

RULE 2.5 CONDITIONS AND LIMITATIONS OF PERMITS

All permits issued in accordance with these Rules shall be subject to the following conditions and limitations:

- 2.5.1** The Permit Holder shall agree to abide by the condition and specification contained on the permit application and the permit.
- 2.5.2** Any activity covered under Rule 1.1 shall be allowed only after an approved permit has been obtained from the Permits Department. The activity shall be as described in an approved permit and plans or drawings accompanying the permit. The Permits Department and the Director of Engineering must approve significant changes in plans.
- 2.5.3** The Permits Department or its representative shall be given at least two days (excluding Saturdays, Sundays and Holidays) notice prior to the commencement of any operation covered by the permit.
- 2.5.4** In the event of failure to comply with the terms and conditions of any permit issued in accordance with these Rules or failure to obtain an appropriate permit, the Permits Department shall have the right to halt construction activity until such time as adequate corrections have been made or until such deficiencies are corrected by issuing a stop work order.
- 2.5.5** The Saginaw County Road Commission Permits Department shall reserve the right to inspect and test any driveway, structure, connection, pathway, etc. constructed within road right-of-way and the Permit Holder shall reimburse the Board for actual costs associated with any on-the-job inspection or testing which may be required. Such inspection and testing may include inspection of materials, soils, construction methods, compaction, grades, drainage, signing, barricading, maintenance, or other safety precautions that may be necessary in emergencies.
- 2.5.6** If, upon inspection, an activity described in Rule 1.1 is found to be in violation the owner shall correct any deficiencies within a period of 30 days, as specified in a notice of violation sent by certified mail to the owner. Dangerous or hazardous conditions shall be corrected immediately. If the owner fails to make the necessary corrections within the period of time stated in the notice, the Board or its agents may perform the necessary correction(s), with the costs incurred to be reimbursed to the Board by the owner.
- 2.5.7** The Permit Holder is responsible for restoring the right-of-way and roadway to a condition acceptable to the Saginaw County Road Commission in the event that work covered by the permit is suspended due to any reason including dispute between the Applicant and the Permit Holder. Restoration shall include paving, stabilization of slopes and ditches, and installation of temporary or permanent drainage facilities or structures. The Permit Holder agrees and understands that the Saginaw County Road Commission will take reasonable actions necessary to ensure safe public travel, preservation of the roadway and drainage, the prevention of soil erosion and sedimentation, and elimination of nuisance to

- abutting property owners. Any such costs will be charged to the Permit Holder. In the event that suspension of work will be protracted, or, will not be completed by the Permit Holder, the Permit Holder shall restore the right-of-way to a condition similar to the condition that existed prior to issuance of the permit. Should the Permit Holder fail to restore the right-of-way, the Saginaw County Road Commission will notify the Permit Holder and request that the Permit Holder's bonding agent either complete the work or restore the right-of-way.
- 2.5.8** All costs incurred by the Board in obtaining or enforcing compliance with conditions and standards of the permit, failure to obtain a permit, or defective workmanship or materials shall be borne by the Applicant, Permit Holder, or person undertaking the activity. Any Permit Holder who conducts their operations in a manner detrimental to the Road Commission's statutory obligation of maintaining roads and streets at all times in a reasonably safe and fit condition for the traveling public will be required to cease all operations within the right-of-way. If necessary, additional cash deposits and expense of maintaining a Road Commission inspector (full-time) may be required from the Permit Holder prior to the resumption of work
- 2.5.9** The Permit Holder shall have a copy of the permit and associated approved plans available at the site during construction.
- 2.5.10** The Permit Holder shall take, provide, and maintain all 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. The Permit Holder shall maintain all activities covered under Rule 1.1 set forth in the permit in a manner as not to damage, impair, interfere with, or obstruct a public road or create a foreseeable risk of harm to the traveling public. Any Permit Holder who conducts their operations in a manner detrimental to the Road Commission's statutory obligation of maintaining roads and streets at all times in a safe and fit condition for the traveling public will be required to cease all operations within the right-of-way. If necessary, additional cash deposits and expense of maintaining a Road Commission inspector (full-time) may be required from the Permit Holder prior to the resumption of work.
- 2.5.11** The Permit Holder shall comply with all applicable O.S.H.A. AND MI.O.S.H.A. Requirements.
- 2.5.12** The Permit Holder shall surrender the permit, cease operation, and surrender all rights there under, whenever notified to do so by the Board or its representative because of the need to use the area covered by the permit or because of a default of any condition or provision of the permit.
- 2.5.13** Drainage from private property shall not be altered to flow into the county right-of-way or county road drainage system unless approved by the Permits Department see Rule 5.9 for storm water discharge requirements.
- 2.5.14** The Saginaw County Road Commission makes no warranty either expressed or implied to the Applicant or the Permit Holder as to the suitability of or condition

