



## RESIDENTIAL DRIVEWAYS

### Definition

All driveways for the purpose of serving the residents of one single-family dwelling, two single-family dwellings, or one two-family dwelling shall be deemed to be a residential driveway.

### Design Features

No portion of the driveway entrance within the highway right-of-way shall have a grade greater than 10% (1' vertical in 10' horizontal).

All drives shall enter perpendicular to the existing roadway.

Typical driveway design features, including geometrics, can be found in Appendix A. The applicant shall follow these standards unless approval to do otherwise is given by the County Highway Engineer.

### Drainage Requirements:

- The County Highway Engineer or its agents shall determine whether or not a culvert is required and, if required, the diameter and length of the culvert. The applicant shall furnish, install and maintain the culvert so determined.
- Culverts shall be installed in line with and on the same grade as the road ditch.
- No culvert of less than 12" nor less than 30' in length diameter may be installed.
- All culverts should be corrugated metal pipe (CMP) made with steel of the proper gauge corresponding to its diameter, as shown below. ALT2 or SLCPP are also acceptable materials. Single wall plastic pipe will not be allowed.

<u>Diameter</u>	<u>Gauge No.</u>
12" - 24"	16
30" - 36"	14
42" - 54"	12
60" - 72"	10

- If the applicant wishes to install a culvert of material other than that above, approval must be obtained by the County Highway Engineer prior to installation.

### Location

All portions of a residential driveway, including the radii, shall be located entirely within the applicant's property lines extended at right angles to the centerline of the road. This requirement does not apply to joint driveways (see below).

No portion of a residential driveway, including the radii, shall be located closer than 50 feet to the nearest right-of-way line of an intersecting roadway.

No portion of two residential driveways serving the same property, including the radii, shall be located closer than 150 feet, measured parallel to the centerline of the road.

Number of Driveways

One driveway is allowed for residential property, held in one piece, with frontage less than or equal to 150 feet. One additional residential driveway may be permitted where frontage exceeds 150 feet.

Two residential driveways may be permitted, in lieu of the above requirement to serve a circle driveway if the frontage of the property is 100 feet or more.

Joint Driveway

When both property owners abutting a common property line agree, they may construct a joint residential driveway, which shall have a minimum width of 20 feet and a maximum width of 30 feet.

Driveway Surface

Driveways fronting on a hard surface roadway should be surfaced with a material, which is equal to or better than the surface of the roadway which it joins. At a minimum, driveways shall be surfaced with at least six inches of processed road gravel.

Clear Vision

A clear vision area, as shown in Figure 1, shall be provided at all residential driveways entering onto a roadway under the jurisdiction of the Mason County Road Commission.

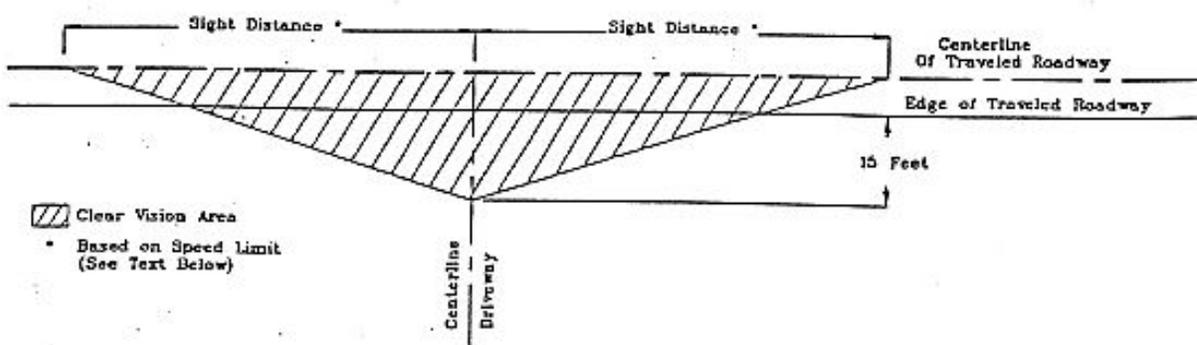


Figure 1. Clear vision requirement for residential driveways.



To provide for adequate vision, all obstructions must be removed within the clear vision area. Sight distance, looking each way from the driveway centerline, shall be measured from an eye height of 3.5 feet to an object 3.5 feet above the roadway centerline. The eye height of the driveway centerline should be positioned 15 feet from the edge of the traveled roadway.

The following minimum sight distances, according to the posted regulatory speed limit, are required for the clear vision area.

25 MPH - 250 ft.	45 MPH - 450 ft.
30 MPH - 300 ft.	50 MPH - 500 ft.
35 MPH - 350 ft.	55 MPH - 550 ft.
40 MPH - 400 ft.	

In the absence of a posted regulatory speed limit, 550 feet of sight distance is required.



## FARM-FIELD DRIVEWAYS

### Definition

Any driveway serving cultivated fields, timberland or undeveloped land not used for industrial, commercial or residential purposes shall be designated a farm-field driveway.

### Design Features

No portion of the driveway entrance within the highway right-of-way shall have a grade greater than 10% (1' vertical in 10' horizontal).

All drives shall enter perpendicular to the existing roadway.

Typical driveway design features, including geometrics, can be found in Appendix A. The applicant shall follow these standards unless approval to do otherwise is given by the County Highway Engineer.

### Drainage Requirements:

- The County Highway Engineer or its agents shall determine whether or not a culvert is required and, if required, the diameter and length of the culvert. The applicant shall furnish, install and maintain the culvert so determined.
- Culverts shall be installed in line with and on the same grade as the road ditch.
- No culvert of less than 12" diameter nor less than 30' in length may be installed.
- All culverts should be corrugated metal pipe (CMP) made with steel of the proper gauge corresponding to its diameter, as shown below. ALT2 or SLCPP are also acceptable materials. Single wall plastic pipe will not be allowed.

<u>Diameter</u>	<u>Gauge No.</u>
12" - 24"	16
30" - 36"	14
42" - 54"	12
60" - 72"	10

If the applicant wishes to install a culvert of material other than that above, approval must be obtained by the County Highway Engineer prior to installation.

### Location

All portions of a farm-field driveway, including the radii, shall be located entirely within the applicant's property lines extended at right angles to the centerline of the road.

No portion of a farm-field driveway, including the radii, shall be located closer than 50 feet to the nearest right-of-way line of an intersecting roadway.

Driveway Surface

All farm field driveways shall be gravel surfaced and slopes shall be seeded or sodded to provide plant growth, which will stabilize the driveway and minimize erosion.

Clear Vision

A clear vision area, as shown in Figure 2, shall be provided at all farm-field driveways entering onto a roadway under the jurisdiction of the Road Commission for Mason County.

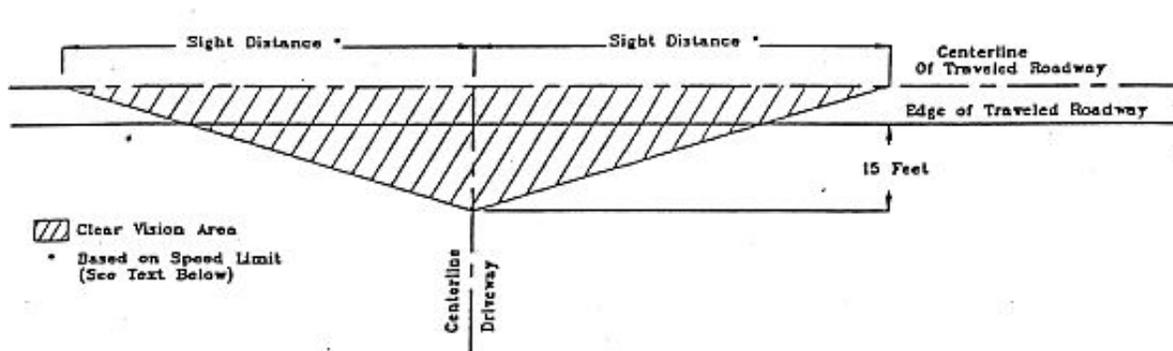


Figure 2. Clear Vision requirement for farm-field driveways.

