

# **Access Management Standards**

This section replaces Access Control Standards on Page number 300-4 of the Engineering Standards passed February 11, 2002 and is an abridged version of the Access Management Policy approved by City Council on February 24, 2003.

## **Administration**

The administrative procedures and related information for the implementation of access management guidelines include the following:

- Permit Application Process
- Location and Number of Driveways
- Variances
- Necessity for Traffic Impact Studies
- Access Permit/Deny Process

NOTE: All interior lots on Access Level 7 streets should be exempted from these procedures. However, corner lots on Access Level 7 and all lots that access other than Access Levels 7 streets should follow these procedures.

## **Permit Application Process**

A permit is required for a parcel or lot under the following conditions when:

1. Lot splits occur;
2. New access connection permits are requested;
3. Substantial enlargements or improvements are planned by developers; or
4. Significant change in trip generation figures are anticipated from the existing developments.

The applicant requesting an access point should comply with the following steps:

1. Prior to the initial request for site plan approval or a building permit, the applicant should obtain a copy of the access requirements of the City of Sidney Engineering Department.
2. As a preliminary submittal, the applicant should provide at a minimum, a letter of explanation and request for consideration with the following information to the City Engineer.

- Scale: 1 in. = 50 ft. unless otherwise approved by the City Engineer
  - The name, address and telephone number of the owner(s) and that of the applicant, where the applicant is an agent (contractor, tenant, consultant) of the owner.
  - The name of the property or development
  - A location map with an appropriate scale showing the location of the property with respect to the area.
  - All existing and approved access points within approximately 300 ft. of the property on both sides of the road.
  - The identification of any legal rights-of-way or easements affecting the property as it relates to the roadway and proposed right-of-way acquisitions plus alternate access arrangements if appropriate (i.e., an access easement across neighboring property to a secondary road).
  - The existing and proposed dimensions of the highway including through and turning lanes, shoulders, curbs, medians, bike paths, sidewalks, etc.
  - Location and dimensions of the proposed access.
3. Upon review of the preliminary submittal by the City Engineer, the applicant should submit the final site plan(s) and, if required, the necessary support documentation. This documentation can include engineering plans, a traffic impact study, a cost estimate for highway improvements, and other supplemental studies. This is a final step in the application process.

NOTE: The City Engineer has the right to waive any of the above information for a minor access point or for a temporary access situation, if the City Engineer determines that such information is not needed to secure a safe, low-impact access permit.

4. Any application that involves access to the Limited Access State Highway System shall be reviewed by the Ohio Department of Transportation for conformance with state standards. A letter of acceptance from ODOT shall be submitted before final approval is granted.

### **Location and Number of Unsignalized Driveways**

By default, each property is allowed one access point either independent or shared. For any additional access points, the applicant needs to provide enough justification that the additional access points improve the safety and traffic operations of the traffic movements from or into the development and do not deteriorate the traffic operations on the accessing street. When more than one driveway is requested, the property should have enough lot frontage to allow the driveways with the minimum spacing requirements shown in Tables 3-1 to 3-4.

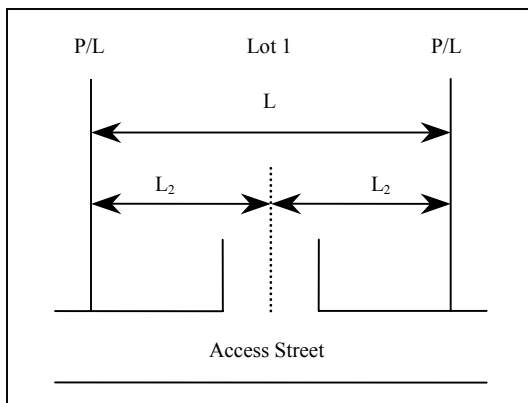
The location and number of driveways should be based on the following factors:

1. Size of the development (Minimum-use, Minor, Medium, or Major Traffic Generator)
2. Access level of the accessing street (Access level 1 to 7. Access levels 1 and 2 do not allow direct access)
3. Speed limit of the accessing street (25 MPH to 55 MPH)
4. Available lot frontage
5. Location of lot (interior vs. corner)
6. Location of opposite driveways.

