



## NIAGARA PARKS COMMISSION

### Residential Driveways Information Sheet:

Location, Design and Construction on Side Roads Outside Municipalities

- Location
- Grade
- Sight Distance
- Drainage
- Construction
- Questions and Answers
- Contacts

This information is provided to assist you in the construction of your Residential driveway and to help you determine:

1. Best location on your property for an access.
2. What you need to look for in developing a safe access.
3. Construction standards for a driveway.

The guidelines outlined in this information sheet apply **ONLY** to Residential driveways located on the Niagara Parkway or Service Roads. Different guidelines apply to commercial, industrial or multi-family developments.

There are a few things that you must be aware of before constructing your driveway.

You will need to decide where to construct your driveway. Once you've decided on your access location, you will need to consider a few safety issues to ensure it will work well and not create a safety hazard for other motorists.

There are five main issues to consider when developing a safe access.

Remember these are for your safety and the safety of other road users.

#### **1. LOCATION**

A residence can have only one access off a Niagara Parks Commission maintained road.

First, you should consider where you are going to position your home and how your driveway will fit into the overall layout. Think about all the seasons. What will it be like in the winter months? Will the location serve as an efficient access to your home?

It is a requirement to provide parking for two vehicles on your property.

Driveways must be located in front of your own property.

Finding the best location along the frontage of your property is very important, remembering that it will provide access to your property for the future.

## **2. GRADE**

Grade is the change in elevation of land. When you develop an access, the grade of your driveway should be fairly level for at least the length of your car with a bit of extra space for larger vehicles. This is important during icy conditions. You don't want to slide onto the road when you try to stop.

If your property is higher than the road, you are required to create a small swale or depression to direct surface water from your driveway to the ditch. This will help prevent water from running onto the road and creating black ice when temperatures drop. A combination of a slight grade and the swale or depression will also help keep access debris off of the road as a result of heavy rains. It is the responsibility of the access owner to clean debris from their driveway off of the road.

## **3. SIGHT DISTANCE**

Imagine sitting in your car and you are about to enter the road. You look up and down the road before proceeding. The point where you observe the road is the sight distance. This is important because you need to see approaching traffic and they need to see you.

Required sight distances are dependent upon posted speed limits. Posted speed limits are the white regulatory signs and not the yellow curve advisory signs. Below is a table showing required sight distances for different posted road speed limits.

<b>Posted speed of road – km/hr</b>	<b>Required sight distance – meters</b>	<b>Required sight distance – feet</b>
<b>40</b>	<b>80</b>	<b>260</b>
<b>50</b>	<b>100</b>	<b>330</b>
<b>60</b>	<b>120</b>	<b>395</b>
<b>70</b>	<b>140</b>	<b>460</b>
<b>80</b>	<b>160</b>	<b>525</b>

At locations where sight distance is poor, you may need to clear some of the vegetation to help you achieve the required sight line distance. Remember the vegetation may grow back and you will have to clear it from time to time. It is the responsibility of the access owner to receive permission from the landowner to clear vegetation other than what is needed for the primary access construction.

## 4. DRAINAGE

Drainage is the water that runs from adjacent properties, accesses and the road into the ditch at the side of the road.

Before you construct your access, you need to determine if there is a defined ditch line along your property. If there is an existing ditch, you will need a culvert. Remember that regular road ditch maintenance done by the Niagara Parks Commission may result in an improved or deeper ditch. We require that you provide a minimum 400-mm (16-inch) diameter corrugated steel pipe (CSP). Near river areas or areas of high rain runoff, a larger diameter pipe will be required.

The culvert should be longer than the width of your driveway. The standard residential driveway is six meters (20 feet). The culvert length should be a minimum of nine meters (30 feet) to allow for the driveway fill on either side of the driveway.

## 5. CONSTRUCTION

Now you know where to locate a safe driveway by addressing sight distance and drainage.

Here are the standards for constructing your driveway:

- When the property is higher than the road, the grade should not be greater than 2% (0.2 meter) for the first 10 meters (30 feet) and there should be a slight swale at the ditch line.
- Driveways are six meters (20 feet) in width at the junction with the road.
- Culverts must be corrugated steel pipes with a minimum size of 400-mm (16 inches) by nine meters (30 feet) in length.
- The culvert should be placed slightly below the invert or lowest point in the ditch. Consider the implications of ditch maintenance and cleaning by the Niagara Parks Commission.
- The culvert should be covered with granular material to a depth equal to half the diameter of the culvert. For example, if the culvert is 400-mm (16 inches) in diameter, the depth of the cover must be a minimum of 200-mm (8 inches) in depth. This amount of cover is necessary to protect the culvert from collapse.
- Sight distance as per Table 3.1 for the particular posted speed of the road you are accessing.
- Good gravels are to be used in the construction of the driveway as per the attached copy of specifications.