To provide for adequate vision, all obstructions must be removed within the clear vision area. Sight distance, looking each way from the driveway centerline, shall be measured from an eye height of 3.5 feet to an object 3.5 feet above the roadway centerline. The eye height at the driveway centerline should be positioned 15 feet from the edge of the traveled roadway.

The following minimum sight distances, according to the posted regulatory speed limit, are required for the clear vision area.

25 MPH - 250 ft.	45 MPH - 450 ft.
30 MPH - 300 ft.	50 MPH - 500 ft.
35 MPH - 350 ft.	55 MPH - 550 ft.
40 MPH - 400 ft.	

In the absence of a posted regulatory speed limit, 550 feet of sight distance is required.



## COMMERCIAL DRIVEWAYS

### Definition

Any driveway providing access to land, which is used for industrial, institutional or commercial purposes shall be deemed to be a commercial driveway. Determination by the County Highway Engineer, as to whether or not a specific use shall be designated commercial, shall be final and binding.

### Design Features

All applications for commercial driveway permits must be accompanied by two (2) copies of a site plan.

No portion of the driveway entrance within the highway right-of-way shall have a grade greater than 5% (1' vertical in 20' horizontal).

All drives shall enter perpendicular to the existing roadway, with the entering and exiting radii clearly defined.

The applicant shall provide a right-turn lane and taper and/or passing lane if the County Highway Engineer determines that such lanes are required to minimize congestion or hazard on the roadway caused by vehicles entering the applicant's driveway. Factors associated with this determination may include volumes, speeds, vehicle type and roadway alignment.

Typical driveway design features, including geometrics, can be found in Appendix A. The applicant shall follow these standards unless approval to do otherwise is given by the County Highway Engineer. Design dimensions shown in Appendix A may be increased by the Road Commission depending on roadway or site characteristics, such as volumes, speeds and vehicle types.

### Drainage Requirements:

- Drainage calculations that indicate no additional storm water runoff will enter the Mason County Road Commission right-of-way from the development must be included on the site plan. Existing roadway drainage shall be maintained.
- Design of detention basins shall be based on a 10-year frequency design storm.
- No culvert of less than 12" diameter nor less than 30' in length may be installed.
- All culverts should be corrugated metal pipe (CMP) made with steel of the proper gauge corresponding to its diameter, as shown below. ALT2 or SLCPP are also acceptable materials. Single wall plastic pipe will not be allowed.

<u>Diameter</u>	<u>Gauge</u>
12" - 24"	<u>No.</u> 16
30" - 36"	14
42" - 54"	12
60" - 72"	10



- If the applicant wishes to install a culvert of material other than that above, approval must be obtained by the County Highway Engineer prior to installation.

### Location

All portions of a commercial driveway, including the radii, shall be located entirely within the applicant's property lines extended at right angles to the centerline of the road. This requirement does not apply to joint driveways (see below).

A commercial driveway may be located directly opposite an existing road intersection such that left turns oppose each other and are perpendicular to the major road. However, if offset, the centerline of a commercial driveway shall be located a minimum of 250 feet from the centerline of the nearest intersecting roadway for ADT less than 2,500. A commercial driveway shall be located a minimum of 350 feet from the centerline of the nearest intersecting roadway for ADT more than 2,500. This will hold true regardless of their orientation to each other (i.e., same side or opposing). In the event that special circumstances make this requirement unfeasible, in no case shall any portion of a commercial driveway, including the radii, be located closer than 150 feet to the nearest right-of-way line of an intersecting roadway. The Road Commission reserves the right to approve the location that is considered to be in the best interest of public safety.

No portion of two commercial driveways serving the same property, including the radii, shall be located closer than 150 feet, measured parallel to the centerline of the road.

### Type

A two-way commercial driveway shall be the standard driveway approach. Two-way commercial driveways may be either divided or undivided (see Appendix A). A two-way divided commercial driveway shall have a curbed island separating the entering and exiting movements.

A one-way commercial driveway is a special case and may be allowed depending on the site specific characteristics. A one-way driveway includes separate entering and exiting drives and shall be designed to facilitate the desired turning movements and to discourage prohibited movements. The installation and maintenance of directional signs shall be the responsibility of the applicant and shall be shown on the site plan.

### Number of Driveways

On each roadway, one driveway is allowed for each commercial property where frontage is less than or equal to 350 feet. One additional commercial driveway may be permitted where frontage exceeds 350 feet. The driveways will have a minimum spacing of 350' between drives.

### Joint Driveway

When both property owners abutting a common property line agree, they may construct a joint commercial driveway, which shall have the same design features as a two-way commercial driveway (see Appendix A for typical design features).

## Driveway Surface

All commercial driveways shall be surfaced from the edge of the traveled way to the right-of-way line with a material, which is equal to or better than the surface of the roadway which it joins. The County Highway Engineer shall determine whether or not a material is equal to or better than the surface of the roadway.

## Parking

The applicant will be required to prevent parking in the highway right-of-way. The Road Commission will not issue permits for commercial properties that encourage the stopping or standing of vehicles in the right-of-way or the backing of vehicles from the highway onto the sites.

## Clear Vision

A clear vision area, as shown in Figure 3, shall be provided at all commercial driveways entering onto a roadway under the jurisdiction of the Mason County Road Commission.

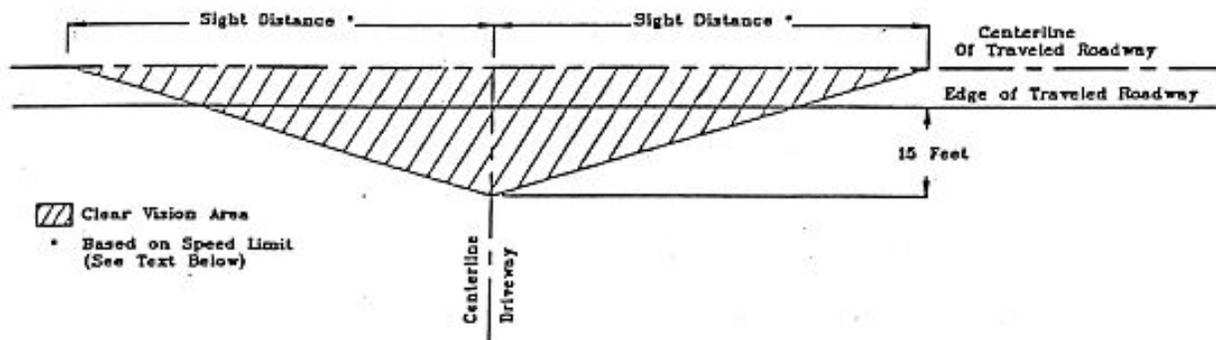


Figure 3. Clear vision requirement for commercial driveways

To provide for adequate vision, all obstructions must be removed within the clear vision area. Sight distance, looking each way from the driveway centerline, shall be measured from an eye height of 3.5 feet to an object 3.5 feet above the roadway centerline. The eye height at the driveway centerline should be positioned 15 feet from the edge of the traveled roadway.