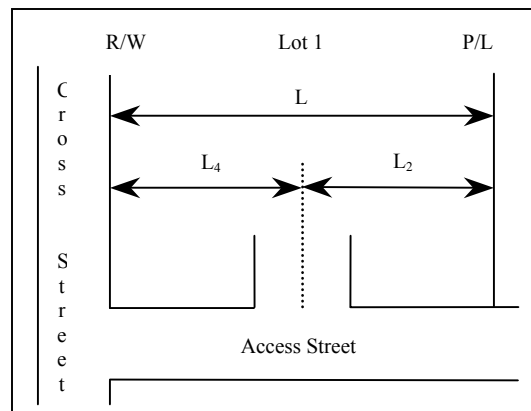
Figures 5-1 to 5-4 show the typical locations of driveways. Figures 5-1 and 5-2 are the conditions for properties with a single driveway requirement – interior and corner lots respectively. Figures 5-3 and 5-4 are the conditions for the properties with multiple driveway requirement – interior and corner lots respectively. As shown in the figures, the following parameters are used to define the location of driveways. These parameters will help in determining not only the location but also the number of allowable driveways based on the available lot frontage.

- $L_1$  – Minimum distance between driveways. Minimum requirements are shown in Tables 3-1 to 3-4.
- $L_2$  – Minimum distance from the Property Line (P/L). The values are one-half of  $L_1$ .
- $L_3$  – Minimum distance from the cross-street Right-of-way (R/W). Minimum requirements are shown in Table 3-5.
- $L_4$  – Acceptable distance from the cross-street R/W line. The values are maximum of  $L_1$  or  $L_3$ .
- $L$  – Minimum required lot frontage.

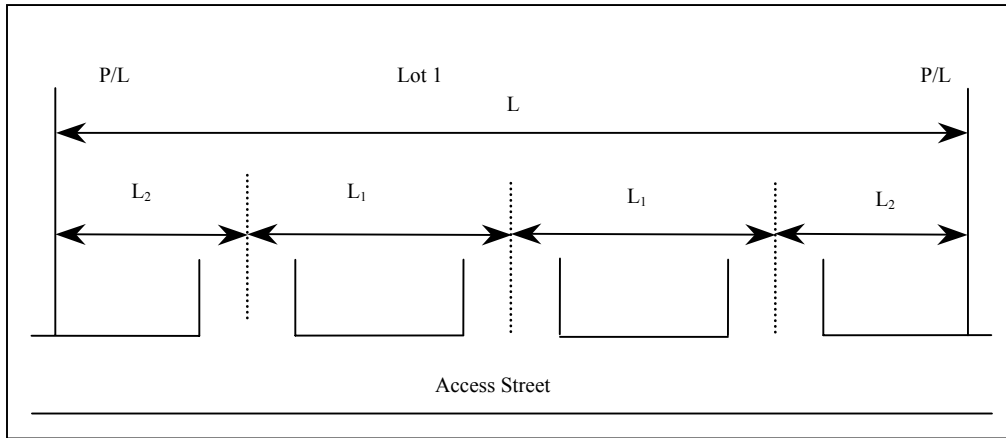
**Figure 5-1: Typical Location of Driveway – One Driveway – Interior Lot**



