanes as determined by INDOT.

Private driveway - Any change to an existing access, approach and/or crossover or the construction of a new access, approach and/or crossover that connects the highway to private property having a residence, barn, private garage, an improved or unimproved

condition and ordinarily used only by the owner or occupant of the premises, guests and necessary service vehicles.

SECTION 5: Application for permit; form; fees

Application to INDOT for a permit to construct any approach connecting a driveway with any department highway or highway right of way, to cut any curb along a highway or construct a crossover on a highway will be made on the form as prescribed by INDOT. The form and accompanying documentation will be submitted containing as many copies as may be prescribed by INDOT. Reasonable fees for processing driveway permits may be established by appropriate department action.

SECTION 6: New application; when required

Relocation, alteration, or remodeling of an access, approach and/or crossover, or any change in the character of the use of the access, approach and/or crossover will be considered the construction a new access, approach or crossover and an application for a permit will be required. The granting or denial of such application will be governed by the same regulations and judged by the same standards as an application for a permit for a wholly new access, approach and/or crossover.

The application will include immediately proposed and future work affecting all locations of access to the applicant's property and adjacent parcels in which the applicant holds an interest.

SECTION 7: Parties to application; evidence of title

All applications for permits under 120 IAC 2-1 (this rule) will be made in the name of the owner of the fee simple title. All persons having any interest in the land, including but not limited to mortgagees, lessees, optionaires, lien holders, and holders of other encumbrances will join with the fee simple holder in the application. All such persons will join in the application, will sign and consent to the conditions of the application, and will be bound equally thereafter by the conditions of the permit which may be issued to the permittee.

Title evidence, will be furnished to support the signatures for driveway permit applications in the following areas:

A. All commercial driveway permit applications except those applications involving an existing access with no proposed change in access, use, or character.

B. Private driveway permit applications including field access approaches in areas along highways covered by limited access resolutions or on sections of state routes in the biennial highway improvement program.

All other allowable evidence will be at the discretion of INDOT.

If the applicant submits an application in which the title evidence does not include the signatures of all interest holders and if the application is evaluated in favor of granting the permit, the applicant must submit subsequent title evidence showing that all omitted interest holders have ceased to be interest holders or have by an addendum to the application joined the original applicant on the original application, and such subsequent title evidence or addendum must be submitted before the permit is issued.

SECTION 8: Statement of purpose and adjacent parcels

All applications for permits will disclose the present and proposed use of the parcel for which access is requested. Any intended use of the access in conjunction with any adjacent parcel, whether owned by applicants or by others, or to be purchased or sold by the applicant, or others, will be disclosed in the application. All adjacent parcels owned or controlled by the applicants, whether intended to be used in conjunction with the requested access or not will be disclosed in the application. These disclosures are required to ensure the public a safe and convenient means of travel consistent with the right of the adjoining landowner to have access as provided by law.

SECTION 9: Drawings and information required

All applications for permits under these regulations will be accompanied by clear drawings. One (1) set of drawings will accompany all copies of the application form. Information to be shown on drawings will include the following as applicable:

(1) Driveway(s) and approach(es) including dimensions for width, length, angle of intersection, radii, and any other measurement necessary to show the geometrics of the driveway(s) and approach(es) drawn to an engineer's 20 or 30 scale.

(2) Rate of slope or grade of pavement for approach(es) and driveway(s).

(3) Type of approach and driveway pavement material (stone, concrete, or Hot Mix Asphalt (HMA) pavement including depths of lifts).

(4) Existing drainage patterns and structures, including size and kind.

(5) New drainage patterns, including the effect on downstream department facilities and private property, and structures including size, kind, invert pipe elevations, and inlet elevations.

(6) Width dimension of highway right of way.

(7) Width and type of highway pavement.

(8) Highway right of way and applicant's property lines.

(9) Development site plan showing parking, interior drives, buildings, and other improvements, including distance from right of way line to gasoline pumps.

10) Distance to intersecting roads, streets, railways, or crossovers within five hundred (500) feet in each direction on both sides of highway from the applicants property lines drawn to an engineer's 50 scale.