of soils and/or ground water that may be encountered during an excavation. The Applicant and Permit Holder are responsible for proper disposal according current regulations of any material excavated from within the right-of-way including soils or ground water contaminated by petroleum products or other pollutants associated with sites found on the Michigan Department of Natural Resources Act 307 list or reported on appropriate release forms for underground storage tanks. Further, the Road Commission makes no warranty as to the suitability of the subsurface for the work proposed.

- 2.5.15** The road surface may not be used for the storage of materials or any other construction purpose without prior approval of the Road Commission. Depending on traffic volumes and other conditions, the Road Commission may require the Permit Holder to provide bypass lanes (either paved or unpaved), may allow one-lane traffic properly controlled, or some combination of the two. Traffic control shall be in accordance with Part 3, “Maintaining Traffic and Traffic Controls” and the M.M.U.T.C.D.
- 2.5.16** The Permit Holder shall remove all surplus materials to an area outside of the limits of the right-of-way unless the permit provides the manner of disposal at locations within the right-of-way. Excavated material and raw materials or equipment shall not be stockpiled or stored so as to adversely affect the safety of the traveling public nor shall such material be disposed in such manner that wetlands or streams are impacted. Work within wetlands or wetland fringes are not authorized by the permit unless accompanied by State or Local wetland permit. Excess materials may not be disposed of in lakes, streams, wetlands or flood plains.
- 2.5.17** The Permit Holder shall store all materials far enough away from the road surface so that they are not a hazard to the traveling public. The Permit Holder shall maintain sufficient clear areas on the shoulder that a car can park off the road in an emergency. Materials and equipment shall not block the vision of traffic seeking ingress onto the road. Only those materials that will be used by the Permit Holder in their immediate operations can be stored in the right-of-way. All other materials, equipment, and trailers must be stored in an area outside of the right-of-way. Loading and unloading operation shall be conducted in a manner that minimizes congestion and delay to the traveling public. Proper traffic control must be in place prior to temporary lane closures to load or unload materials or equipment. Any road or lane closers must be approved in advance by the Permits Department of the Saginaw County Road Commission.
- 2.5.18** Polluting materials including, but not limited to oil, grease, diesel fuel, and gasoline shall be stored and managed in compliance with current State or Federal rules and regulation and in such a manner that spills will be contained and avoid contamination of the ground or ground water. The Permit Holder is responsible for cleanup and removal of any contaminated soils.
- 2.5.19** The Permit Holder is responsible for obtaining a soil erosion control permit from the Saginaw County Drain Commission prior to commencing work. The Permit Holder is responsible for installing and maintaining all erosion control features shown on the approved plans, soil erosion and sedimentation control permits, or

as may be required during the life of the project. All temporary control measures must be removed prior to final inspection.