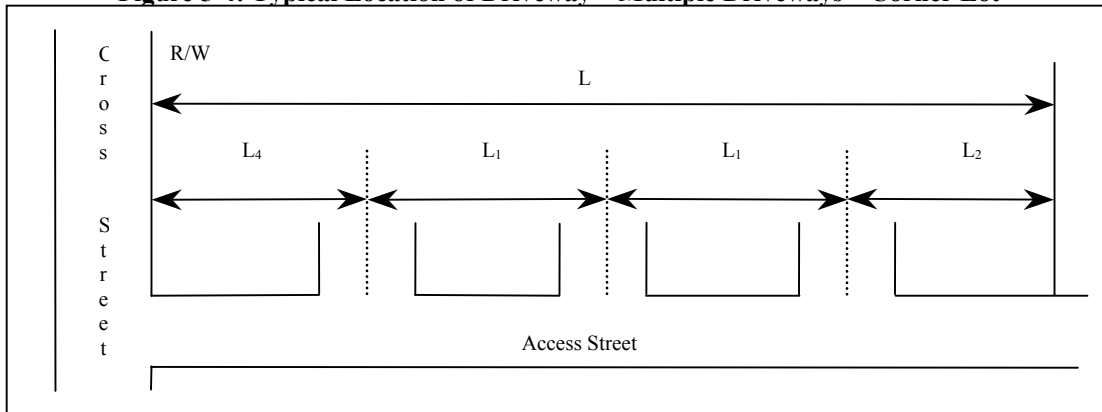
**Figure 5-2: Typical Location of Driveway – One Driveway – Corner Lot**



