

Administrative Rules

Regulating

DRIVEWAYS

Effective April 26, 1971

Code of Ordinances
Sections 22-55.1, 22-55.2, 22-55.3

City of Midland, Michigan

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ORDINANCE NO. 775

AN ORDINANCE TO AMEND THE CODE OF ORDINANCES, CITY OF MIDLAND, MICHIGAN, BY REPEALING SECTION 22-5 OF SAID CODE, AND BY ADDING NEW SECTIONS WHICH NEW SECTIONS SHALL BE DESIGNATED AS SECTIONS 22-55.1, 22-55.2 AND 22-55.3.

The City of Midland Ordains:

Section 1. That section 22-55 of the Code of Ordinances, City of Midland, Michigan is hereby repealed.

Section 2. That a new section be added to the Code of Ordinances, City of Midland, Michigan designated as Section 22-55.1.

Section 22-55.1. Definitions.

- a.) *"Buffer Area"* means a portion of a highway right-of-way adjacent to a pavement that serves as a physical barrier between highway and activity on private property.
- b.) *"Circle Driveway"* means a private driveway that enters and leaves private property at two points within the same frontage.
- c.) *"Clear Vision Area"* means land acquired or used by the agency having jurisdiction over a highway for the purpose of maintaining unobstructive vision.
- d.) *"Commercial Driveway"* means a driveway serving a commercial establishment, industry, governmental or educational institution, hospital, church, apartment building or other large traffic generator.
- e.) *"Department"* means the Engineering Department of the City of Midland.
- f.) *"Directional Driveway"* means a driveway designed so that traffic leaving the highway is separated from traffic entering the highway with some turning movements prohibited.
- g.) *"Divided Driveway"* means a driveway designed so that traffic leaving the highway is separated from traffic entering the highway.

- h.) *"Dual Service Driveway"* means two adjacent commercial driveways designed to facilitate traffic movement from a highway to a single private property by use of either driveway and a return to the highway by use of the other driveway.
- i.) *"Field Entrance"* means a driveway serving a farmyard, cultivated or uncultivated field, timber land or undeveloped land not used for industrial, commercial or residential purposes.
- j.) *"Frontage"* means a private property line that abuts a highway right-of-way.
- k.) *"Limited Access"* means a highway right-of-way in respect to which owners or occupants of abutting lands and other persons having no legal right of access to or from the highway except at designated access points, determined by the public authority having jurisdiction over the highway.
- l.) *"Residential Driveway"* means a driveway serving a private home.
- m.) *"Right-of-Way Line"* means a boundary between private property and public land under legal control of the agency having jurisdiction of the highway.
- n.) *"Utility Structure Driveway"* means a driveway serving a utility structure such as a pumphouse or substation which operates automatically and requires only occasional access.

Section 22-55.2.

For the purpose of carrying out the City's responsibilities as defined in Article III of Chapter 22 of the Midland Code of Ordinances, Part 2, DRIVEWAY PERMITS, **except** Rules 26 and 27 thereof, and Part 3, DRIVEWAY DESIGN STANDARDS, including figures and tables contained therein of the Rules and Regulations of the Michigan Department of State Highways filed with the Secretary of State on June 30, 1970 under authority conferred upon the Department of State Highways by Section 5 of Act 200 of the Public Acts of 1969, are hereby adopted by reference and made a part of the Code of Ordinances of the City of Midland.

Section 22-55.3.

For any driveway permit which may be denied by the City Engineering Department under these rules and regulations, the provisions of Section 15-15 of the Midland Code of Ordinances, relating to appeals, shall govern.

Section 3.

All Ordinances or parts of Ordinances in conflict herewith are hereby repealed only to the extent necessary to give this Ordinance full force and effect.

Section 4.

This Ordinance shall take effect upon publication.
(Motion adopted.)

April 26, 1971

PART 2. DRIVEWAY PERMITS

R 247.221.

Applications.

Rule 21.