11) The distance to and the design of all drives on both sides of highways and in each direction, that are within five hundred (500) feet of applicants property lines drawn to an engineer's 50 scale.

12) The posted speed limit on highway and all traffic control equipment serving the highway, including but not limited to signalization devices, lighting, pavement markings, guardrails, and sign structures.

13) Proposed treatment of right of way area adjacent to and between approaches.

14) Appropriate symbols such as north arrow, direction of lane travel and direction of drainage flow, and a legend defining abbreviations and graphic representations of existing and new conditions, objects, materials, etc.

15) A legal description of the property to be served by the permit together with a legal description of the adjoining land owned or controlled by the applicant.

16) Traffic control needed during work activity displaying necessary signs, barricades, detour signs, and warning devices will be provided whenever work is to interfere with normal traffic. Traffic control must be in accordance with the Construction and Maintenance Section of the Indiana Manual of Uniform Traffic Control Devices.

SECTION 10: Construction and materials standards

All construction and materials used within the highway right of way must conform to the current Indiana state highway "standard specifications" which will be kept on file at the offices of INDOT.

SECTION 11: Standards and design requirements

All applications will be filed in accordance with the standards and design requirements of INDOT. The permittee will agree to perform all work on the right of way in accordance with such standards and design requirements of INDOT.

SECTION 12: Commercial applications; attestation

All applications for commercial purposes will be signed by a registered professional engineer, a registered architect, and/or registered land surveyor, attesting that the applications as proposed, conform with all department regulations, specifications and standards, except as will be noted in such attestation.

SECTION 13: Land use and zoning approval

Approval of a permit application will be subject to the permittee obtaining all necessary approvals involving land use from the zoning board plan commission, and/or local governmental authorities, and will comply with all applicable laws. The issuance of any permit will in no way imply department approval of or be intended to influence any action pending before any local board, commission or agency.

SECTION 14: Performance bonds

INDOT will require a performance bond to be filed with each application for a commercial driveway showing the applicant as principal in a minimum amount of five thousand ($5,000) dollars or in an amount as specifically set by appropriate department action. Such amount will be increased in any application to equal the estimated cost of that part of the project on INDOT's right of way. INDOT may also require an adequate bond to be filed in any non-commercial application. Such bonds are required to ensure compliance with all terms of the permit and will in case of noncompliance, provide in addition to any damages suffered thereby, all witness and court costs in collecting the same, together with any attorney's fee reasonably due, and will be released only when the work described on the permit has been completed to the satisfaction of INDOT.

SECTION 15: Crossovers

Permits for private or commercial crossovers will not be approved unless the applicant can prove to the satisfaction of INDOT that the location of the crossover will not be detrimental to the safety of the traveling public. The minimum recommended distance between crossovers is four hundred (400) feet.

SECTION 16: Adjacent tapers

Where the taper of a proposed driveway will create hazardous and erratic traffic movement because of its proximity to adjacent similar taper, the entire area between said tapers must be paved thus forming a continuous full lane between the approaches of which said tapers are a part.

SECTION 17: Sight distances

All approaches will be located so as to provide adequate sight distance in both directions along the highway for safe access to the highway without interfering with traffic. Under substandard visibility conditions as determined and set by INDOT, access may be granted for an alternate location that offers the least hazard and interference with traffic.

SECTION 18: Interference with traffic control devices

No entrance or approach will be located or constructed so as to interfere with or prevent the proper location of necessary highway signs or other traffic control devices.

SECTION 19: Drainage requirements

All improvements authorized by the permit will not interfere with drainage of the street or highway, nor cause additional area to drain onto the right of way unless specifically acknowledged and allowed by the permit, nor will such improvements be constructed so as to cause drainage onto the roadway.

SECTION 20: Authorization to proceed; objections

Upon receipt of a permit issued by INDOT, the permittee is authorized to proceed with the work covered by the permit, subject to the conditions imposed by INDOT.

In accordance with the notice requirements of IC 4-22-1-25, any objection to the conditions and provisions of an approved permit must be submitted in writing to INDOT within fifteen (15) days from the issue of the permit.

The permit does not apply to any highway right of way that is closed for construction purposes, except as allowed by the provision in the permit, nor to any county road or city streets.