**Figure 5-3: Typical Location of Driveway – Multiple Driveways – Interior Lot**



**Figure 5-4: Typical Location of Driveway – Multiple Driveways – Corner Lot**

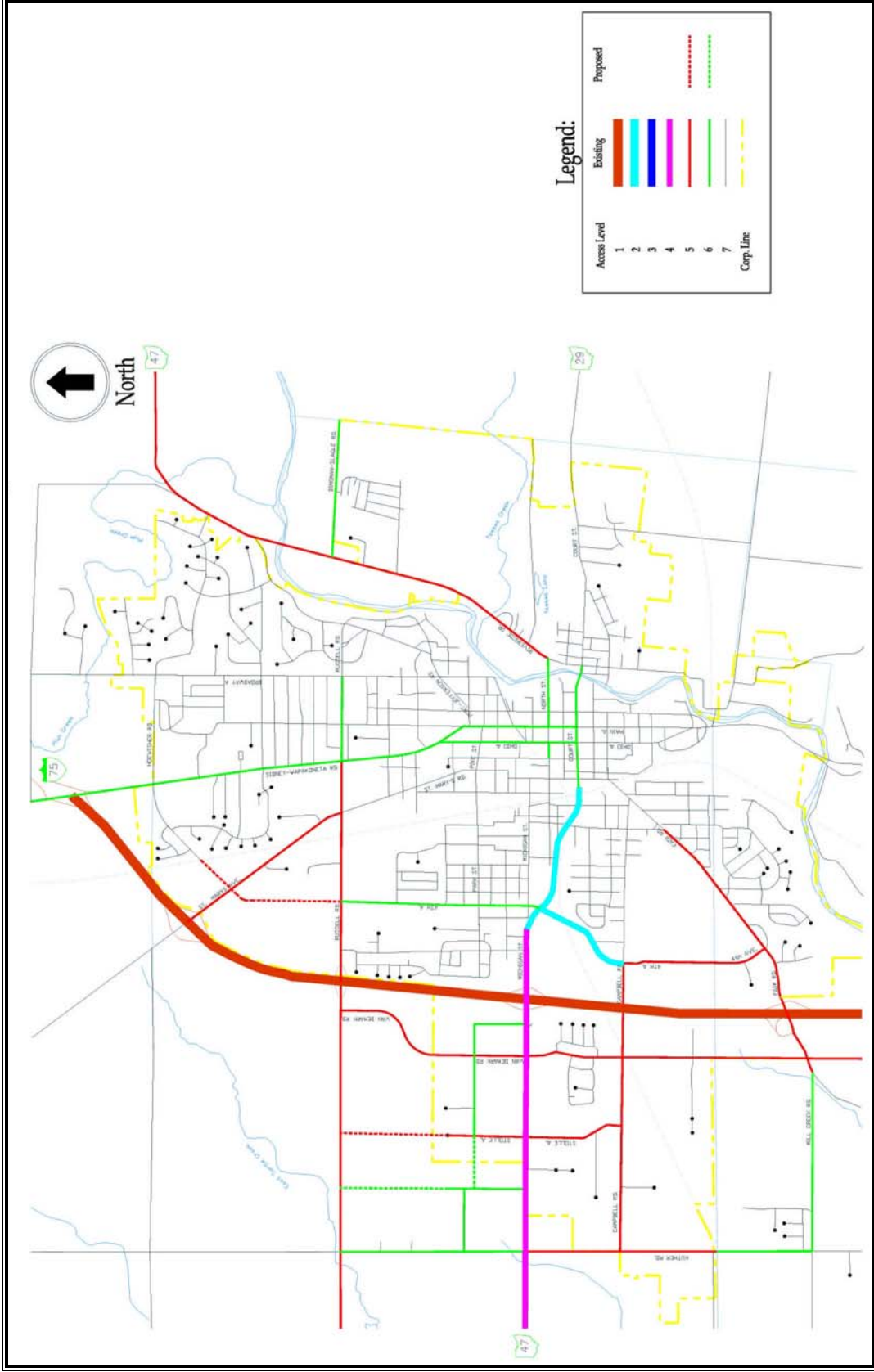


Where:  $L$  = Minimum Lot Frontage                       $L_2 = L_1/2$                        $L_4 = \text{Maximum of } L_1, L_3$   
 $L_1$  = Unsignalized driveway spacing  
 (Value from Tables 3-1 to 3-4)                       $L_3$  = Lateral Clearance  
 (Value From Table 5-1)

### Access Classification Map

The access classification map within the City of Sidney is shown in Figure 2-2.

Figure 2-2: Access Classification Map



When determining the location and number of unsignalized driveway access, special attention should be given to the following conditions:

- The size of generator should be computed based on:
  - Land use of the whole parcel (parcels which are proposed to be split into smaller lots).
  - Land use of the lot itself (for all existing and approved lots).
- Minimum-use generators should be restricted to a single driveway unless justified.
- If the property has alternative access possibilities, the access should be encouraged on to the highways with lower access classification.
- If any property shares the driveway's of another property, the value of  $L_2=0$  in figures 5-1 to 5-4 only on the shared side. Therefore, minimum lot frontage requirements for such properties can be reduced by the value of  $L_2$ .
- Access points in to three legged signalized intersections should not be allowed unless it is justified through the traffic impact study.
- Wherever the unsignalized approaches on both sides of the accessing street are not aligned, safe off-sets as shown in Table 3-6 should be maintained as agreed by the City Engineer. Minimum-use generators are exempted from this requirement.
- Minimum-use and minor generators should be exempted from the requirements of barriers shown in Figures 2-6 and 2-8 for access onto undivided Access level 3 and 4 streets respectively.
- Minimum-use and minor generators should be exempted from the requirement of exclusive left turn lanes on access level 5.
- Minimum-use and minor generators should be exempted from the requirement of exclusive left turn lanes on access level 6.
- If an undivided roadway becomes divided, left-turn access should be subject to elimination in one or both directions.

## Unsignalized Driveway Spacing

Guidelines developed for unsignalized driveways are based on speed and access level of the main road, and size of the development (or traffic generator).

Four magnitudes of traffic generators are used in developing the spacing criteria:

- Minimum-Use Generator – Developments that generate up to a total of 50 vehicle trips in the peak hour in both directions.
- Minor Generator – Developments that generate a total of 51 to 250 vehicle trips in the peak hour in both directions.
- Medium Generator – Developments that generate a total of 251 to 500 vehicle trips in the peak hour in both directions.
- Major Generator – Developments that generate a total of more than 500 vehicle trips in the peak hour in both directions. Note that these generators sometimes warrant signals for some or all of its driveways.