1. An application for a driveway permit shall be accepted from a property owner, governmental agency, lessee, or its legally authorized agent.
2. An application for a driveway permit shall be submitted in the manner prescribed on forms supplied by the department. The application shall contain or be accompanied by a certification of either legal ownership or agency authorization. The application shall be accompanied by plans or drawings containing the information required by rule 22 and shall include the applicable design features required by part 3.

R 247.222.

Plans or drawings.

Rule 22.

Copies of a driveway permit application shall be accompanied by plans or drawings clearly indicating the following features of the site and abutting highway as the department may require:

- a.) Existing highway pavement, ditches, right-of-way and property lines, highway appurtenances, utilities, medians, if existing, and dimensions thereof.
- b.) For commercial driveways, buildings, both proposed and existing, and appurtenances and dimensions thereof, including a notation as to present use of the buildings and details of internal traffic circulation, parking and traffic signs.
- c.) Design features in accordance with part 3 of driveways, tapers and right-turn lanes to be constructed, reconstructed, relocated, surfaced, resurfaced,, operated, used or maintained including the following dimensions and features:
 - (i) Widths of driveways.
 - (ii) Radii of driveway returns and other points of curvature.
 - (iii) Driveway grades or profile view of drive, when necessary.

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(iv) Angle of the driveway relative to the highway centerline.

(v) Dimensions of traffic islands adjacent to the highway.

(vi) Driveway surface material and traffic island surface material.

- d.) Distance from each existing and proposed driveway on the site to:
 - (i) Nearest intersecting street, road or highway.
 - (ii) Nearest driveway on adjacent properties.
 - (iii) Street, road, highway or driveways opposite the site.
 - (iv) Property lines and property lines extended to the highway centerline.
 - (v) Buildings and businesses appurtenances on the site.
- e.) Features in addition to driveways to be constructed within the highway right-of-way including traffic control islands, curb, sidewalks and authorized traffic signs.
- f.) Existing and proposed drainage structures and controls to include:
 - (i) Size of drive culvert.
 - (ii) Type of culvert.
 - (iii) Type of culvert end treatment.
 - (iv) Grade of culvert.
 - (v) Direction of surface water flow on or from adjacent property.
- g.) North directional arrow.

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R 247.223.

Specifications and Design Standards.

Rule 23.

The design location, construction and operation of driveways and related construction within the highway right-of-way shall meet requirements of the current department Standard Specifications for Highway Construction and the design standards required by part 3 of these rules. A deviation therefrom shall be consistent with current and projected traffic volumes on the highway and on the driveway, adjacent development, equivalence of materials and methods, and safety requirements of persons using the driveways and highway. The deviation shall be authorized only by the department.

R 247.224.

Conditions and Limitations in Permits.

Rule 24.

A driveway permit is subject to the following conditions and limitations:

- a.) The department reserves the right of inspection by its authorized representatives of a driveway constructed within a highway right-of-way. The permittee shall reimburse the department for the services of an on-the-job inspection which may be required for major commercial developments or other special cases.
- b.) The department or its representative may require that it be given at least 5 days notice before commencement of an operation covered by the permit.
- c.) The permittee shall have a copy of the permit available at the site during construction.
- d.) The permittee shall take, provide and maintain necessary precautions to prevent injury or damage to persons and property from operations covered by the permit and shall use warning signs and safety devices which are in accordance with the current Michigan Manual of Uniform Traffic Control Devices.
- e.) The permittee shall surrender the permit and all rights thereunder when notified to do so by the department because of its need for the area covered by the permit or because of default of any provision of the permit. The department may grant the person a new permit.

- f.) Altered natural drainage shall not be permitted to flow onto the highway right-of-way unless special provisions are approved by the department.
- g.) The permit holder shall remove all surplus materials to an area outside of the highway right-of-way unless the permit provides for disposal at locations within the highway right-of-way. Excavated material shall be stockpiled so it does not adversely affect the safety of traffic.
- h.) Work authorized by the permit shall be completed to the satisfaction of the department on or before the completion date specified in the permit. A request for an extension of time for completion of this work shall include reasons for the request. Approval of extension of time shall be based on extenuating circumstances and absence of neglect by permittee.
- i.) The property owner or his agent shall maintain the driveways set forth in the permit.