SECTION 21: Inspection; revocation of permit

An inspection may be conducted at any time by INDOT and a final inspection of the permit will be conducted upon completion of construction. The work covered by the permit does not comply until found to be in accordance with the plans and specifications filed in the application as amended by INDOT, together with any special conditions noted therein, and approved by INDOT. The permittee will adjust or stop operations upon direction of any police officer or authorized department employee. The permit may be revoked at any time by INDOT for noncompliance with any and/or all provisions and conditions of said permit.

The permittee will pay INDOT for any inspection costs including labor, vehicular mileage, and equipment expenses when it is necessary to assign a department employee to inspect the work. The permittee will immediately reimburse INDOT upon receipt of an itemized statement.

SECTION 22: Noncompliance of permits without bonds

On permits not covered by a bond, work performed that is incomplete improperly performed or otherwise does not follow the conditions or provisions of the permit will be designated as “Does Not Comply”. INDOT will follow procedures for corrective action, beginning with the notice action stated in 105 IAC 7-2-4(2). Permit applications for existing approaches that are denied by INDOT will be corrected by entering the same procedure in 105 IAC 7-2-4 (2).

SECTION 23: “Limitation of access” instrument

The permittee will sign a copy of a “limitation of access” instrument, if so required by INDOT as a condition of the permit. INDOT will immediately cause said limitation of access instrument to be recorded in the appropriate county.

SECTION 24: Notice of start of construction

The permittee will notify INDOT’s sub-district office five (5) working days prior to the start of any work activity on the highway right of way, of the date such work will commence. The permittee will notify INDOT’s sub-district office prior to completion of all work on the highway right of way of the anticipated date such work will be completed.

SECTION 25: Traffic control

The permittee will erect and maintain all necessary traffic control signs, barricades, detour signs, and other traffic control devices required to safely direct traffic over or around the part of the highway where permitted operations are to be done in accordance with the construction and maintenance section of the Indiana Manual on Uniform Traffic Control Devices. Disruption to traffic will be kept to a minimum and will require approval of INDOT prior to beginning other work activities on the right of way.

SECTION 26: Prohibited hours of work

The permitted work will not be performed on the highway right of way between sunset and sunrise, unless specifically allowed by special provisions to the permit. The permitted work will not be performed on the highway right of way during the period beginning at 12:00 noon on the last weekday preceding and continuing until sunrise on the following day; New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving and Christmas.

SECTION 27: Display of permit

The permittee will have a permit complete with drawings and special provisions on the job site at all times and will show said permit, on demand, to any police officer or department employee.

SECTION 28: Term of permit; extension; cancellation

All work on highway right of way authorized by a permit must be completed within one (1) year after the permit is issued; otherwise, the permit will be canceled unless an extension is requested, in writing, by the permittee, and is approved by INDOT. The time extension will not exceed more than one (1) year beyond the original expiration date unless approved otherwise by INDOT. If a permit is canceled, a new application must be submitted and approved before the proposed work can begin. Once construction authorized by the permit is initiated it must be completed within thirty (30) days, unless otherwise expressly approved as a special condition.

SECTION 29: Liability during construction

The permittee will assume all responsibility (during the time from the beginning of the work covered by any permit until final approval for the work) and will furthermore be obligated to save harmless the State for any and all injury, loss or damage occasioned

to or by persons or property resulting directly or indirectly from such work; INDOT will, in its discretion, require the permittee to provide liability and indemnity insurance for the use and benefit of the State of Indiana.

SECTION 30: Interference with structures on right of way

The work authorized by the permit will not interfere with any existing structure on any department right of way without specific permission in writing from INDOT or other owner thereof. Any structure or traffic control device affected by the proposed construction will be relocated at the permittee's expense as directed. In the event that any buildings, railings, traffic control devices, or other structures are damaged, said cost of the removal and/or of repair due to damage will be at the permittee's expense as directed.

SECTION 31: Encroachment by advertising signs

The permittee will not erect or maintain any advertising sign on or over the right of way or any portion thereof in violation of any law.