The latest *Trip Generation Manual* published by the Institute of Transportation Engineers (ITE) should be used as a tool in determining the type of generator. The manual includes data/methods to estimate the number of trips generated for a developments based on the land use and size of the center. Based on the estimated number of trips, the development can be classified under one of the four generators. The peak hour to identify the number of trips is defined as the peak hour of the generator. Such a peak hour can fall on any day of the week and any time of the day.

Minimum spacing guidelines for unsignalized driveways for minimum-use, minor, medium and major generators are shown in Tables 3-1, 3-2, 3-3, and 3-4 respectively. As shown in the tables access levels 1, 2, 3 and 7 are not included. Access levels 1 and 2 do not allow direct access on to the highways that are designated as access levels 1 or 2. Therefore, there are no driveway spacing guidelines for access levels 1 and 2. Access level 3 streets do not exist currently and therefore spacing guidelines for this category are not included. Since the location and spacing of driveways on access level 7 streets are based on only safety, there are no driveway spacing standards set for access level 7 streets.

**Table 3-1: Minimum Lot Width/Driveway Spacing (in feet) for Minimum-use Generators**

Access Level	Speed in MPH						
	25	30	35	40	45	50	55
4	100	120	140	160	180	200	220
5	75	90	105	130	145	160	175
6	50	60	70	80	90	100	100

**Table 3-2: Minimum Lot Width/Driveway Spacing (in feet) for Minor Generators**

Access Level	Speed in MPH						
	25	30	35	40	45	50	55
4	130	160	190	220	250	280	310
5	100	120	140	160	180	200	220
6	75	90	105	130	145	160	175

**Table 3-3: Minimum Lot Width/Driveway Spacing (in feet) for Medium Generators**

Access Level	Speed in MPH						
	25	30	35	40	45	50	55
4	175	210	245	280	315	350	385
5	125	150	175	200	225	250	275
6	100	120	140	160	180	200	220

**Table 3-4: Minimum Lot Width/Driveway Spacing (in feet) for Major Generators**

Access Level	Speed in MPH						
	25	30	35	40	45	50	55
4	230	275	320	365	410	455	500
5	175	210	245	280	315	350	385
6	125	150	175	200	225	250	275

## Corner Lots

For corner lots, access spacing for the first access point from cross-streets of access level 2 through 7 shall also meet “lateral” access restrictions. Table 3-5 shows the lateral access restrictions. The distance between the first access point of a corner lot from a cross-street shall be the maximum of a relevant value from Tables 3-1 to 3-4 and the value from Table 3-5.

**Table 3-5: Minimum Lateral Clearance (in feet) for Corner Lots**

Generator Type	Access Level of Cross Street				
	2	4	5	6	7
Minimum-Use	100	100	50	50	50
Minor	125	125	75	75	75
Medium	150	150	100	100	100
Major	330	330	150	150	150



## Opposing Driveways

On undivided roadways, access on both sides of the road should be aligned. Wherever this is not possible, driveways should be off-set based upon the generator types on both sides of the road as shown in Table 3-6. Minimum-use generators should be exempted from this requirement.

**Table 3-6: Minimum Off-sets between Opposing Driveways**

Generator Type on Accessing Side	Generator Type on Opposite Side	Minimum Off-set
Minor	Minimum-Use	N/A
Minor	Minor	150 to 200 feet
Minor	Medium	150 to 200 feet
Minor	Major	300 to 400 feet
Medium	Minimum-Use	N/A
Medium	Minor	150 to 200 feet
Medium	Medium	150 to 200 feet
Medium	Major	300 to 400 feet
Major	Minimum-Use	N/A
Major	Minor	300 to 400 feet
Major	Medium	300 to 400 feet
Major	Major	300 to 400 feet

## Signalized Intersections

Intersection/driveway signalization in conjunction with highway access shall be permitted only when the signal is warranted. Traffic signal warrant analysis shall be based upon the latest *Ohio Manual of Uniform Traffic Control Devices* (OMUTD) published by the Ohio Department of Transportation (ODOT).