The following minimum sight distances, according to the posted regulatory speed limit, are required for the clearvision area.

25 MPH - 300 ft.	45 MPH - 500 ft.
30 MPH - 350 ft.	50 MPH - 550 ft.
35 MPH - 400 ft.	55 MPH - 600 ft.
40 MPH - 450 ft.	

In the absence of a posted regulatory speed limit, 600 feet of sight distance is required.



## PUBLIC AND PRIVATE ROAD APPROACHES

### Definition

A public road shall be defined as a roadway to be dedicated to the public.

A private road shall be defined as a roadway that serves more than two single-family dwellings, or one two-family dwelling and is dedicated to the use of the property owner(s).

### Design Features

All applications for a public or private road approach permit must be accompanied by two (2) copies of a site plan. Included on the site plan shall be the name(s) of proposed public or private road(s).

No portion of a public or private road approach within the highway right-of-way shall have a grade greater than 5% (1' vertical in 20' horizontal).

All public or private road approaches shall enter perpendicular to the existing roadway.

The applicant shall provide a right-turn lane and taper and/or passing lane if the Road Commission determines that such lanes are required to minimize congestion or hazard on the roadway caused by vehicles entering the applicants public or private road approach. Factors associated with this determination may include volumes, speeds, vehicle type and roadway alignment.

Typical design features for public and private road approaches, including geometrics, can be found in Appendix A. The applicant shall follow these standards unless approval to do otherwise is given by the County Highway Engineer. Design dimensions shown in Appendix A may be increased by the Road Commission depending on roadway or site characteristics, such as volumes, speeds and vehicle types.

Other standards for public roads are found in Road Standards - Policies and Guidelines.

### Drainage Requirements:

- Drainage calculations that indicate no additional storm water runoff will enter the Mason County Road Commission right-of-way from the development must be included on the site plan.
- Design of detention basins shall be based on a 10-year frequency design storm.
- The Board of County Road Commissioners or its agents shall determine whether or not a culvert is required and, if required, the diameter and length of the culvert. The applicant shall furnish, install and maintain the culvert so determined.
- Culverts shall be installed in line with and on the same grade as the road ditch.
- No culvert of less than 12" diameter nor less than 30' in length may be installed.



- All culverts should be corrugated metal pipe (CMP) made with steel of the proper gauge corresponding to its diameter, as shown below. ALT2 or SLCPP are also acceptable materials. Single wall plastic pipe will not be allowed.

<u>Diameter</u>	<u>Gauge No.</u>
12" - 24"	16
30" - 36"	14
42" - 54"	12
60" - 72"	10

- If the applicant wishes to install a culvert of material other than that above, approval must be obtained by the County Highway Engineer prior to installation.

### Location

A public or private road approach may be located directly opposite an existing road intersection such that left turns oppose each other and are perpendicular to the major road. However, if offset, the centerline of a public or private road approach shall be located a minimum of 250 feet from the centerline of the nearest intersecting roadway. This will hold true regardless of their orientation to one another (i.e., same side or opposing).

### Approach Surface

All private road approaches shall be surfaced from the edge of the traveled way to the right-of-way line with a material, which is equal to or better than the surface of the roadway which it joins. The County Highway Engineer shall determine whether or not a material is equal to or better than the surface of the roadway.

Construction standards for public roads are contained in Road Standards – Policies and Guidelines.

### Clear Vision

A clear vision area as shown in Figure 4, shall be provided at all public and private road approaches entering onto a roadway under the jurisdiction of the Mason County Road Commission.

To provide for adequate vision, all obstructions must be removed within the clear vision area. Sight distance, looking each way from the centerline of the public or private road approach, shall be measured from an eye height of 3.5 feet to an object 3.5 feet above the existing roadway centerline. The eye height at the public or private road approach centerline should be positioned 15 feet from the edge of the traveled roadway.

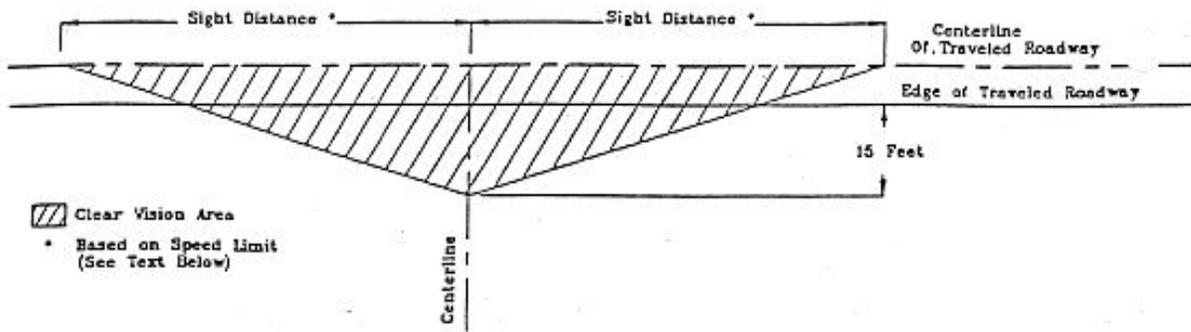


Figure 4. Clear vision requirement for public and private road approaches.

The following sight distances, according to the posted regulatory speed limit, are required for the clear vision area. Those values listed as standard represent the minimum requirements for sight distance where existing roadway and site characteristics allow. A permit will not be issued where the minimum allowable sight distance, based on speed conditions, cannot be achieved.

<u>Speed Limit (mph)</u>	<u>Required Sight Distance (feet)</u>	
	<u>Standard</u>	<u>Minimum Allowable</u>
30 or below	475	350
35	575	400
40	700	450
45	825	500
50	975	550
55	1150	600

In the absence of a posted regulatory speed limit, 1150 feet of sight distance is required.



## VARIANCE IN STANDARDS

A variance may be allowed by the Board only in cases involving practical difficulties or unnecessary hardship, when the record to the Board supports the following affirmative findings:

That the alleged hardship or practical difficulties, or both, are exceptional and peculiar to the property.

- 2) That the alleged hardship or practical difficulties, or both, which would result from a failure to grant the variance, include substantially more than inconvenience or inability to attain a higher financial return, or both.
  - I. That allowing the variance will result in substantial justice being done, considering the public benefits and the individual hardships that will be suffered by a failure of the Board to grant a variance.
- 4) That the condition and circumstances, which are the bases of the variance request, shall not be self-imposed.

If a variance has been granted, and the construction authorized with the variance has not been commenced within one year from the date of its approval, the grant of the variance shall be automatically withdrawn.

### III. VALIDITY

Each section, subsection, provision, requirement, regulation or restriction established by these rules for driveway permits or any amendments or additions thereto, is hereby declared to be independent, and the holding of any part to be unconstitutional, invalid or ineffective for any cause shall not affect nor render invalid the resolution or amendments or additions thereto as a whole or any other part thereof, except as to the particular part so declared to be invalid.