- 2.5.20** The Permit Holder shall be responsible for preventing erosion and sedimentation during any suspension of operation including disputes between the Applicant and Permit Holder. In the event that the Permit Holder fails to maintain soil erosion or sedimentation features including temporary seeding and mulch, the Road Commission shall undertake such work as required at the expense of the Permit Holder.
- 2.5.21** The Permit Holder shall notify the Permits Department of completion of the work in writing and request a final inspection. All work authorized by permit shall be completed to the satisfaction of the Permits Department prior to the release of the permit.
- 2.5.22** The Applicant and Permit Holder are responsible for obtaining any permits and complying with State, Federal, or Local laws, rules, regulations, or ordinances. These include, but are not limited to inland lakes and streams, wetlands, woodlands, flood plains, filling, and hours of operation. Issuance of a Saginaw County Road Commission permit does not authorize activities otherwise regulated by State, Local, or Federal agencies.
- 2.5.23** The Permit Holder and not the Saginaw County Road Commission is solely responsible for the correctness and completeness of plans submitted as part of an application for permit. Any error(s) in the aforementioned plans that become evident after the issuance of a permit and which change the scope of permitted work is subject to review(s) and may be grounds for a permit to be revoked.
- 2.5.24** The Saginaw County Road Commission reserves the right to limit the number of permits issued to a Permit Holder. The number of active permits the Permit Holder has and the available work force will determine the number of permits that can be issued to a Permit Holder; normally this would be two permits. Failure of a Permit Holder to comply with permit provisions on other active permits shall be just cause to delay issuance of additional permits.
- 2.5.25** The Permit Holder is responsible for maintaining a minimum of one acceptable access to all abutting occupied properties, driveways, and side streets unless indicated on the approved plans. The Permit Holder is further responsible for obtaining the written permission of owners or occupants of properties that may lose access during the excavation or other work. The local police, fire, or emergency service agencies shall define acceptable access. The Permit Holder is responsible for providing signing and other improvements necessary to ensure adequate access until the roadway, driveway, or side street is restored. The Permit Holder shall conduct their operation in such manner as to minimize inconvenience to abutting property owners. The Road Commission reserves the right to reasonably restrict the progress of excavation by the Permit Holder based on the rate of roadway and right-of-way restoration, including permanent or temporary pavement. The Road Commission may require that excavation be suspended until satisfactorily backfilling of open trenches or excavations have been completed and driveways, side streets, and drainage restored.

- 2.5.26** All pumping or de-watering operations shall be conducted in compliance with N.P.D.E.S. permits. Outlet filters or sediment basins shall be used before discharged water reaches roadside ditches, storm sewer inlets, or surface waters. The out letting of waters into roadside ditches for extended periods of time will be unacceptable. The placement of discharge lines on or across the surface of the traveled portion of any road will not be allowed without advanced written permission from the Saginaw County Road Commission. The Permit Holder agrees to do all necessary restoration of the road drainage system. If the Road Commission deems it necessary for the Permit Holder to either alter dewatering operations or to cease de-watering operations altogether for public safety, the Permit Holder agrees to comply. The Permit Holder shall locate all de-watering facilities as far from the road surface as possible. If, due to extenuating circumstances, these facilities are located closer to the road than the back slope of the ditch, a flashing light shall be required at each location.
- 2.5.27** Normal weight restrictions will be in effect at all times, except during the period when reduced seasonal load limitations are in effect. If, due to the high volume of trucking, damage occurs to the roads, the Permit Holder must either enter into an agreement with the Saginaw County Road Commission to make appropriated repairs of the road or reduce loads carried on the road sufficiently to eliminate possible damage. The use of tracked or crawler mounted equipment on road pavements shall not be permitted unless specifically authorized in advance in writing by the Road Commission. Written authorization for such use will usually require complete replacement or resurfacing of the entire pavement so used.
- 2.5.28** The Permit Holder shall maintain all work areas in the right-of-way in a safe, dust free condition until all work in a given area is completed, including the hauling of materials. Dust control at a frequency determined by the Saginaw County Road Commission shall be provided on any unpaved detour, by-pass, and shoulder, which is to be used by traffic. The Road Commission will not permit the use of oil. Chloride shall not be used for dust control on paved streets.
- 2.5.29** If the area disturbed by the work is one (1) acre or greater, and requires a National Pollution Discharge Elimination System (N.P.D.E.S.) Permit, the Permit Holder shall notify the Saginaw County Road Commission and provide the name and address of the certified operator.