PART 3. DRIVEWAY DESIGN STANDARDS

R 247.231

Driveway locations.

Rule 31.

- 1.) A driveway shall be so located that no undue interference with the free movement of highway traffic will result. A driveway shall be so located also to provide the most favorable vision and grade conditions possible for motorists using the highway and the driveway consistent with development of the site considering proper traffic operations and safety.
- 2.) A driveway, including the radii but not including the right-turn lanes and tapers, shall be located entirely within the area between permittee's property lines extended to the centerline of the highway. A driveway radius may extend outside of that area only if the adjacent property owner certifies in writing that he will permit such extension.
- 3.) If the driveway is to be located adjacent to a highway intersection, the following shall apply:
 - (a.) If the intersecting highway is curbed, the point of curvature of the driveway radius shall be at least **20 feet** from the point of curvature of the intersecting highway radius.
 - (b.) If the intersecting highway is uncurbed, the point of curvature of the driveway radius shall be at least **50 feet** from the edge of pavement of the intersecting highway.
 - (c.) When an existing highway or driveway is reconstructed or the requirements in paragraphs (a) or (b) cannot be applied, the driveway radius shall not encroach upon the intersection radius unless such encroachment is physically unavoidable.
- 4.) A driveway shall not be constructed along the acceleration or deceleration lanes and tapers connecting to interchange ramp terminals, unless no other reasonable access point is available.

R 247.232

Clear Vision and Buffer Areas.

Rule 32.

- 1.) At an intersection or railroad crossing where the department owns limited access right-of-way to provide a clear vision area, a driveway shall not enter or cross that clear vision area. At an intersection or railroad crossing where the department has an easement for a clear vision area, a driveway shall not enter or cross that clear vision area if another reasonable access point is available.
- 2.) Adjacent to and on both sides of a driveway, a buffer area between the right-of-way line and the pavement edge shall be used, as determined by the department, to provide a physical barrier between highway traffic and activity on private property. A buffer area is needed to provide an unobscured vision area and to prevent potentially hazardous movement of vehicles, especially at undesirable angles of approach, from and to the highway. The buffer area shall consist of a lawn area, a low shrub area, a ditch or equivalent. Where encroachment of vehicle parking on the buffer area takes place or may take place, the department may require the buffer area to be established by guardrail, guard posts, curb or equivalent.

R 247.233

Design Features.

Rule 33.

The design features described in this rule and illustrated in figure 1 shall be used by the applicant in dimensioning a proposed driveway or driveway system on plans accompanying the driveway permit application. The dimensions to be used for various driveway design features, shown as a standard with a working range of dimensions, are given in tables 1 to 7, rules 37 to 49. These standard dimensions shall be used unless conditions warrant a deviation. The department may specify particular dimensions so a particular driveway system will accommodate vehicle movements normally expected without creating undue congestion or hazard on the highway or to provide reasonable access. The letters in the following design features refer to features in figure 1 on page 12:

- (a) Intersecting angle, A, the clockwise angle from a highway centerline to a driveway reference line which is the centerline or the edge of the driveway
- (b) Driveway width, B, the distance between driveway edges of pavement or edges of the gravel surface measured at the point where the edges of the driveway become parallel, point b in figure 1. If the right-of-way line is so close to the pavement that point b falls on the applicant's property, then the width of the driveway at the right-of-way line shall be based on the projected driveway width.
- (c) Entering radius C, the radius of a driveway edge curve on the right side of a vehicle entering the applicant's property.
- (d) Exiting radius, D, the radius of a driveway edge curve on the right side of a vehicle leaving the applicant's property.
- (e) Curb ending, E, the length of the height transition of the driveway curb from ground level to full curb height along an uncurbed highway. This curb transition may be 10 feet minimum.
- (f) Right-turn lane length, F, the length of an auxiliary lane constructed preceding the driveway to accommodate right-turn traffic entering the applicant's property.
- (g) Right-turn lane width, G, the width edge-to-edge of a right-turn lane, or the width edge-to-edge at the full width of entering and exiting tapers.
- (h) Entering taper, H, the length of a pavement widening, preceding the driveway for a right-turn lane or taper.
- (j) Exiting taper, J, the length of a pavement narrowing, following the driveway.
- (k) Entrance drive width, K, the width of the portion of a divided or a directional driveway that is used by a vehicle entering the applicant's property.