### **Caution:**

Digging into steep slopes may cause the slope to fail and fall onto the road or undermine your building area. If,

- The access is located in an unsafe location with inadequate sight lines;
- The access construction is resulting in drainage or debris running onto the road; or
- The access is interfering with roadway and ditch drainage,

you will be required to relocate and/or fix your access, or the NPC will relocate and/or fix your access and charge you for the costs.

Obtain information on any buried utility. **“Call Before You Dig”:**  
**Ontario One Call 1-800-400-2255**

**Attachments (PDF files):**

- Driveway Plan Diagram: Location, Design and Construction/Residential Driveways on Side Roads
- Profile Diagram: Location, Design and Construction/Residential Driveways on Side Roads
- Culvert Specifications/Driveway Cross Section

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**Questions and Answers**

Question: Am I responsible for maintenance of my access; including culvert maintenance and replacement and snow clearing in winter?

Answer: Yes. An individual who has an access to a NPC road is responsible for all maintenance including maintaining or replacing culverts under the access adjacent to the highway, clearing snow from highway plowing operations at the access entrance; and maintaining the access to ensure drainage, gravels, snow or other material do not spill onto the highway.

Question: Why can't I just put an access wherever I choose on my property?

Answer: The location of your access is important for several reasons. First and most important it is to serve your residence, so the location must be compatible with where you want to position your home. Some other considerations are sight distance, the grade of your access into your property, and construction costs. NPC personnel can give you some advice in this regard if you have any questions.

Question: The information sheet talks about improving sight distance by clearing the vegetation, what if there are large trees and how much clearing will I required to do?

Answer: This requirement is to improve your sight lines when entering and exiting your property. In some cases, brush within the highway right of way must be removed in order to achieve a better sight line. There are some circumstances where this cannot be achieved such as where there are larger well-established trees within the right of way or where the trees or vegetation may be on your neighbour's property. It's important to know where your property lines are.

Question: What if the vegetation is on the highway right of way in front of my neighbour's property, can I remove it?

Answer: The right of way is public land and that would allow you to work within the right of way. However, as your neighbours may have some concerns about your working in front their property, it would be mandatory that you contact them first and get their agreement to brushing of the right of way.

Before you remove brush, you must check with the NPC Tree Department to see if brushing as part of the regular maintenance program is planned for your area.

Question: If there is a ditch in front of my property and the water only runs during the spring, do I still need to install a culvert?

Answer: Yes, the culvert is still required. There can be extensive damage to the road and your driveway in a short time if the culvert was not put in place.

Question: Can I use plastic pipe for my culvert?

Answer: Double walled plastic pipe can be used, but the construction practices will vary in the installation. The culvert must have more gravels and fill on top of the pipe to buffer it from the weight of vehicles travelling over the pipe. It should be noted that metal pipe is preferred due to its reliability and strength.

Question: Where can I find information on driveway construction specifications?

Answer: The drawing attached to the information sheet is self-explanatory. If you still have questions, there are contractors that can assist you in the development of your driveway. NPC staff can also assist you.

Question: What happens if I do not construct my driveway properly?

Answer: The NPC staff routinely monitor the road system will advise you of the deficiency and ask that you repair it. If the repairs are not done within a reasonable time frame, the NPC may repair your driveway and bill you for costs of the works. This will only be done when the driveway is constructed to a degree that causes serious concerns for traffic safety, drainage issues and the integrity of the NPC road system.

Question: Is there someone who I can speak to about constructing my driveway?