RULE 2.8 INDEMNITY AND CERTIFICATES OF INSURANCE

Certificates of insurance shall be required for all permits, excluding residential driveway permits, in amounts and coverage's specified by the Board. The Saginaw County Road Commission shall be a certificate holder with the provision that it will be notified of cancellation or reduction of insurance. The Policy must be provided by a person, a corporation, or by authorized representatives who signed personally the permit. Variations in insurance or coverage or form may be reviewed by the Legal Department and approved if Road Commission interests are adequately covered. Insurance must be kept in force until the permitted construction is completed, inspected, and approved. Should insurance coverage be reduced below acceptable coverage or canceled,

authorization to continue work under the permit is suspended, and the Saginaw County Road Commission may take appropriate action to restore or protect the road and appurtenances utilizing any inspection, security deposits, and bonds to defray expenses. Permit applications and permits will contain hold harmless provisions, which require the signer to hold the Board and its employees harmless for any and all claims arising out of the installation and continued existence of the facility.

PART 6 - DRIVEWAY DESIGN STANDARDS

RULE 6.1 DRIVEWAY LOCATION AND GRADE

(All drives shall have a 10 foot approach constructed with either gravel or asphalt unless street has curb and gutter.)

- 6.1.1** Driveways shall be so located that no undue interference with the free movement of road traffic will result, and to provide the required sight distance. (If local agency having jurisdiction over said drive has established a more restrictive requirement for driveways, the local agency rules shall be used to build said drive.)
- 6.1.2** Driveways, including the radii (but not including right turn lanes, passing lanes, and tapers) shall be located entirely within the permit applicant's right-of-way frontage. This right-of-way frontage is determined by projecting the property lines to the centerline of the road. Radii on adjacent right-of-way frontage shall be permitted only upon obtaining a letter of encroachment from the adjacent property owner and/or when the Permits Department has determined that such extension is necessary.
- 6.1.3** If the driveway is to be located outside of a subdivision and adjacent to an intersection, the point of curvature of the driveway radius shall be at least 50 feet from the existing or future proposed right-of-way line, whichever distance is greater.
- 6.1.4** Proposed driveways in subdivisions shall be located no nearer to an intersection than local township setback requirements, but a minimum of 25' from the R.O.W. line, whichever distance is greater.
- 6.1.5** The permit application shall specify the driveway system requested, including the number and type (two-way, one-way, or divided) of driveways. The Permits Department may approve the requested system or may request that the applicant make changes to insure safe operations and necessary spacing between driveways, based on anticipated traffic volumes on the driveways and on the road, type of traffic to use the driveway, type of roadside development, and other safety and operational considerations. Generally only one driveway will be permitted per parcel.
- 6.1.6** The number of residential driveways that may be permitted shall be determined as follows:
- A.) One (1) residential driveway shall be permitted for each platted lot or for each unplatted residential parcel.
 - B.) Two (2) residential driveways may be permitted for residential property with more than 300 feet of frontage if, in the opinion of the Permits Department, the additional driveway does not create a safety problem.

- C.) Two (2) residential driveways may be permitted on the same property, in lieu of the above, to serve a circle driveway if the frontage of the property is 80 feet or more at the right-of-way line.
- D.) Residential driveways on the same property shall be at least 45 feet apart, center-to-center.

6.1.7 The number of commercial driveways that may be permitted shall be determined as follows:

- A.) One (1) driveway may be permitted for each separately owned parcel with less than 100 feet of frontage provided that the parcel is wide enough for the minimum driveway width plus the required radius.
- B.) Additional driveways may be permitted for commercial property with more than 100 feet of frontage provided that the sum of the driveway widths of these additional driveways does not exceed 15 percent of the frontage in excess of the first 100 feet and further provided that the above traffic volume, safety, and operational considerations are met.
- C.) Two (2) commercial driveways may be permitted, in lieu of the above, to serve as two one way directional drives if the frontage is 300 feet or more. Commercial driveways on the same property must be at least 70 feet apart, center-to-center.

6.1.8 Adjacent property owners may and are encouraged to consolidate their commercial driveways by using either a joint driveway system or a frontage road. If the Permits 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 road via the joint driveway and/or frontage road system. A copy of this agreement executed by all parties concerned shall accompany the application.

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

6.1.10 The driveway grade shall be determined using the following criteria:

- A.) If the road is uncurbed, the grade of the driveway shall meet the existing shoulder. And the last 10 foot of drive where it meets roadway must be constructed using asphalt.
- B.) If the road is curbed, the grade of the driveway shall meet the existing edge of pavement. And drive may be constructed using either asphalt or concrete.
- C.) The grade of two-way, one-way, and divided commercial driveways shall be a maximum of six (6%) percent.