SECTION 32: Change in existing access; subject to new rules

Any person, who by law, has an existing legal right of access to a state highway will as a condition of the issuance of any permit and in consideration of the same, agree that such rights of access, then existing or granted thereafter with respect to such real estate are subject to 120 IAC 2-1 [this rule] as the same may from time to time be amended by INDOT.

SECTION 33: Severability of rule

If any provision of 120 IAC 2-1 [this rule] or the application thereof to any person or circumstances is invalid, such invalidity will not affect the other provisions or usage of 120 IAC 2-1 [this rule], which can be given effect without the invalid provision or usage, and to this end, the provisions of 120 IAC 2-1 [this rule] are declared to be severable.

Rule 1.5: Developments, Traffic Studies

Section 1: Preliminary Notification and Warrants

Unless waived in writing by INDOT, a preliminary notification will be required to be submitted with the application for a permit for all developments that meet the following preliminary warrants for a traffic impact analysis study: Land Use Type Preliminary Warrants Residential 150 dwelling units Retail 15,000 square feet Office 35,000 square feet or 3 acres Industrial 70,000 square feet or 9 acres Educational 30,000 square feet or 250 students Lodging 120 occupied rooms Medical 46,000 square feet.

At the discretion of INDOT, upon notice from INDOT after submission of the application for a permit, a preliminary notification may be required for the following types of developments: (1) Parking garages, banks, fast food restaurants, service stations with convenience stores, or similar developments considered by INDOT to warrant special consideration due to the pattern and volume of traffic generated and the existence of high vehicle trip generation rates. (2) Mixed-use developments that cannot easily be grouped or classified under the land use types provided in subsection (a) and generate more than fifty (50) vehicle trips in the peak direction within one (1) street peak hour.

Section 2: Preliminary Notification Requirements

In addition to the requirements of 105 IAC 7-1-9, an applicant required to provide preliminary notification under section 1 of this rule must provide an approximate description of existing and anticipated traffic conditions of the proposed development, including the following: (1) Type of development. (2) Preliminary site plan with site access points and the nearest signalized intersection in each direction. (3) A market study, if applicable. (4) Trip generation values and methods used to compute such values. (5) Any other information the applicant deems necessary or helpful to facilitate the initial meeting as provided under section 3 of this rule.

Section 3: Initial Meeting

Upon submission of the application and preliminary notification, the applicant and INDOT will schedule an initial meeting. The initial meeting will be held no later than thirty (30) days after the submission of the application and preliminary notification that comply with the requirements of 105 IAC 7-1 and this rule.

Participants at the initial meeting will include the following: (1) The applicant or its representative. (2) One (1) or more of the following department personnel within the

district in which the proposed development site is located: (A) Regulations supervisor. (B) Traffic engineer. (C) Development engineer. (3) Any other individual deemed necessary by the applicant or department personnel to facilitate the initial meeting. (c) The purpose of the initial meeting will be to determine what further action, if any, is necessary by the applicant before a permit may be granted, including the following: (1) Whether a traffic impact analysis study is warranted and, if so, the scope and extent of such study. (2) Whether a traffic operations study is warranted and, if so, the scope and extent of such study. (3) If the necessity for a traffic impact analysis study or a traffic operations analysis study cannot be determined, the information necessary from the applicant to make this determination. (4) All other issues and requirements the applicant must address before INDOT may grant a permit. (d) Within thirty (30) days of the initial meeting, a memorandum of understanding will be prepared by the applicant or its representative detailing the actions to be performed by the applicant as determined at the initial meeting. The applicant may not proceed with any action until INDOT has approved in writing the memorandum of understanding. The memorandum of understanding will include all pertinent issues discussed at the initial meeting and a description of any study to be conducted, including the following: (1) Issues to be addressed in the study. (2) Limits of study area. (3) Study assumptions. (4) Data sources. (5) Contents of any report to be generated.