Turn lane requirements at signalized locations should be based on capacity analysis using the latest *Highway Capacity Manual* (HCM) methods.

## Driveway Design Elements

When a new driveway is placed or an existing driveway is modified, it is important to follow design standards that make the traffic movements on the driveway safe and easy to operate and maintain. This section includes design standards for basic elements of the driveway - design vehicle; driveway width; turning radii; driveway profile; driveway pavement; and driveway storage lengths.

The standards shown in this chapter are for unsignalized driveways only. For signalized intersections/driveways, a detailed study and analysis should be done before the design is initiated and such design should be based on standard engineering practices. The recommended standards to the city for unsignalized driveways are based on the *State Highway Access Management Manual* by ODOT.

Driveway design is dependent upon several factors. The driveway type will determine what type of vehicles are to be considered in the design which, in turn, affects the access width along with the radius and/ or flare dimensions.

### **Driveway Types**

- **Residential** – A driveway providing access to a single family residence, to a duplex, or to an apartment building containing not more than four dwelling units.
- **Commercial** – A driveway providing access to an office, business, retail or institutional building, or residential facility having five or more dwelling units. These establishments are customarily serviced by trucks as an incidental rather than a principal driveway use. Industrial plant driveways whose primary function is to serve administrative or employee parking lots are considered commercial driveways.
- **Farm/Field** – A driveway providing access to an agricultural tract of land.
- **Industrial/Retail** – A driveway directly serving a substantial numbers of truck movements (equal to or greater than 10 trucks per day) 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 driveways, specially designed, signed and located to provide access for trucks. These also are classified as industrial driveways.

### **Driveway Dimensions**

Dimensions of any driveway should be based on the latest revision of City of Sidney Engineering Standards.

### **Driveway Profile**

Profiles of any driveway should be based on the latest revision of City of Sidney Engineering Standards.

### **Driveway Pavement**

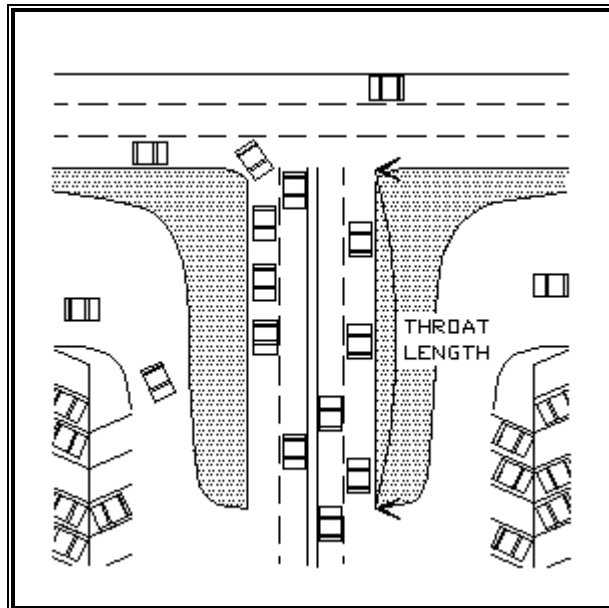
Pavement details of any driveway should be based on the latest revision of City of Sidney Engineering Standards.

## Driveway Storage Lengths (Throat Lengths)

Adequate driveway storage length or “Throat Length” as shown in Figure 4-1 is necessary for access points to:

- Enable vehicles entering highway to enter at comfortable distance between vehicles, and
- Prevent spill back onto the development internal road system

Figure 4-1: Location of Driveway Throat



In general, traffic volume is the main controlling factor in evaluating storage lengths. Storage requirements should be based on the peak highway traffic hours, or the peak hour of the generator, whichever is larger. The latest *Trip Generation Manual*, Published by the Institute of Transportation Engineers (ITE), should be used as a tool to determine the peak hour traffic volumes of the generator. After determining traffic volumes, storage lengths can be computed using the latest edition of the *Location and Design Manual: Volume One* by ODOT. Some general requirements are suggested for storage lengths of each driveway based on the type and size of the generator, but these requirements may vary according to the projected volume of the individual driveway.