R247.234

R 247.235

- (l) Exit drive width, L, the width of the portion of a divided or directional driveway that is used by a vehicle leaving the applicant's property.
- (m) Island width, M, the edge to edge distance between an entrance drive and an exit drive.
- (n) Island length, N, the distance between ends of the island, measured parallel to the entrance drive.
- (p) Nose offset, P, the distance between the edge of the pavement and the traffic island of a divided or directional driveway.
- (r) Curb cut, R, the length of the opening along a highway curb for a straight-sided residential driveway.
- (s) Distance between driveways, S, the inside distance between 2 adjacent driveways measured along a highway right-of-way line.

Commercial Driveways, Permits.

Rule 34.

A permit application for a commercial driveway shall specify the driveway system requested, including the number and type: two-way, one-way, divided, dual service or directional. The department may approve the requested system or may require changes in it to insure safe conditions and necessary spacing between driveways, based on anticipated traffic volumes on the driveways and on the highway, type of traffic to use the driveways, type of roadside development and other operational considerations.

Commercial Driveways, Consolidation.

Rule 35.

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

Rule 36.

If the highway carries one-way traffic, the dimensions given in rules 41 and 42 may be altered so that the prohibited movements are discouraged. If the driveway system is on the left-hand side of a one-way highway, the dimensions used shall be based on the same principles as used on right-hand side driveways.

R247.237 Commercial Driveways, Right-Turn Lanes.

Rule 37.

The applicant shall provide right-turn lanes or tapers as part of a commercial driveway system if the department determines that such right-turn lanes or tapers are required to minimize congestion or hazard on the highway caused by vehicles entering the applicant's driveways. A right-turn lane shall be preceded by a taper. The design feature dimensions of a right-turn lane and taper shall conform to those given in Table 1.