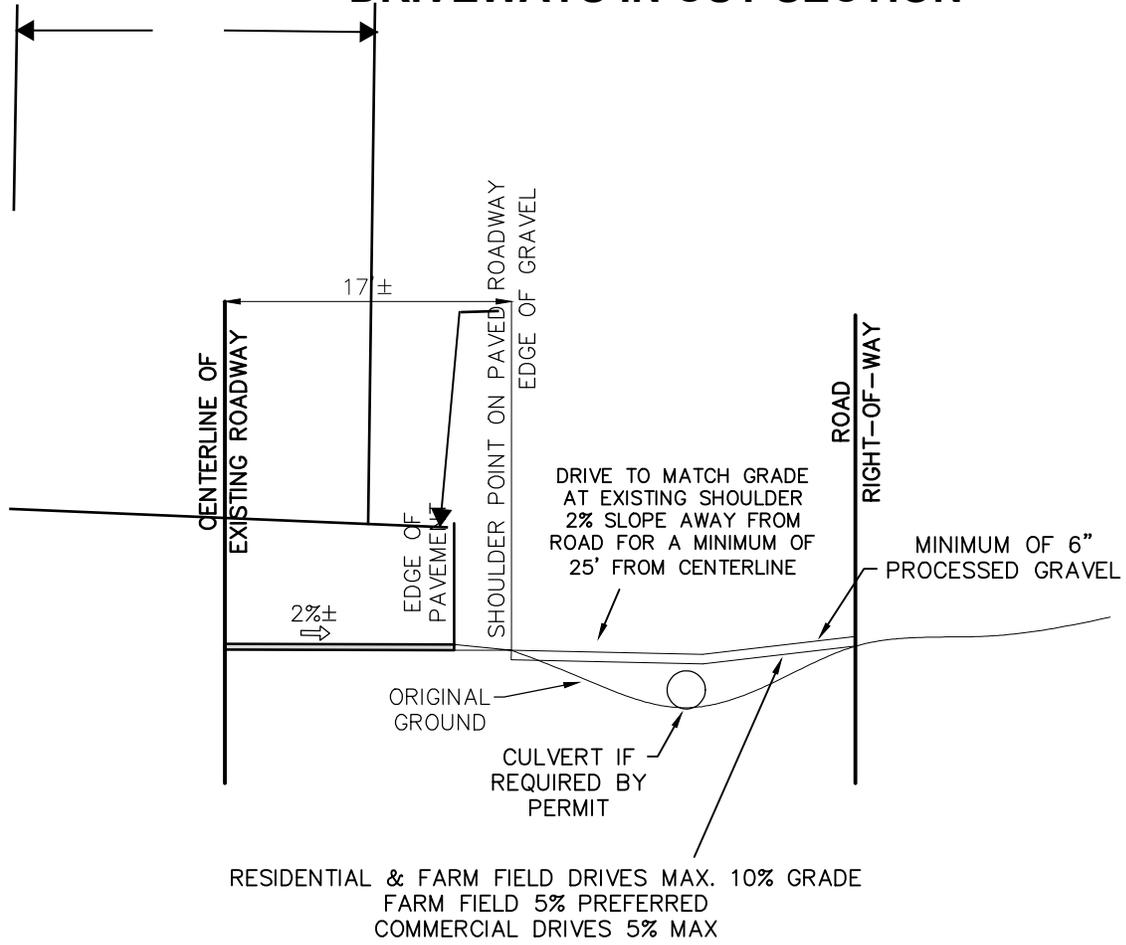
Adopted by the Board of the MCRC the 30<sup>th</sup> day of March 2023 and effective at this date.