Section 4: Traffic Impact Analysis warrants

Unless waived by INDOT at the initial meeting or subsequent to the initial meeting, in writing, an applicant subject to this rule will be required to conduct, at the applicant's expense, a traffic impact analysis study if one (1) or more of the following warrants are met: (1) Warrant 1, land use intensity, the development generates more than one hundred (100) vehicle trips in the peak direction within one (1) street peak hour. (2) Warrant 2, level-of-service, either: (A) the traffic generated by the proposed development causes the level-of-service of the adjacent streets and intersections to drop to "C" or lower; or (B) the nearby intersections currently operate at level-of-service "D" or lower. Indiana Administrative Code Page 15 PERMITS FOR HIGHWAYS (3) Warrant 3, roadway modifications, the proposed development: (A) is expected to significantly impact a roadway segment identified in the transportation improvement program; or (B) includes modifications to the roadway system, such as: (i) the addition of lanes to accommodate site-generated traffic, exclusive turning lanes, acceleration/deceleration lanes, median openings; and (ii) the installation of traffic signals and other traffic control devices. (4) Warrant 4, special cases, it is determined at the initial meeting or from a preliminary study that the traffic generated from the proposed development will create safety, operational, or other traffic problems.

This section will not be construed to limit the conditions by which INDOT may require a traffic impact analysis study.

Section 5: Traffic operating analysis study, conditions requiring study

Unless waived by INDOT at the initial meeting or subsequent to the initial meeting, in writing, an applicant subject to this rule will be required to conduct, at the applicant's expense, a traffic operations analysis study if one (1) or more of the following conditions are met: (1) The development generates enough turning movements into or out of the development that an auxiliary lane, such as an acceleration/deceleration lane, passing blister, or separate turn lane is required. (2) A request is made for a new or modified driveway near an intersection or interchange. (3) A request is made for a new or modified driveway near an intersection or interchange. (4) There exists a sight distance limitation or a high accident location near the site. (5) A request is made for median openings.

This section will not be construed to limit the conditions by which INDOT may require a traffic operations analysis study.

Section 6: Traffic impact analysis and traffic operations analysis study, qualifications of preparer and certification.

A traffic impact analysis or traffic operations analysis study required under this rule must be prepared by or under the supervision of a registered professional engineer with experience in traffic engineering operations who will provide certification in the following or similar form: "I certify that this Traffic Impact Analysis has been prepared by me or under my immediate supervision and that I have experience and training in the field of traffic and transportation engineering (signed) John O. Smith, P.E. Indiana Registration 12345".

Section 7: Review of traffic impact analysis and traffic operations analysis

Upon completion and submission of a traffic impact analysis or traffic operations analysis study required under this rule, the study will be reviewed by INDOT. The review will be conducted by department personnel trained and experienced in traffic impact and traffic operations study methodology, land use planning, and traffic engineering, safety, and operations.

A formal review of the traffic impact analysis or traffic operations analysis study will include the following findings: (1) Those analyses and conclusions that are acceptable. (2) Those analyses and conclusions that are not acceptable. (3) The acceptability of recommended site access provisions and roadway improvements. (4) A list of required improvements that might be considered to mitigate impacts of the development.

Upon completion of the formal review, INDOT will submit to the study preparer and the applicant its findings and either: (1) its acceptance of the study; or (2) a request for revisions clearly specifying the additional information required before the study may be accepted.

The study preparer will submit any additional report in response to a request for revisions in the form of an addendum to the original study unless a fully revised report is requested.

Rule 2: Unauthorized Approaches to Driveways

SECTION 1: Purpose of rule

The Indiana Department of Highways will control access and regulate work performed on approaches to driveways on highway right of way. This control and regulation will provide for the preservation of the highway, and the safety and convenience of traffic on highway. The measure of public benefit will be the guide in determining the priorities and procedures in correcting any unauthorized approaches to driveways.

SECTION 2: Documentation of approaches; corrective action required

INDOT will control access along highways through inspection and by properly documenting planned and existing approaches for driveways and pedestrian walkways. Any construction, reconstruction, alteration, or modification to an approach by person(s) other than INDOT will be administered through 120 IAC 2 [this article], Permits. Existing approaches, which may be in either a complete or incomplete condition and that have not been reviewed and authorized by INDOT, will be considered unauthorized, undocumented and subject to corrective action. Existing approaches which were originally authorized by INDOT but which have become substandard for any reason, such as a change in land use that adversely affects traffic patterns, will also be considered unauthorized, undocumented and subject to corrective action.