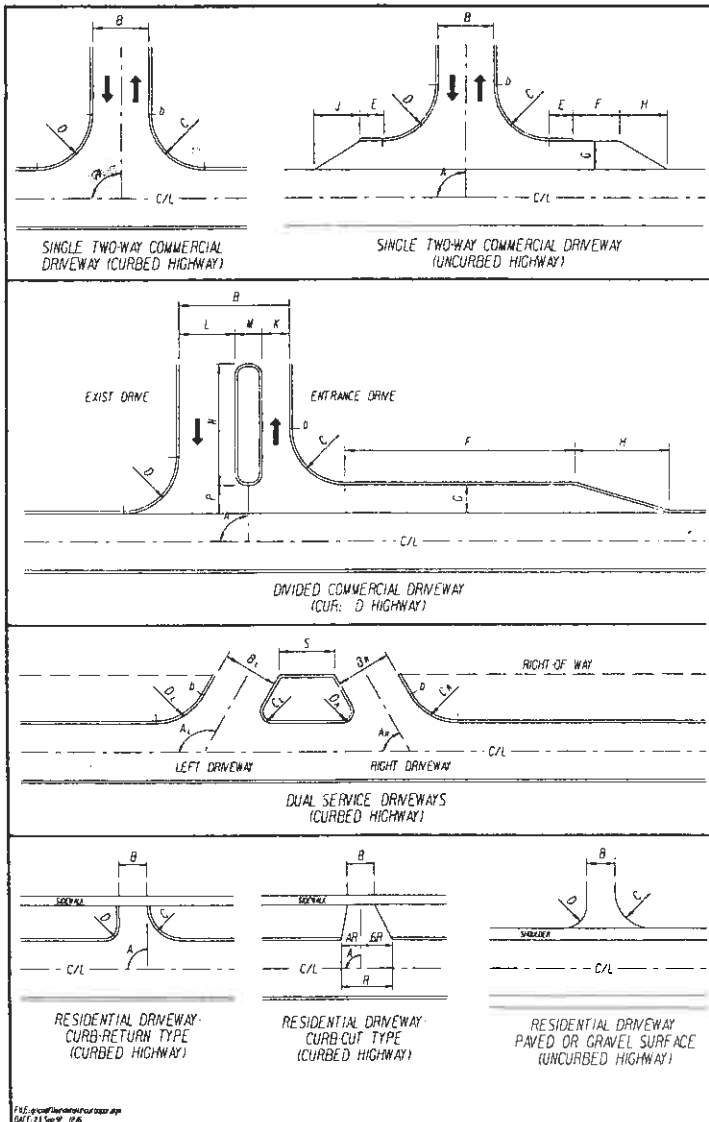


TABLE 1

COMMERCIAL RIGHT-TURN LANE AND TAPERS					
Design Features		Curbed Highway		Uncurbed Highway	
		Standard	Range	Standard	Range
Curb Ending	E	Not Applicable	Not Applicable	10 ft.	no range
Right-turn Lane Length	F	As determined by the department		As determined by the department	
Right-turn Lane Width	G	12 ft.	10 to 15 ft.	12ft.	10 to 15 ft.
Entering Taper	H	150 ft.*	50 to 150 ft.	150 ft.	50 to 150 ft.
Exiting Taper	J	Not Applicable	Not Applicable	50 ft.	50 to 150 ft.

*If a right-turn lane is used, the Entering Taper standard shall be 50 ft. Without a right-turn lane, the Entering Taper standard shall be 150 ft.

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

Two-Way Commercial Driveways.

Rule 41.

The design feature dimensions of a two-way commercial driveway shall conform to those given in Table 2.

TABLE 2

TWO-WAY COMMERCIAL DRIVEWAY					
Design Features		Curbed Highway		Uncurbed Highway	
		Standard	Range	Standard	Range
Intersecting Angle	A	90°	60 to 120°	90°	60 to 120°
Driveway Width	B	30 ft.	12 to 50 ft.	30 ft.	15 to 50 ft.
Entering Radius	C	20 ft.	5 to 50 ft.	30 ft.	5 to 50 ft.
Exiting Radius	D	15 ft.	5 to 50 ft.	20 ft.	5 to 50 ft.

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

R 247.242

One-Way Commercial Driveways.

Rule 42.

The design feature dimensions of a one-way commercial driveway shall conform to those given in Table 3.

TABLE 3

ONE-WAY COMMERCIAL DRIVEWAY						
Design Features			Curbed Highway		Uncurbed Highway	
			Standard	Range	Standard	Range
	Distance Between Driveways	S	N/A	40 to 500 ft.	N/A	40 to 500 ft.
	Intersecting Angle	A	90°	60 to 120 ft.	90°	60 to 120°
	Driveway Width	B	16 ft.	16 to 30 ft.	16 ft.	16 to 30 ft.
ONE-WAY IN	Entering Radius	C1	20 ft.	15 to 50 ft.	20 ft.	15 to 50 ft.
	Exiting Radius	D1	10 ft.	5 to 15 ft.	5 ft.	5 to 15 ft.
ONE-WAY OUT	Entering Radius	C0	10 ft.	5 to 15 ft.	5 ft.	5 to 15 ft.
	Exiting Radius	D0	20 ft.	15 to 50 ft.	20 ft.	15 to 50 ft.

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

R 247.243

Divided Commercial Driveways.

Rule 43.