1. Storage lengths of at least 50 ft. should be provided for minimum-use and minor traffic generators.
2. Storage lengths of at least 150 ft. with two (2) exit lanes or more should be provided for medium traffic generators.
3. Storage lengths of greater than 200 ft. with two (2) exit lanes or more should be provided for major traffic generators.

## Variances

In circumstances where the City Engineer find that approved access requirements may result in **extraordinary hardships** or **practical difficulties**, the City Engineer may allow variances to the access requirements.

In order to review a request for a variance, the City Engineer may require a Traffic Impact Study or other information or studies. For any variance, the applicant should submit a written petition to the City Engineer. The City Engineer will grant a variance whenever it is determined that all of the following conditions are met:

1. The granting of the variance would not result in undue delay or congestion or unsafe conditions to the motoring public using the roadway.
2. The applicant must **provide proof of unique or special conditions** that would not allow the development to procure reasonable access as per the guidelines. Please note that the City Engineer **will not** grant a variance if any of the following can be applied to the proposed access:
  - Where reasonable alternate access by an existing road or street other than the primary road is possible.
  - Where indirect or restricted access can be obtained.
  - Where reasonable engineering or construction solutions can be applied to mitigate the condition.
3. The applicant must provide proof that access is essential to the development needs and clear documentation of the practical difficulty or unnecessary hardship. No variance should be granted where such difficulty or hardship is self-created in the opinion of the City Engineer.

Upon receipt of relevant information, facts, documentation, and necessary data and /studies, the City Engineer will review the information and inform the applicant concerning its finding and conclusions on granting a variance.

## Traffic Impact Studies

A traffic impact study may be an integral part of the access permit process. It should generally deal with site-generated traffic, the directional distribution of traffic and the assignment of the site traffic onto existing and/or proposed roadways. In certain circumstances, for Traffic Impact Studies, the City Engineer may require the inclusion of off-site traffic from other proposed developments that will impact area roads.

A Traffic Impact Study is required when:

1. All developments that can be expected to generate more than 250 peak-hour vehicle trips on the adjacent street, or for a lesser volume when the developments are in high accident locations, currently congested areas or areas of critical local concern.
2. When the original traffic impact study is more than three (3) years old, access decisions are still outstanding, and/or changes in development have occurred in the site conditions.

The study is to be prepared under the supervision of qualified traffic engineers with specific experience in the preparation of traffic impact studies.

The studies should be completed in accordance with the standards published by the Institute of Transportation Engineers in its latest *Manual of Transportation Engineering Studies*.

### **Access Permit / Deny Process**

Upon review of all relevant information provided by the applicant for an access permit, the City Engineer has the right to either grant or deny the permit. A detailed process to be followed by the City Engineer for access approval/denial is shown in a flow chart as Figure 5-5. The process considers: (1) the size of development for which access is required, (2) the functional and access classification of the roadway to which access is requested, (3) the type of access requested to the allowable levels and types of access, (4) highway and intersection capacity, (5) geometric design considerations, (6) the type of proposed traffic control, (7) relevant spacing standards along with minimum lot frontage criteria, and (8) the need to, if required, apply a variance to the permit criteria.

If the application is approved with conditions, the applicant shall resubmit the plan with the conditional changes made. The plan, with submitted changes, will be reviewed within 10 working days and either approved or denied.

If the access permit is denied, the City Engineer should provide a written accounting detailing why the application has been rejected.

### **Appeal Process**

If the applicant does not agree with City Engineer's decision on the access permit, the applicant may appeal to the City Manager.

### **Permit Review Process Flow Chart**

The permit review process for the City of Sidney is shown in Figure 5-2.

Figure 5-2: Permit Review Process