- D.) The grade of residential, utility driveways, and field entrances shall be a maximum of 7.5 (7.5%) percent.
- E.) Vertical curves (50 feet minimum) shall be provided at all changes of grade of four percent or more.
- F.) If the sidewalk elevation must be adjusted to meet the driveway, the slope shall not exceed 3.1%.

RULE 6.2 CLEAR VISION AREAS, BUFFER AREAS, AND SIGHT DISTANCE

6.2.1 At intersections or railroad crossings where the Board controls limited access right-of-way to provide a clear vision area, no driveway shall enter or cross any part of that clear vision area. Where the Board has an easement for a clear vision area at an intersection or railroad crossing, driveways shall not be permitted through the clear vision area if another reasonable access point is available.

6.2.2 Adjacent to driveways, a buffer area between the right-of-way line and the pavement edge shall be used, as determined by the Permits Department, to provide a permanent physical barrier between moving traffic and private property and unobstructed visions on either side of the driveway. This buffer area may consist of a lawn area, a low shrub area, a ditch, or equivalent method and may require the removal of trees, brush, earthen embankments, and other obstructions. Where encroachment of parked vehicles may take place, the Permits Department may require this buffer area to be established by curb or equivalent method.

- A.) Minimum sight distance for commercial driveways and private road approaches shall in accordance with figure 6-1, the “Guide for Corner Sight Distance” dated January, 2003:
- B.) Sight distance for residential drives shall be measured 10 feet from the edge of the traveled portion on gravel roads or 10 feet from the edge of pavement on paved roads in accordance with the table 6-1: For additional information see Plate in appendix labeled Guide for Corner Site Distance.

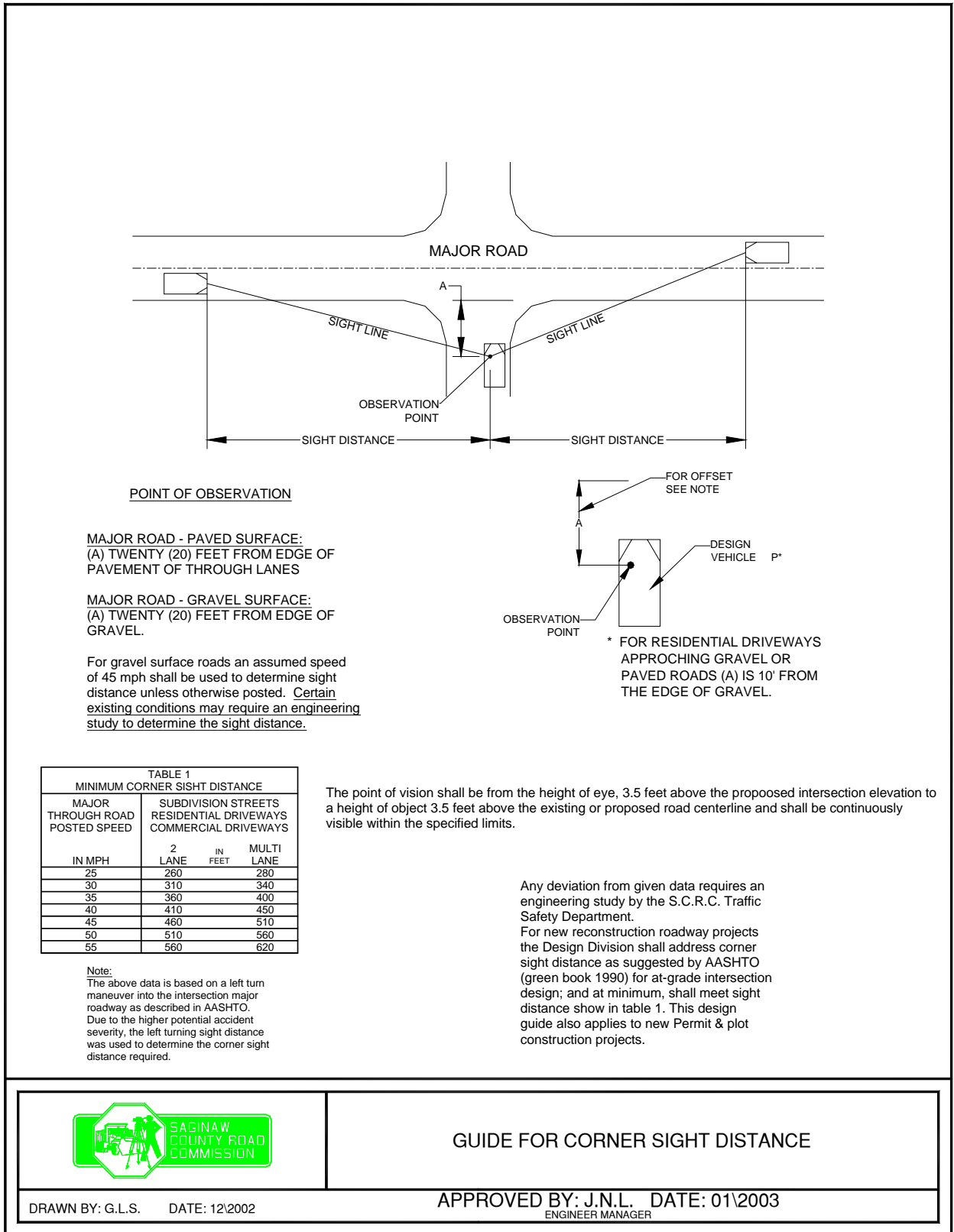
Table 6-1:

Speed Limit, M/P/H.	25	30	35	40	45	50	55
Minimum Sight Distance	260-310	360	410	460	510	560	

· Sight distance will be measured from an eye height of 3.5 feet to an object height of 3.5 feet.

- 6.2.3** The Saginaw County Road Commission recommends and may require that the driveway be located in a location that provides sight distance in excess of the minimums provided herein.
- 6.2.4** Applications for driveways, which do not provide minimum adequate sight distance, may be denied.

Figure 6-1



RULE 6.3 DEFINITIONS OF STANDARD DRIVEWAY DIMENSIONS

The design features described herein with their appropriate illustration of various driveway features as shown in tables 6-2 through 6-9 shall be used by the Applicant in dimensioning proposed driveways or driveway systems on plans accompanying driveway permit applications. These standard dimensions will be used unless conditions require a deviation and the Applicant can show cause for deviation. The Permits Department reserves the right to determine whether this deviation shall be granted and may specify particular dimensions in order that particular driveway system will accommodate the vehicles normally expected without creating undue congestion or hazard on the road. The letters in parentheses accompanying the following design feature titles are used to illustrate these design features in tables 6-2 through 6-9.

- 6.3.1** “Intersecting Angle” (A), the clockwise angle from the road edge of pavement or road centerline if unpaved to the driveway reference line (the centerline or edge of the driveway).
- 6.3.2** “Driveway Width” (B), the distance between driveway edges of pavement (or edges of the gravel surface, if applicable) measured at the point where the edges of the driveway become parallel (point b in the sketches). 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.
- 6.3.3** “Entering Radius” (C), the radius of the driveway edge curve on the right side of a vehicle entering the applicant’s property.
- 6.3.4** “Exiting Radius” (D), the radius of the driveway edge curve on the right side of a vehicle exiting the applicant’s property.
- 6.3.5** “Curb Ending” (E), the length of the height transition of the driveway curb from ground level to full curb height along an uncurbed road. This curb transition shall be 10 feet minimum.
- 6.3.6** “Right-Turn Lane Length” (F), the length of auxiliary lane constructed preceding the driveway to accommodate traffic entering the applicant’s property.
- 6.3.7** “Right-Turn Lane Width” (G), the width of pavement from the outside edge of the through lane to the outside edge of the Right-Turn Lane, or the width of road from outside edge of the through lane to the outside edge at the full width of the Entering and Exiting tapers.
- 6.3.8** “Entering Taper” (H), the length of the diagonal pavement widening, preceding the driveway.
- 6.3.9** “Exiting Taper” (J), the length of the diagonal pavement widening, following the driveway.