A divided commercial driveway shall have a curbed island separating the entrance drive and the exit drive. The radii forming the edges on this island shall be designed to accommodate the largest vehicle that will normally use the driveway. The minimum area of the island shall be 50 square feet. The design feature dimensions of a divided commercial driveway shall conform to those given in Table 4.

TABLE 4

DIVIDED COMMERCIAL DRIVEWAY						
Design Features			Curbed Highway		Uncurbed Highway	
			Standard	Range	Standard	Range
Intersecting Angle	A	90°	75 to 105°	90°	75 to 105°	
Driveway Width	B	48 ft.	42 to 90 ft.	48 ft.	42 to 90 ft.	
Entering Radius	C	25 ft.	5 to 50 ft.	25 ft.	5 to 50 ft.	
Exiting Radius	D	25 ft.	5 to 50 ft.	20 ft.	5 to 50 ft.	
Entrance Drive Width	K	16 ft.	16 to 30 ft.	16 ft.	16 to 30 ft.	
Exit Drive Width	L	22 ft.	16 to 30 ft.	22 ft.	16 to 30 ft.	
Island Width	M	10 ft.	10 to 30 ft.	10 ft.	10 to 30 ft.	
Nose Offset	P	8 ft.	2 to 10 ft.	14 ft.	12 to 17 ft.	
Island Length	N	35 ft.	20 to 150 ft.	35 ft.	20 to 150 ft.	

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

R 247.244

Dual Service Driveways.

Rule 44.

To facilitate vehicle movements between a highway and private property when the major vehicle movement at a commercial establishment is approximately parallel to the highway, such as at a service station or drive-in bank, the department may permit dual service driveways. The design feature dimensions of dual service driveways shall conform to those given in Table 5.

TABLE 5

DUAL SERVICE DRIVEWAYS						
Design Features			Curbed Highway		Uncurbed Highway	
			Standard	Range	Standard	Range
RIGHT DRIVEWAY	Intersecting Angle	AR	60°	45 to 90°	60°	45 to 90°
	Entering Radius	CR	15 ft.	5 to 50 ft.	20 ft.	5 to 50 ft.
	Exiting Radius	DR	10 ft.	5 to 25 ft.	5 ft.	5 to 25 ft.
LEFT DRIVEWAY	Intersecting Angle	AL	120°	90 to 135°	120°	90 to 135°
	Entering Radius	CL	10 ft.	5 to 25 ft.	5 ft.	5 to 25 ft.
	Exiting Radius	DL	15 ft.	5 to 50 ft.	20 ft.	5 to 50 ft.
	Driveway Width	B	30 ft.	12 to 50 ft.	30 ft.	15 to 50 ft.
	Distance Between Driveways	S	20 ft.	10 to 150 ft.	20 ft.	10 to 150 ft.

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

R 247.245 *Directional Commercial Driveways.*

Rule 45.

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

R 247.247 *Residential Driveways, Number and Separation.*

Rule 47.

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

- (a) One residential driveway shall be permitted for each platted lot or for unplatted residential property with less than 100 feet of frontage.
- (b) One additional residential driveway may be permitted for residential property for each 70 feet of frontage in the excess of the first 100 feet of frontage.

- (c) Two residential driveways may be permitted on the same property, in lieu of the requirements of paragraph (b), to serve a circle driveway if the frontage of the property is 80 feet or more.
- (d) Residential driveways on the same property shall be at least 45 feet apart, center-to-center.

R 247.248 *Residential Driveway Dimensions.*

Rule 48.

The design feature dimensions of a residential driveway shall conform to those given in Table 6.

TABLE 6

RESIDENTIAL DRIVEWAY					
Design Features		Curbed Highway		Uncurbed Highway	
		Standard	Range	Standard	Range
Intersecting Angle	A	90°	70 to 110°	90°	70 to 110°
Driveway Width	B	10 ft.	8 to 24 ft.	12 ft.	8 to 24 ft.
Entering Radius	C	15 ft.	5 to 15 ft.	15 ft.	5 to 20 ft.
Exiting Radius	D	6 ft.	5 to 15 ft.	10 ft.	5 to 20 ft.
Curb Cut	R	26 ft.	20 to 40 ft.	N/A	N/A

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

R 247.249 *Field Entrances and Utility Structure Driveways.*

Rule 49.