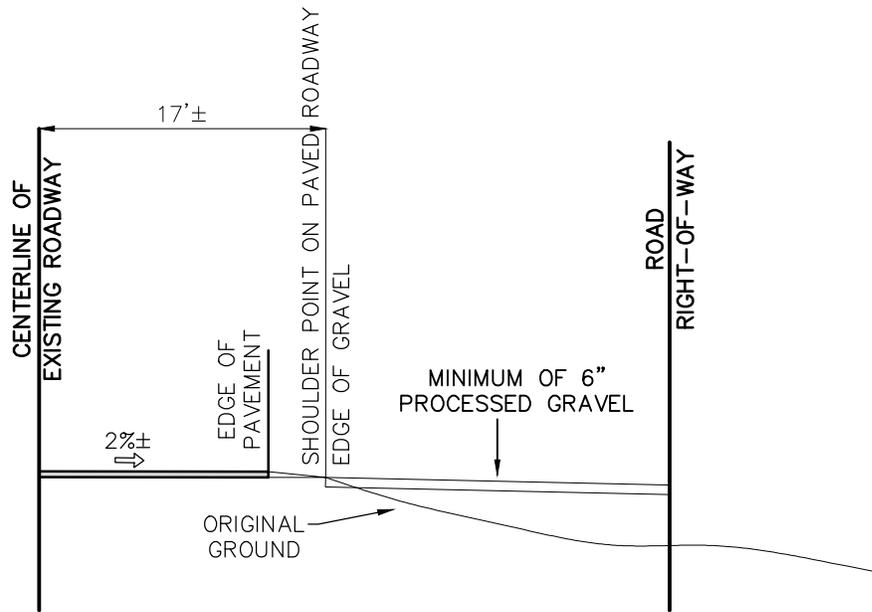
## APPENDIX A - TYPICAL DESIGN STANDARDS

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## DRIVEWAYS IN CUT SECTION



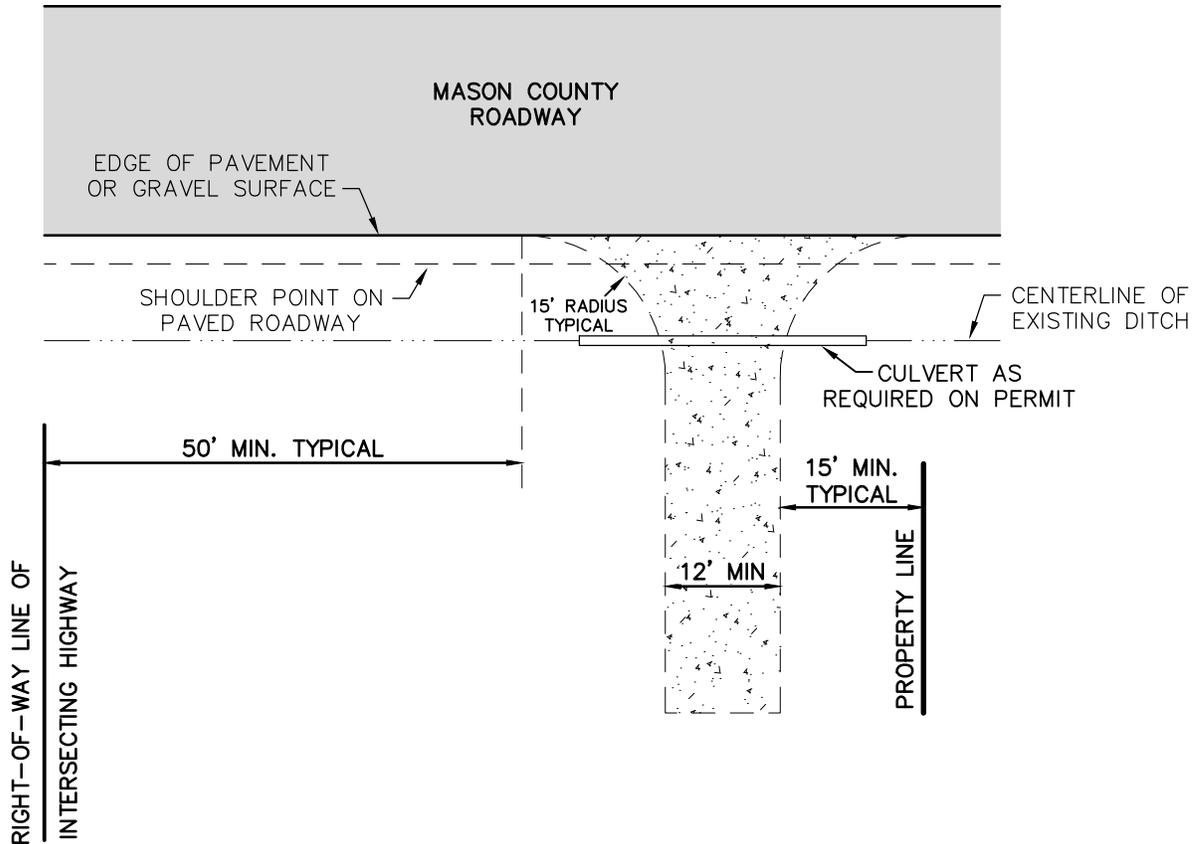
## DRIVEWAYS IN FILL SECTION

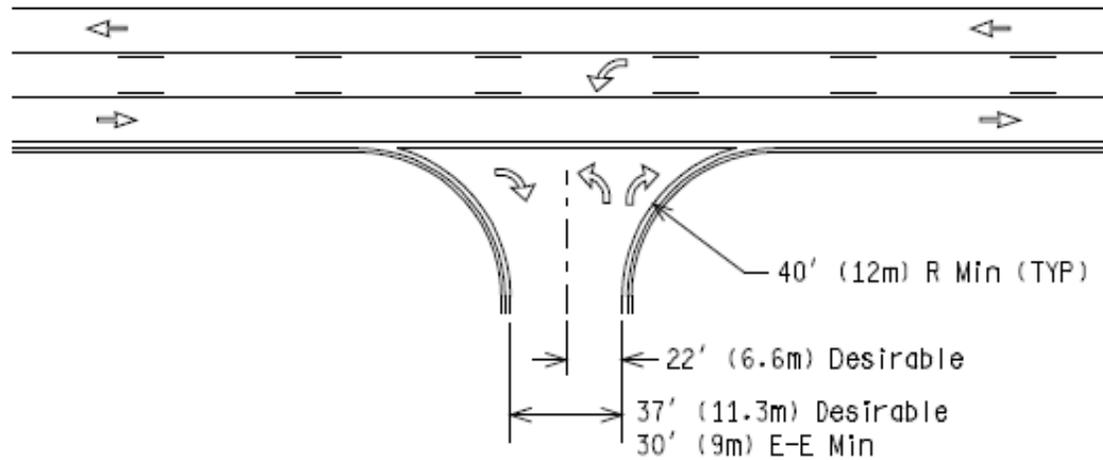


RESIDENTIAL & FARM FIELD DRIVES MAX. 10% GRADE  
 FARM FIELD 5% PREFERRED  
 COMMERCIAL DRIVES 5% MAX

\* 15' LANDING AREA  
 AT 2%± AT ROADWAY  
 MAY BE REQUIRED

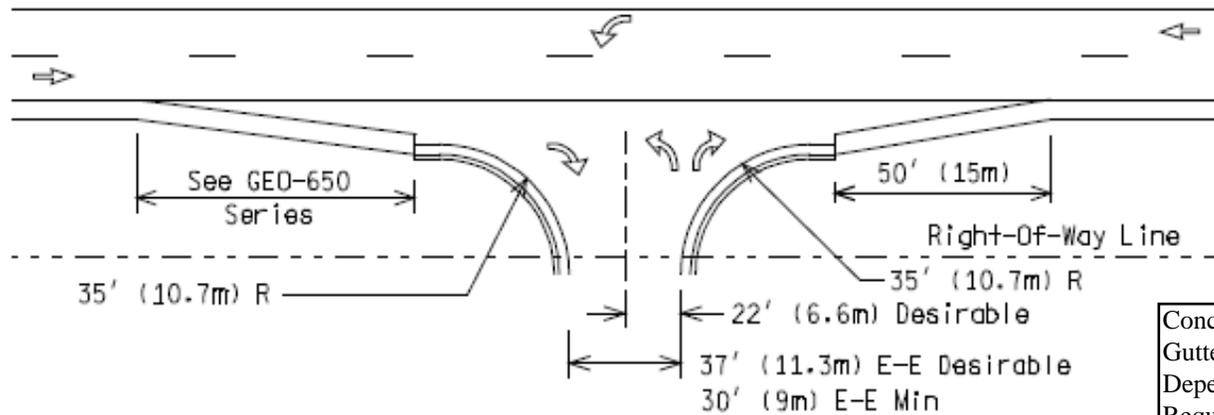
## RESIDENTIAL DRIVEWAYS





(For Three Lanes, Width Should Be  
39' (11.7m) Min)

TWO-WAY DRIVEWAYS ON HIGHWAYS WITH CURB

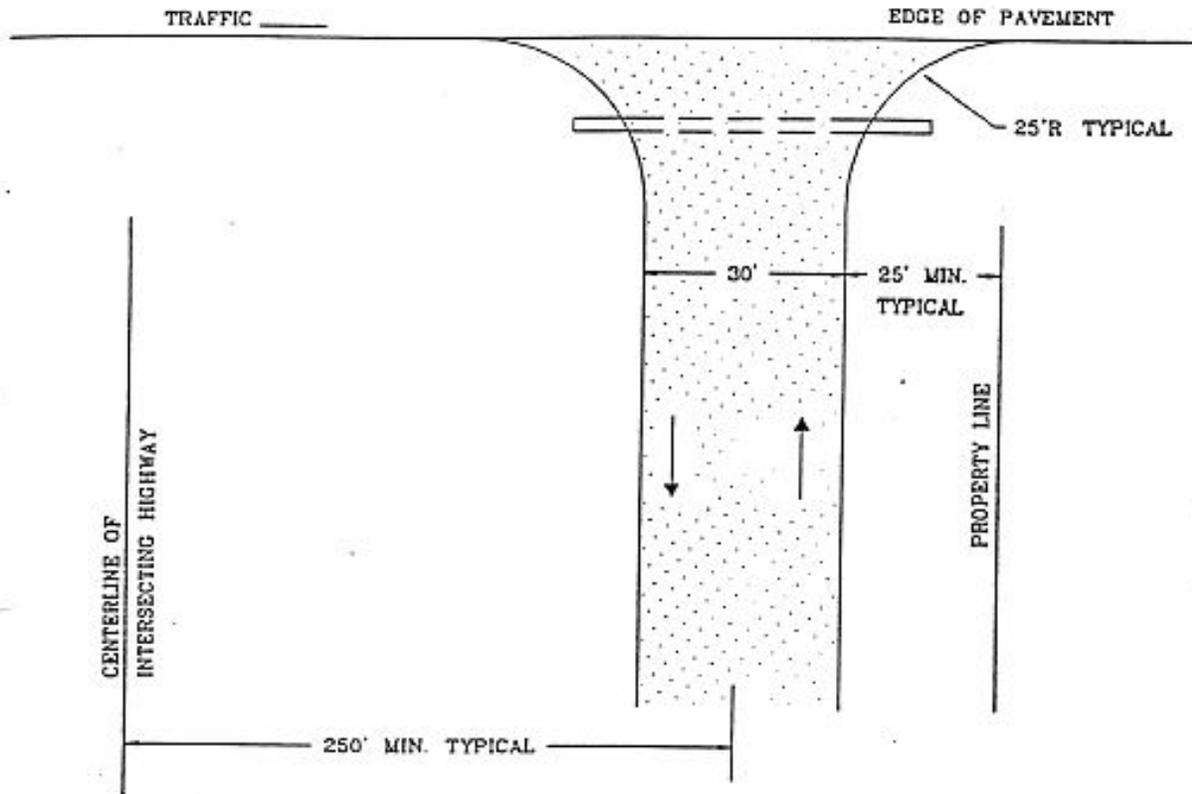


Concrete B2 Curb &  
Gutter may be omitted -  
Depending on Township  
Requirements & MCRC