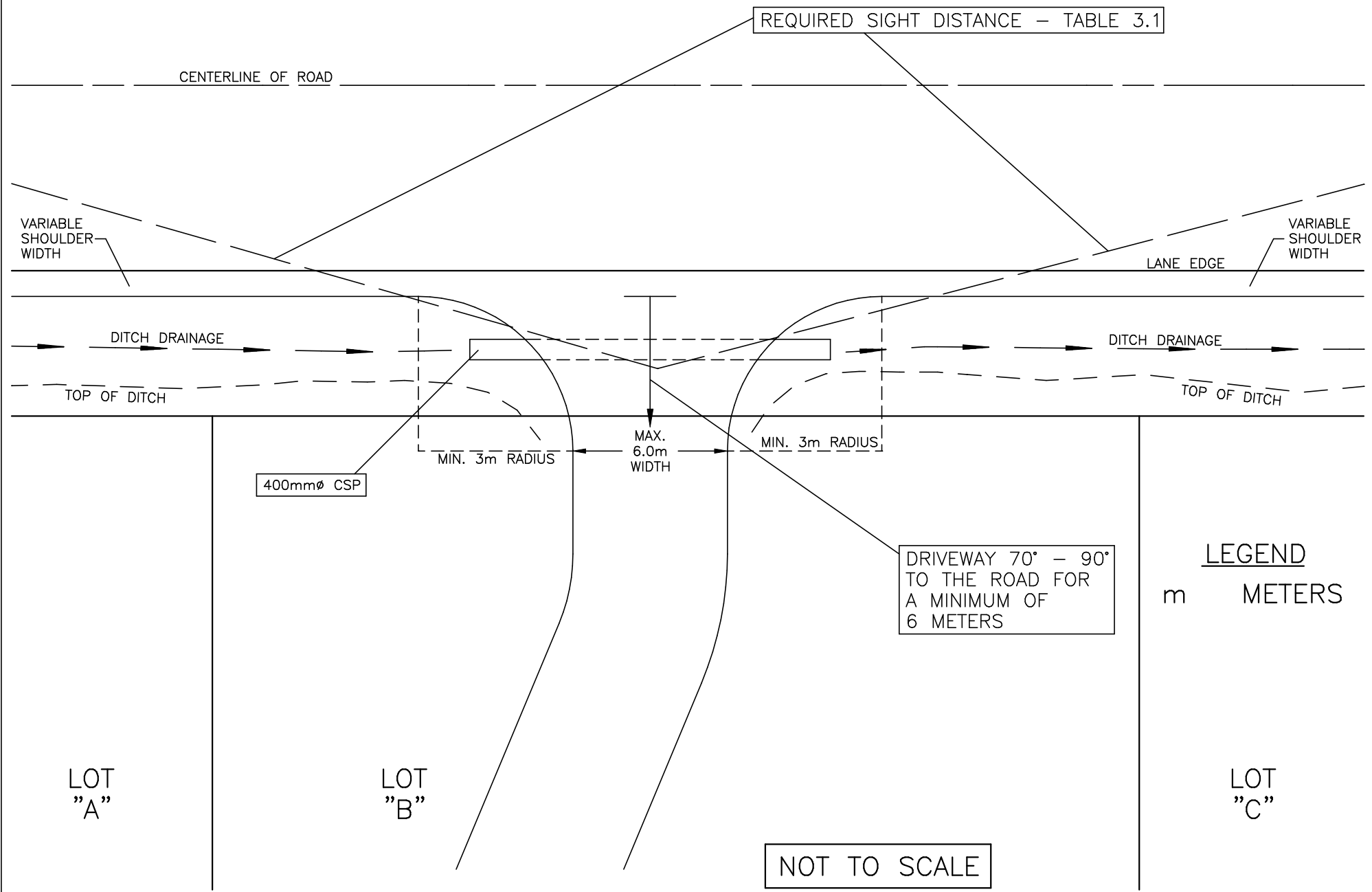
Answer: You can contact the NPC for further information.

Question: How many accesses can I have off a NPC road?