- 6.3.10** “Entrance Drive Width” (K), the width of the half of a Divided or a directional driveway, which has been designated for the use of a vehicle entering the applicant’s property.
- 6.3.11** “Exit Drive Width” (L), the width of the half of a Divided or a Directional driveway, which has been designated for the use of a vehicle exiting the applicant’s property.
- 6.3.12** “Island Width” (M), the edge-to-edge distance between the Entrance Drive and Exit Drive.
- 6.3.13** “Island Length” (N), the distance between ends of the island, measured parallel to the Entrance Drive.
- 6.3.14** “Nose Offset” (P), the distance between the edges of the turn lane or through land and the traffic island of a Divided or a Directional driveway.
- 6.3.15** “Curb Opening/Cut” (R), the length of the opening along the road curb for an approach and its radii.
- 6.3.16** “Passing Lane Approach Length” (S), the length of auxiliary lane constructed on the opposite side of the road preceding the driveway to accommodate through traffic passing the left turn traffic entering the applicant’s property.
- 6.3.17** “Passing Lane Departing Length” (T), the length of auxiliary lane constructed on the opposite side of the road following the driveway to accommodate through traffic passing the left turn traffic entering the applicant’s property.
- 6.3.18** “Passing Lane Width” (U), the width of pavement from the outside edge of the through lane to the outside edge of the Passing Lane.
- 6.3.19** “Passing Lane Approaching Taper” (V), the length of the diagonal pavement widening preceding the Passing Lane.
- 6.3.20** “Passing Lane Departing Taper” (W), the length of the diagonal pavement widening following the Passing lane.
- 6.3.21** “Exiting Lane Length” (X), auxiliary lane extension from exiting radius to beginning of exiting taper.

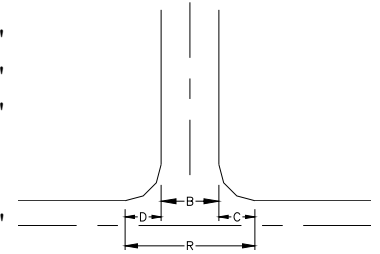
RULE 6.4 STANDARD DIMENSIONS FOR RESIDENTIAL DRIVEWAYS

The dimensions of a residential driveway shall conform to those given in tables 6-2 and 6-3.

Table 6-2:

Residential Driveway

Design Features		Typical	Range
Intersecting Angle	A	90'	
Driveway Width	B	16'	10' to 24'
Entering Radius	C	10'	5' to 10'
Exiting Radius	D	10'	5' to 10'
Total Opening B+C+D=	R	26'	20' to 44'



NOTE:

The TYPICAL dimension shall be used unless the Permits Department specifies or the applicant shows cause for, a different value. The RANGE in dimensions indicates the working value for each design feature.

Table 6-3:

Residential Driveway - Subdivision

Design Features		Typical	Range
Intersecting Angle	A	90'	
Driveway Width	B	16'	10' to 25'
Entering Taper Width	C	6'	5' to 15'
Exiting Taper Width	D	6'	5' to 15'
Taper Depth	Q	10'	10' to 20'
Total Opening B+C+D=	R	26'	20' to 55'

NOTE:

The TYPICAL dimension shall be used unless the Permits Department specifies or the applicant shows cause for, a different value. The RANGE in dimensions indicates the working value for each design feature.

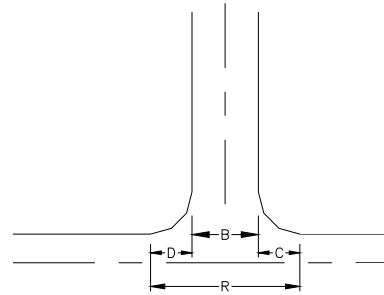
RULE 6.5 STANDARD DIMENSIONS FOR COMMERCIAL DRIVEWAYS AND PRIVATE ROADS

6.5.1 Two-way Commercial driveways shall be designed to accommodate one lane of traffic in each direction. The dimensions of a Two-way Commercial driveway shall conform to those given in table 6-4.