- (1) One field entrance may be permitted for each 1000 feet of frontage of cultivated land, timber land or undeveloped land. Additional driveways may be permitted when a single driveway will not provide adequate access due to topographic conditions.
- (2) The design feature dimensions of a field entrance and of a utility structure driveway shall conform to those given in Table 7.

TABLE 7

FIELD ENTRANCE AND UTILITY STRUCTURE DRIVEWAY					
Design Features		Curbed Highway		Uncurbed Highway	
		Standard	Range	Standard	Range
Intersecting Angle	A	90°	70 to 110°	90°	70 to 110°
Driveway Width	B	20 ft.	15 to 40 ft.	20 ft.	15 to 40 ft.
Entering Radius	C	N/A	N/A	20 ft.	5 to 40 ft.
Exiting Radius	D	N/A	N/A	20 ft.	5 to 40 ft.
Curb Cut	R	26 ft.	20 to 50 ft.	N/A	N/A

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

R 247.251 **Surfacing and Curbing Along Curbed Highways.**

Rule 51.

If a highway is curbed, the following driveway surfacing and curbing requirements apply:

- a.) A commercial driveway shall be paved and curbed to either the right-of-way line or to the point of curvature between the driveway edge and the larger radius, point b in figure 1, as determined by the department.
- b.) A residential driveway shall be paved between the edge of the pavement and the existing or proposed sidewalk. If there is no existing or proposed sidewalk, the surfacing shall extend at least 10 feet from the edge of the pavement. For a residential driveway, either curb cuts or curb returns shall be required as determined by the department, based on the current department standards for curb and gutter.

R 247.252 **Surfacing and Curbing Along Uncurbed Highways.**

Rule 52.

If a highway is uncurbed, the following driveway surfacing and curbing requirements apply:

- a.) A commercial driveway shall be paved and curbed to either the right-of-way line or to the point of curvature between the driveway edge and the larger radius, point b in figure 1, except a commercial driveway may be uncurbed where there is a proper ditch and other adequate roadside control or delineation, as determined by the department. The curb ending adjacent to the highway shall be located at least 13.5 feet from and parallel to the edge of the pavement.
- b.) A low volume commercial driveway along a low volume highway shall be paved, but the paving may be delayed as mutually agreed upon by the applicant and the department.
- c.) A residential driveway may be paved or surfaced with stabilized gravel and may be curbed or uncurbed.

R 247.253 **Surfacing and Curbing of Field Entrances and Utility Structure Driveways.**

Rule 53.

A field entrance or a utility structure driveway may be surfaced with stabilized gravel or with sod over a stable base and may be uncurbed, as determined by the department.

R 247.254 **Surface Materials and Thickness.**

Rule 54.

The surface of a paved driveway, excluding right-turn lanes, shall be concrete, bituminous or equivalent surfacing material. The thickness of the surface and the base to be used shall be sufficient to provide the bearing capacity needed to carry the proposed traffic loads. A 2 1/2 inch, 250 pounds per square yard, bituminous mix on 8 inches of compacted gravel, 8 inches of unreinforced concrete or equivalent surfacing material which meets current department Standard Specifications for Highway Construction is acceptable for normal driveway traffic loads over stable soil.

R 247.255 **Right-Turn Lanes and Tapers.**

Rule 55.

- 1.) The pavement of a right-turn lane and accompanying tapers shall match the highway pavement, unless the department permits the use of an equivalent pavement.

- 2.) The cross slope of a right-turn lane and tapers shall be:
 - a.) A continuation of the cross slope of the highway if the highway is curbed.
 - b.) Equal to the shoulder slope if the highway is uncurbed.