The permit process will be the normal means of taking corrective action. The property owner(s) and/or the person(s) responsible for unauthorized approach will make application for a written permit. All remedies available through the permit process will be used to obtain full compliance of work on the approach.

Under circumstances where INDOT is unable to obtain the cooperation of the property owner(s) and/or the person(s) responsible for an unauthorized approach through the

permit process, corrective action will be taken in accordance with procedures contained in 120 IAC 2-2 [this rule].

SECTION 3: Priority of corrective actions

INDOT will assign unauthorized approach work to its staff in accordance with manpower availability and will first undertake corrective action for the more serious situations as determined by INDOT.

SECTION 4: Procedures for corrective action

Corrective action will normally be the construction, reconstruction, alteration or modification of the approach to standards acceptable to INDOT, or the complete removal of the approach and restoration of the highway right of way. The decision concerning the choice of a remedy remains with INDOT. The following procedure will be used by INDOT to obtain a suitable corrective result.

1) INDOT will contact the responsible person(s) for the unauthorized approach, including the owner of real estate, and advise them they are to begin corrective action by preparing and submitting a permit application. INDOT will state a specific date for receipt of the application, but in no case will the time to submit the application be less than fifteen (15) calendar days from the date of contact. If an application is received within the specified time period, INDOT will proceed to the requirements in 105 IAC 7-1.

2) If the person(s) responsible for the unauthorized approach has not responded within the specified time and if the application for the permit was not received by INDOT, a notice will be given to the owner(s) of the real estate from which the unauthorized approach emanates by certified mail and will be sent to the owner's last known address. A copy of the notice will be sent to the occupant of the real estate and a copy of the notice will be posted upon said real estate in a conspicuous place. The notice will specify the time within which the owner(s) of the real estate will have completed corrective action for the unauthorized approach, but in no case will the period of time specified be less than thirty (30) calendar days.

3) If the owner of the real estate has not completed corrective action on the unauthorized approach within the time specified by the notice, INDOT may do whatever in its discretion is necessary to correct the situation or may cause the same to be done by other persons, parties, or corporation.

4) The cost of the corrective action to the unauthorized approach as provided by subdivision (30) in this section will be borne by the owner of the real estate. After

INDOT has completed the corrective action, it will bill the owner of the real estate for the cost.

SECTION 5: Civil prosecution

It will be at the discretion of INDOT to pursue legal action against the person who fails to react to the requirements of 120 IAC 2-2-4 (1) and (2) [section 4(1) through 4(2)] of this rule.

SECTION 6: Waiver of corrective action

Where unauthorized approaches extending over any highway right of way are in place on the effective date of this regulation, it will be the right of INDOT to exercise discretion in implementing the procedure stated in 120 IAC 2-2-4 [section 4 of this rule].

APPENDIX B: CLAUSES FOR TRANSFER OF REAL PROPERTY

CLAUSES FOR TRANSFER OF REAL PROPERTY ACQUIRED OR IMPROVED UNDER THE ACTIVITY, FACILITY OR PROGRAM

The following clauses will be included in all deeds, licenses, leases, permits, or similar instruments entered into by the Indiana Department of Transportation (INDOT) pursuant to the provisions of Assurance for the subsequent transfer of real property acquired or improved under the Federal-Aid Highway Program.

The (grantee, licensee, lessee, permittee, etc., as appropriate) for himself, his heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that in the event facilities are constructed, maintained, or otherwise operated on the said property described in this (deed, license, lease, permit, etc.) for a purpose for which a Department of Transportation program or activity is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all other requirements imposed pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of INDOT of-Transportation-Effectuation of Title VI of the Civil Rights Act of 1964, Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statutes – Implementation and Review Procedures, and as said Regulations may be amended.

That in the event of breach of any of the above nondiscrimination covenants, INDOT will have the right to terminate the [license, lease, permit, etc.] and to re-enter and repossess said land and the facilities thereon, and hold the same as if said [licenses, lease, permit, etc.] had never been made or issued.