TWO-WAY DRIVEWAYS ON HIGHWAYS WITHOUT CURB

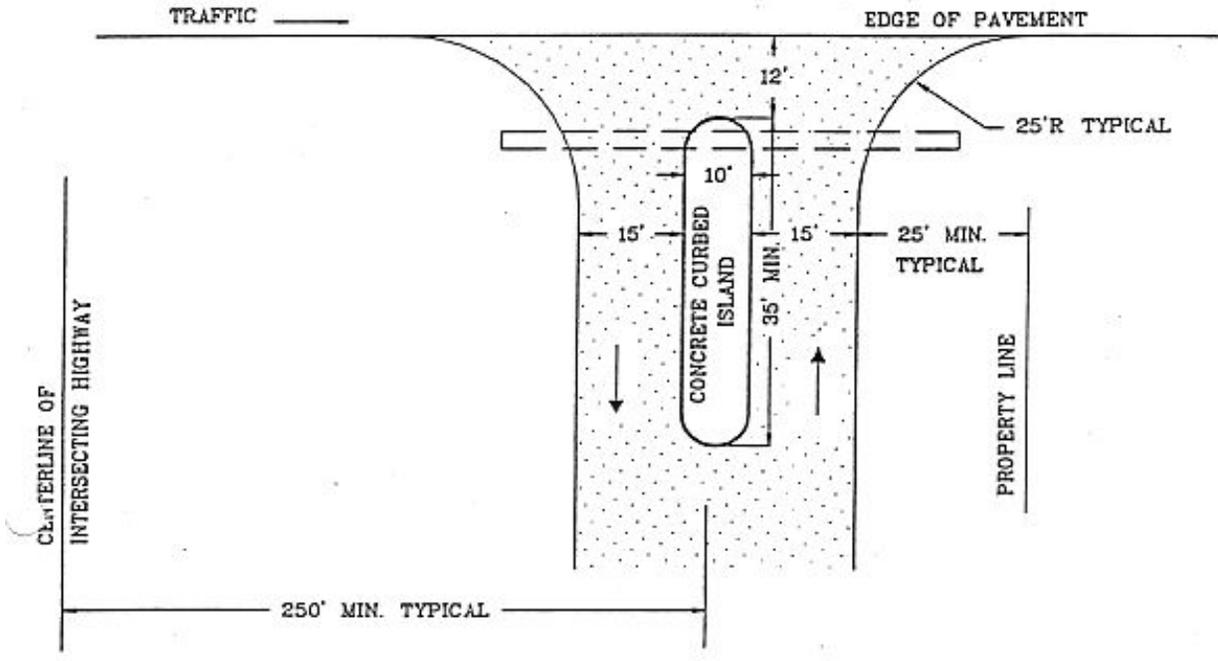


# TWO-WAY COMMERCIAL DRIVEWAY



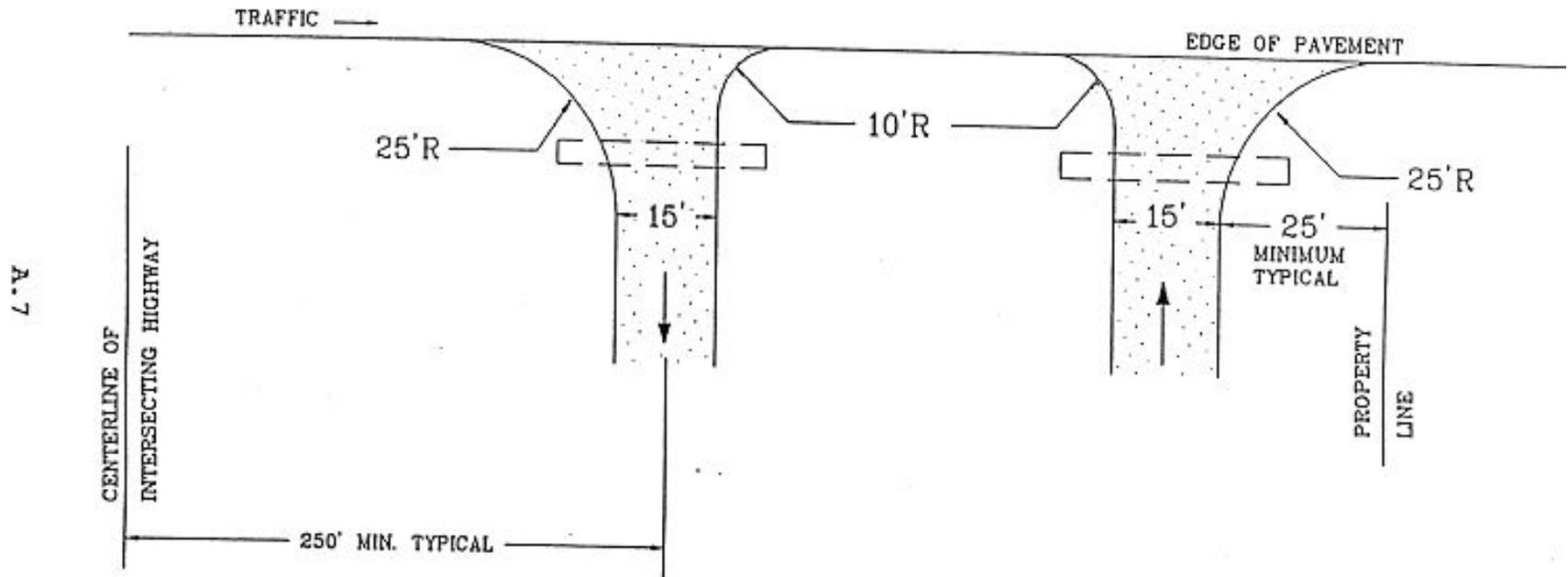


# TWO-WAY DIVIDED COMMERCIAL DRIVEWAY



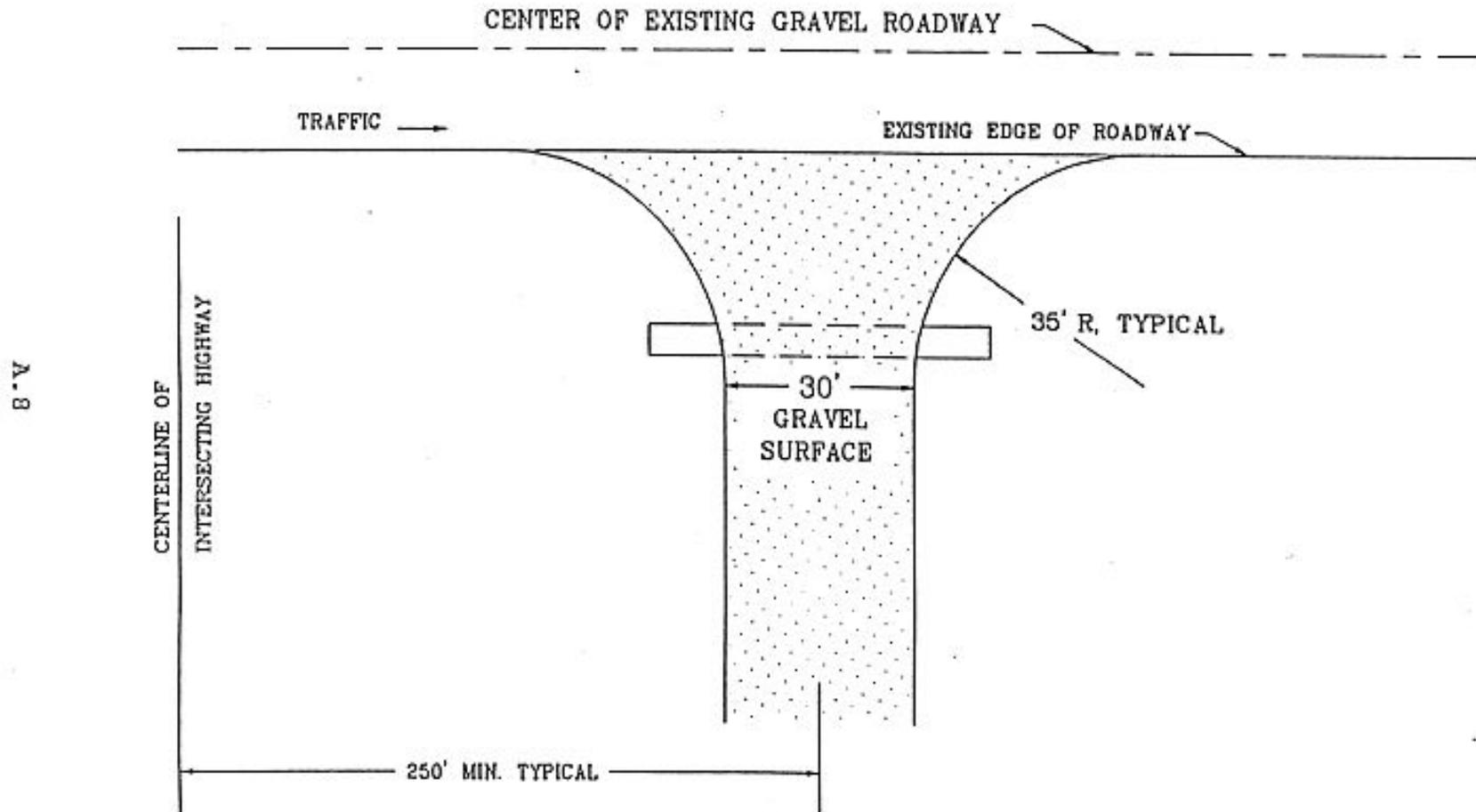


# ONE-WAY COMMERCIAL DRIVEWAY



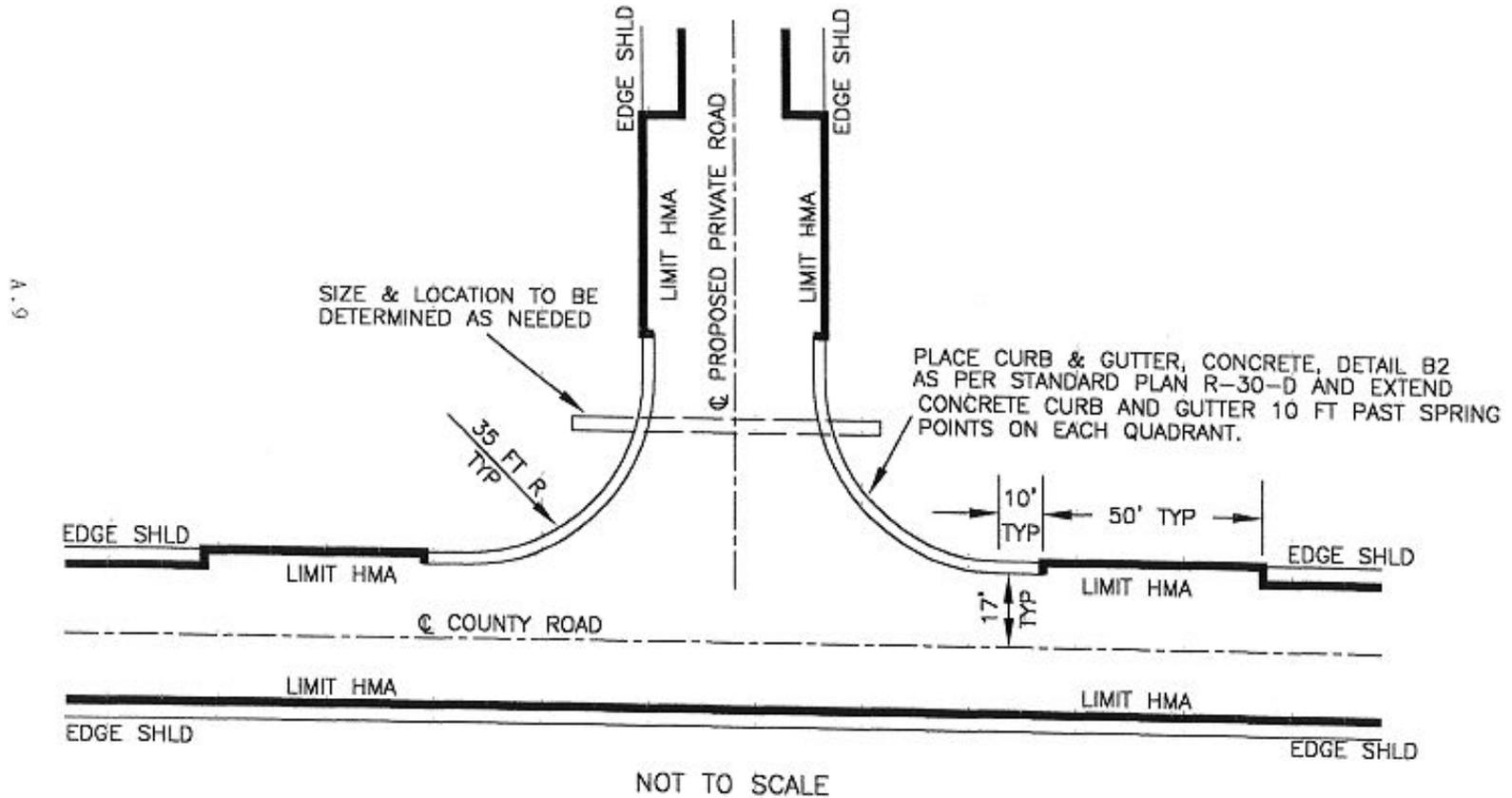