R 247.256

Shoulders.

Rule 56.

- 1.) The surface of the shoulder adjacent to a right-turn lane and tapers shall be of the same material as the highway shoulder and conform to the current department Standard Specifications for Highway Construction.
- 2.) If the distance between two paved commercial driveways serving the same property is less than 100 feet, measured between adjacent ends of the curb endings, the applicant shall pave the shoulder between the driveways.

R 247.259

Driveway Curb Details.

Rule 59.

- 1.) The driveway curb shall either match the existing highway curb or shall conform to the current department standards for curb and gutter.
- 2.) The driveway curb height shall be constant if there is no existing or proposed sidewalk or if an inclined sidewalk is permitted by the department .
- 3.) The driveway height may be tapered to zero height at the sidewalk if the driveway grade meets the grade of an existing or proposed sidewalk.

R 247.261

Drainage.

Rule 61.

- 1.) A driveway shall be constructed so that it does not adversely affect the highway drainage. The drainage and the stability of the highway subgrade shall not be altered by driveway construction or roadside development.
- 2.) Drainage from adjacent parking or storage areas on private property in excess of existing drainage shall not be discharged into the highway drainage system.

- 3.) Culvert pipe shall be of a size adequate to carry the anticipated natural flow of the ditch. The culvert shall be no smaller than the nearest upstream culvert nor less than 12 inches inside diameter. A culvert, catch basin, drainage channel and other drainage structure required within the highway right-of-way shall be manufactured or constructed and installed in accordance with the current department Standard Specifications for Highway Construction. The minimum length of the culvert may be determined as the sum of the distance between driveway edges, measured along the ditch line, plus the distances needed to accommodate an embankment slope not to exceed 1 foot vertical for 6 feet horizontal on both sides of the driveway.

R 247.263

Profile.

Rule 63.

A driveway profile shall be determined using the following criteria:

- a.) If the highway is uncurbed, the grade of the driveway between the highway edge of pavement and the edge of the shoulder shall conform to the slope of the shoulder.
- b.) If the highway is uncurbed or if the sidewalk is more than 10 feet from the edge of the pavement or if there is no sidewalk:
 - i.) The grade of a two-way, a one-way or divided commercial driveway shall not exceed 1.5% for a minimum distance of 25 feet from the edge of the pavement. Beyond this distance, the grade shall not exceed 8%.
 - ii.) The grade of a residential or utility structure driveway or field entrance shall not exceed 10%.
- c.) If the highway is curbed and if the sidewalk is 10 feet or less from the edge of pavement, the grade of a driveway, except a directional driveway, shall be the grade required to meet the sidewalk elevation; but if that grade would exceed the maximums specified in paragraph (b), the sidewalk shall be either tilted or inclined.

- d.) The grade of a directional driveway shall be designed so to provide vision of the highway edge of pavement and the driveway surface for a distance of 100 feet along the driveway. For a driveway on an upgrade towards the highway, a grade of 1.5% for a distance of 100 feet from the edge of the pavement is acceptable. Beyond this distance the grade shall not exceed 4% and the difference in grades where there is a change of grade shall not exceed 3%.
- e.) Vertical curves, with a minimum length of 15 feet, shall be provided at a change of grade of 4% or more.
- f.) If the sidewalk elevation has to be adjusted to meet the driveway, the department may require that the sidewalk be inclined at a rate not to exceed 1 foot vertical for every 24 feet horizontal.

R247.265

Parking and Storage.

Rule 65.

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

R247.267

Traffic Signs and Markings.

Rule 67.

A permittee shall provide and properly maintain traffic signs and pavement markings which the department determines necessary, subject to local ordinances, for proper operation of the driveway. Only those traffic signs and pavement markings which the department determines necessary, subject to local ordinances, for proper operation of the driveway. Only those traffic signs and pavement markings approved by the department may be used within the highway right-of-way. Signs and pavement markings shall conform to the current Michigan Manual of Uniform Traffic Control Devices.