The following will be included in all deeds, licenses, leases, permits, or similar agreements entered into by INDOT pursuant to the provisions of Assurance for the construction or use of or access to space on, over or under real property acquired, or improved under the Federal-Aid Highway Program.

The (grantee, licensee, lessee, permittee, etc., as appropriate) for himself, his personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds, and leases add "as a covenant running with the land") that (1) no person on the ground of race, color, national origin, sex, sexual orientation, gender identity, age, disability, religion, income status or limited English proficiency will be excluded from participation in, denied the benefits of, or he otherwise subjected to discrimination in the use of said facilities, (2)

that in the construction of any improvements on, over or under such land and the furnishing of services thereon, no person on the ground of race, color, national origin, sex, sexual orientation, gender identity, age, disability, religion, income status or limited English proficiency, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations. Department of Transportation, Subtitle A, Office of the Secretary. Part 21, Nondiscrimination in Federally-assisted programs of INDOT of Transportation-Effectuation of Title VI of the Civil Rights Act of 1964), Title 23 Code of Federal Regulations, Part 200, Title VI Program and Related Statutes – Implementation and Review Procedures, and as said Regulations may be amended.

That in the event of breach of any of the above nondiscrimination covenants, INDOT will have the right to terminate the [license, lease, permit, etc.] and to re-enter and repossess said land and the facilities thereon, and hold the same as if said [license, lease, permit, etc.] had never been made or issued.[Include in deeds][1]That in the event of breach of any of the above nondiscrimination covenants, INDOT will have the right to re-enter said land and facilities thereon, and the above described lands and facilities will thereupon revert to and vest in and become the absolute property of INDOT and its assigns.

APPENDIX C: REFERENCES

1. Indiana Department of Transportation – Indiana Design Manual, 2013.
2. AASHTO 2011- A Policy on Geometric Design of Highways and Streets. More commonly known as the Green Book. To obtain a copy, contact AASHTO
3. Transportation Research Board's Highway Capacity Manual, fifth edition 2010. To obtain a copy, contact the Transportation Research Board.
4. Indiana Department of Transportation Standard Drawings, Section 610 for public road approaches. Effective on or after 09/01/2023.
5. Indiana Dept. of Transportation – INDOT's Applicants Guide to traffic Impact Studies
6. Access Management, Location and Design- Publication # FHWA-HI-92-033
7. Transportation Research Board/National research Council Circular # 456, March 1996- Driveway and Street Intersection Spacing
8. Department of Justice, 2010 ADA Standards for Accessible Design.
9. United States Access Board, Chapter 4: Accessible Routes.
10. Institute of Transportation Engineers Trip Generation Manual.
11. Indiana Manual on Uniform Traffic Control Devices.
12. Indiana Department of Transportation; Access Management Guide, September 2006 – Revised 2009.
13. Indiana Administrative Code, Title 105 Indiana Department of Transportation, Article 7: Permits for Highways.
14. Indiana Manual on Uniform Traffic Control Devices, 2011.
15. Indiana Department of Transportations, Applicants Guide to Traffic Impact Studies, May 2015.
16. Institute of Transportation engineers Trip Generation Manual, 10th Edition.

APPENDIX D: INDOT DRIVEWAY PERMIT MANUAL VERSION CONTROL

Document	Version Number & Date	Change Description	Author(s)
INDOT Driveway Permit Manual 1996	Version 1.0, 18 Oct 1996	Established Driveway Permit Manual	
INDOT Driveway Permit Manual 2018	Version 1.0, April 2018	Complete update of all sections, drawings, and references.	Randy Archer, Tim Well, Monica Hartke-Tarr, Shellie Haney, Taylor Ruble, Doug Corey, Jason Hanaway, Luis Laracuente
INDOT Driveway Permit Manual 2018	Version 1.1,		Randy Archer, Brittany Smith, Monica Hartke-Tarr
INDOT Driveway Permit Manual 2018	Version 1.2,		
INDOT Driveway Permit Manual 2018	Version 1.3,		
INDOT Driveway Permit Guide 2024	Version 1.4, April 2024	Complete update of all sections, drawings, and references.	Randy Archer, Monica Harte-Tarr, Angela Hobbs