# PRIVATE ROAD ENTRANCE GRAVEL APPROACH





# PRIVATE ROAD ENTRANCE PAVED APPROACH

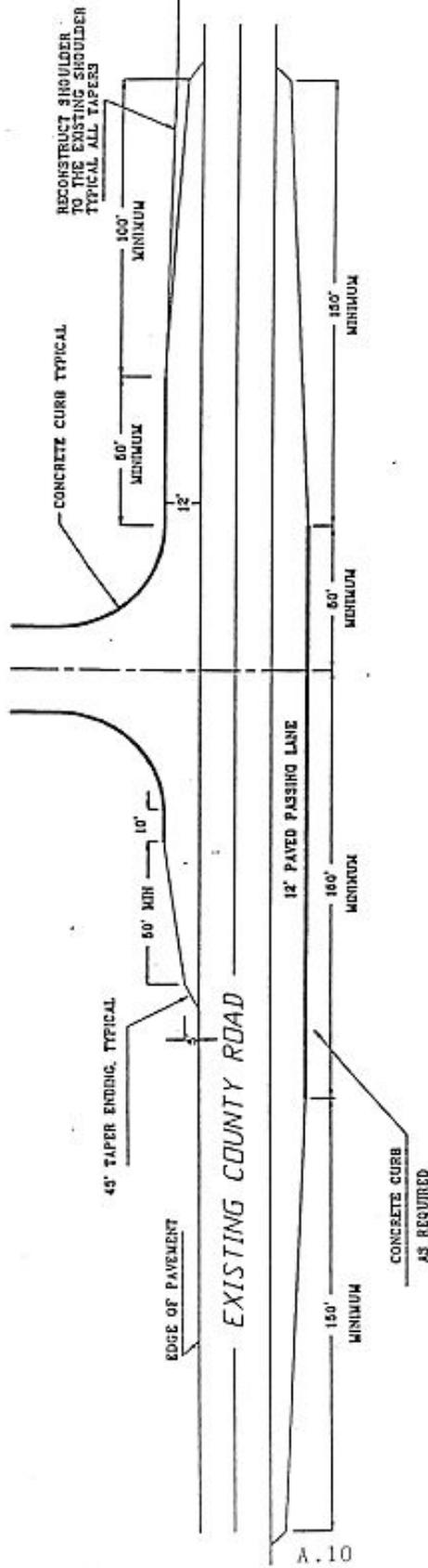


MONTCALM COUNTY ROAD COMMISSION



# PASSING LANE AND RIGHT-TURN LANE

## CONCRETE CURB AND GUTTER APPROACH

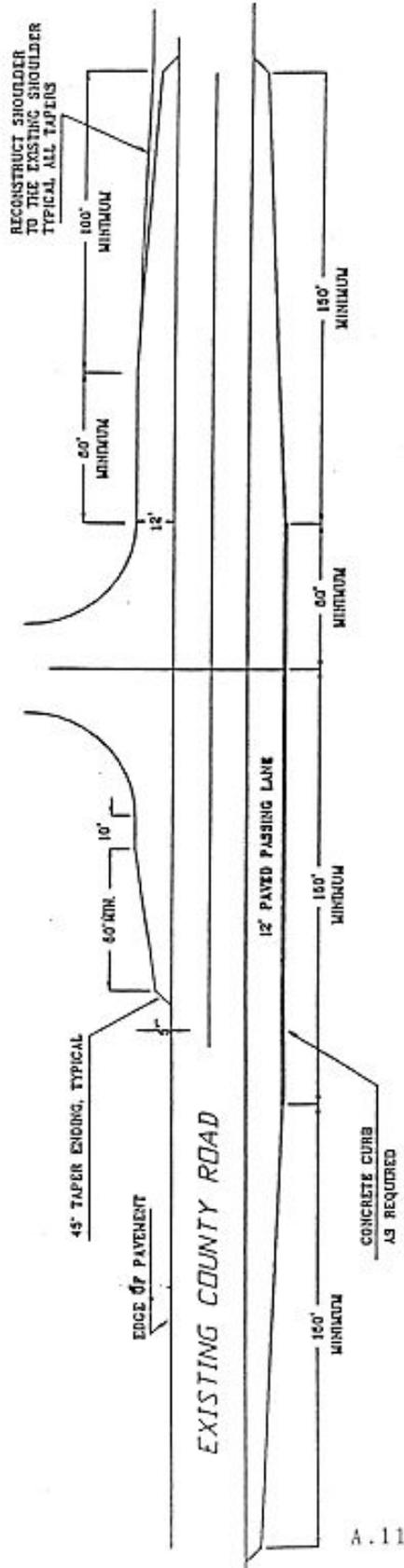