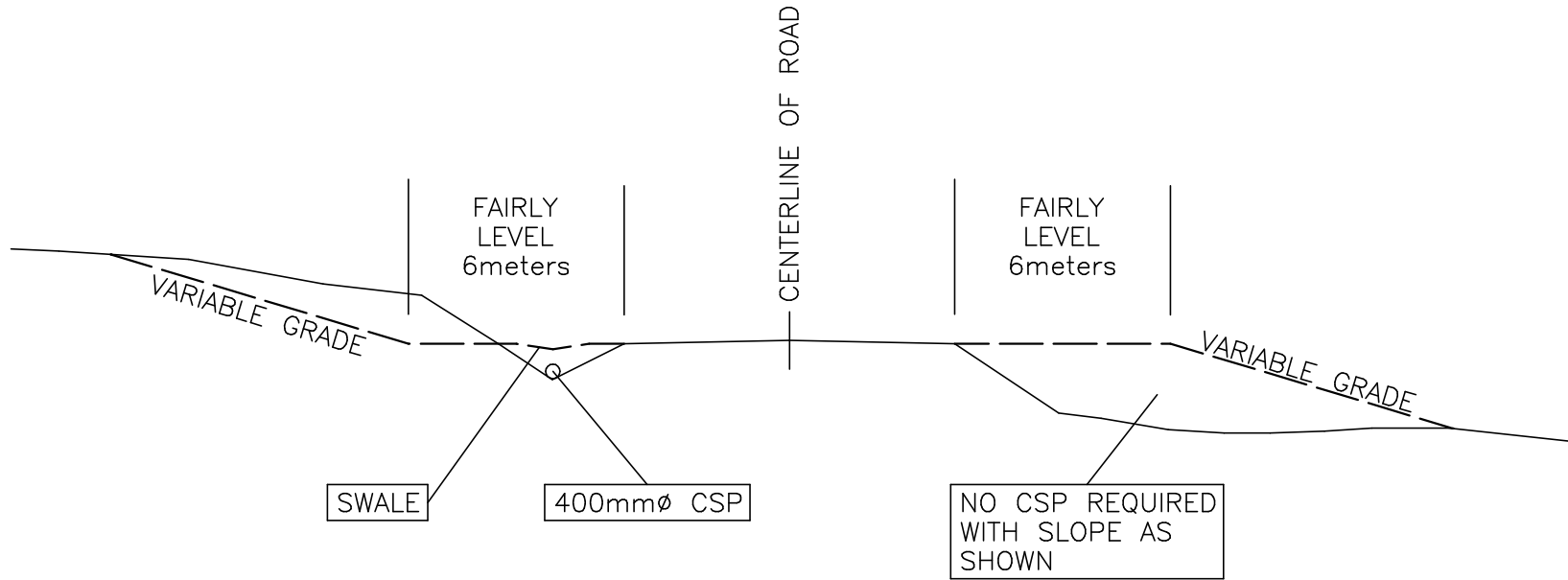
Answer: A residence can have only one access off a NPC maintained road.

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# LOCATION, DESIGN AND CONSTRUCTION RESIDENTIAL DRIVEWAYS ON SIDE ROADS



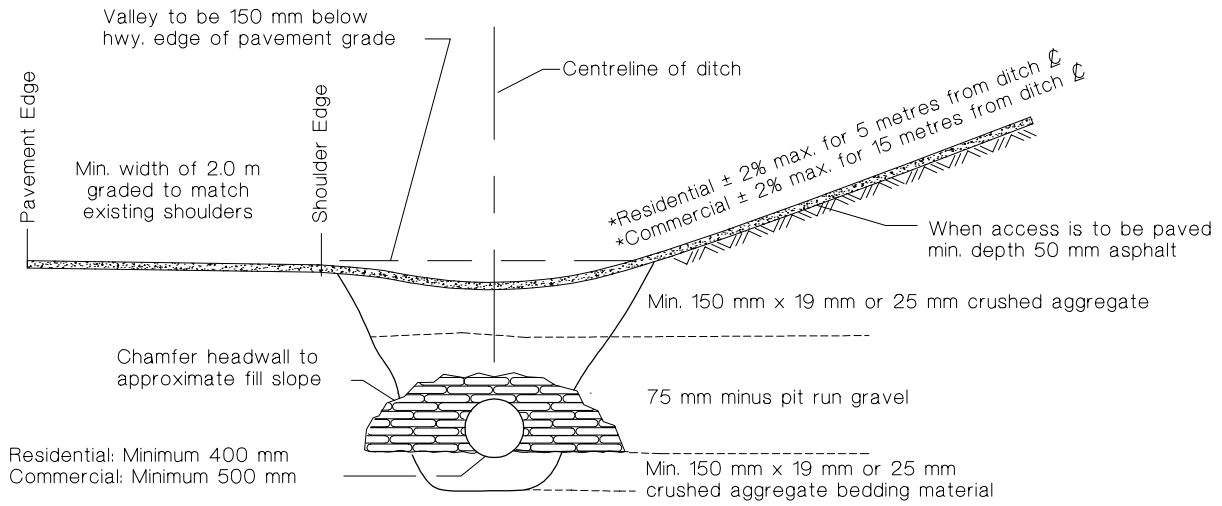
# LOCATION, DESIGN AND CONSTRUCTION RESIDENTIAL DRIVEWAYS ON SIDE ROADS



NOT TO SCALE

DATE: .....

## Culvert Installation



\*Note: Curb and gutter profile, 5 metres or 15 metres measured from back of curb

## Driveway Cross Section