NOTE: PROVIDE FOR EXISTING ROADSIDE DRAINAGE



# PASSING LANE AND RIGHT-TURN LANE

## OPEN DITCH SECTION APPROACH



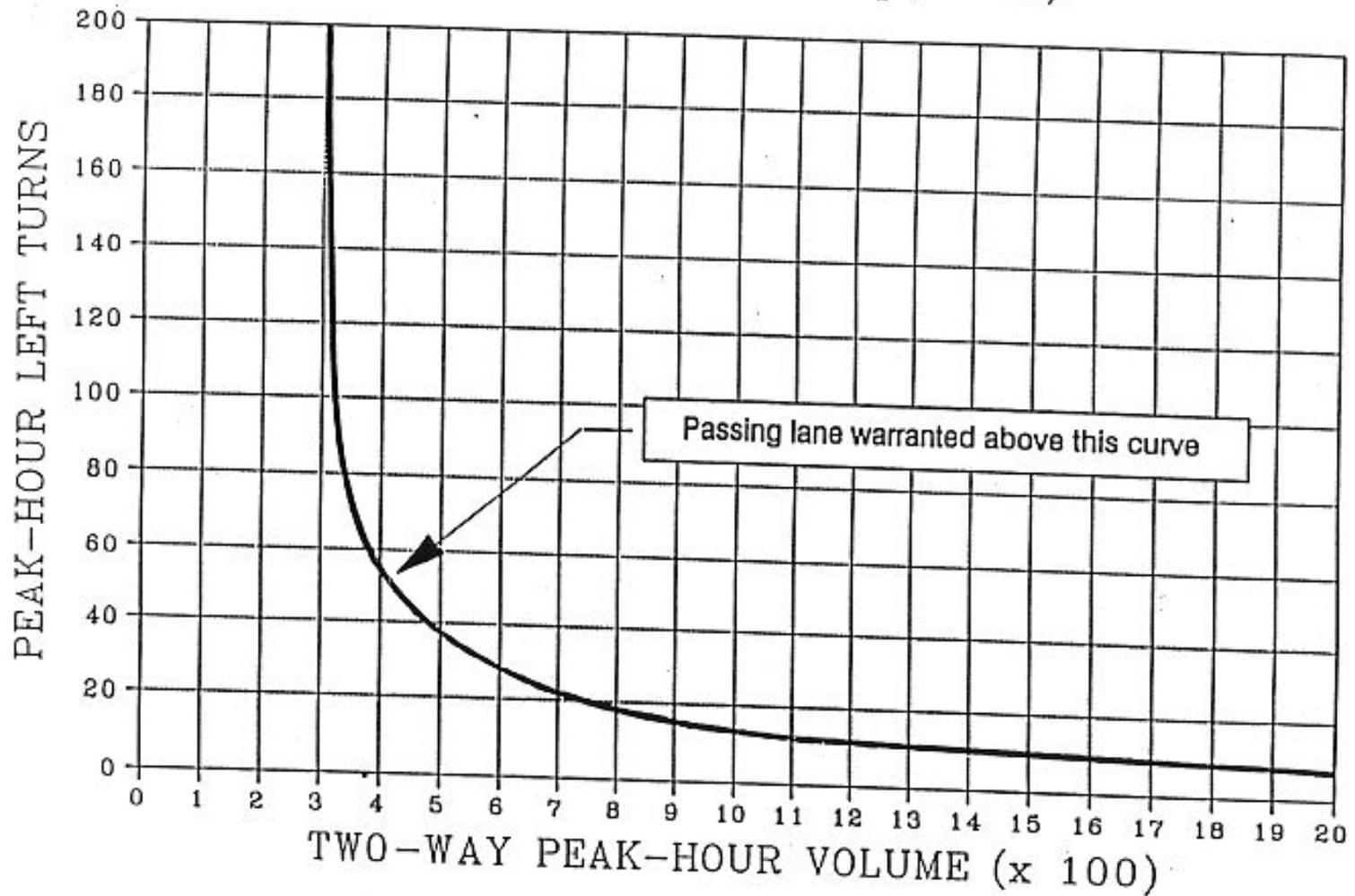
A. 11

NOTE: PROVIDE FOR EXISTING ROADSIDE DRAINAGE



# LEFT TURN PASSING LANE WARRANT

(Based on Total Development)



A.12