Table 6-4:

Two-Way Commercial Driveway Dimensions

Design Features		Typical	Range
Intersecting Angle	A	90'	45' to 90'
Driveway Width	B	24'	16' to 30'
Entering Radius	C	15'	5' to 25'
Exiting Radius	D	15'	5' to 25'
Total Opening	R	54'	26' to 80'
B+C+D=	R	54'	26' to 80'

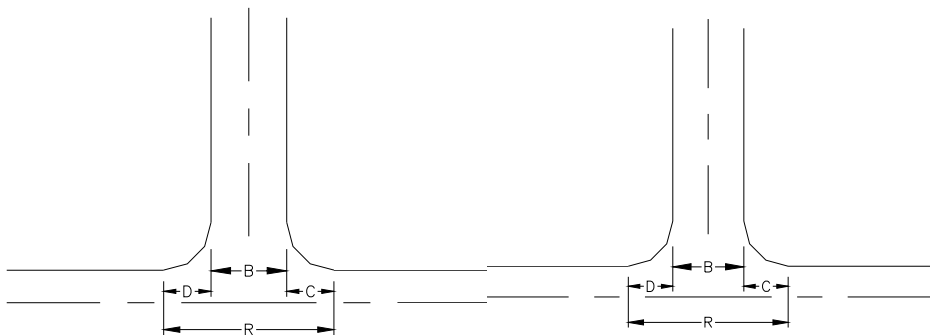


NOTE:

The TYPICAL dimension shall be used unless the Permits Department specifies or the applicant shows cause for, a different value. The RANGE in dimensions indicates the working value for each design feature.

6.5.2 The dimensions of a Directional One-way Commercial driveway system shall conform to those given in table 6-5.

Table 6-5:



Directional (One-Way) Commercial Driveway Dimensions

Design Features		Typical	Range	
ONE	Intersecting Angle	A	90'	45' to 90'
WAY	Driveway Width	B	16'	16' to 30'
IN	Entering Radius	C	15'	5' to 25'
	Exiting Radius	D	15'	5' to 25'
ONE	Entering Radius	C	15'	5' to 25'
WAY	Exiting Radius	D	15'	5' to 25'
OUT	Total Opening B+C+D=	R	36'	26' to 80'

NOTE:

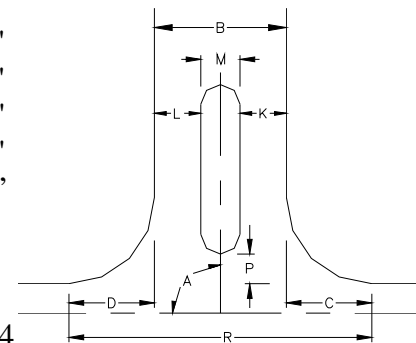
The TYPICAL dimension shall be used unless the Permits Department specifies or the applicant shows cause for, a different value. The RANGE in dimensions indicates the working value for each design feature.

6.5.3 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 dimensions of a Divided Commercial driveway shall conform to those given in table 6-6.

Table 6-6

Divided Commercial Driveway

Design Features		Typical	Range
Intersecting Angle	A	90'	
Driveway Width	B	54'	46' to 72'
Entering Radius	C	25'	15' to 35'
Exiting Radius	D	25'	15' to 35'
Entrance Drive Width	K	22'	20' to 24'
Exit Drive Width	L	22'	20' to 24'
Nose Offset	P	12'	6' to 18'
Island width	M	16'	6' to 24'
Total Opening B+C+D=	R	104'	76' to 144'



NOTE:

The TYPICAL dimension shall be used unless the Permits Department specifies or the applicant shows cause for, a different value. The RANGE in dimensions indicates the working value for each design feature.

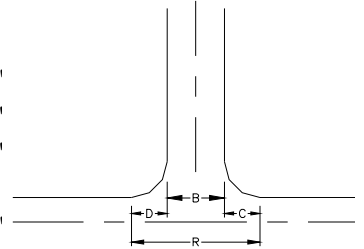
RULE 6.6 STANDARD DIMENSIONS FOR UTILITY STRUCTURE DRIVEWAYS AND FIELD ENTRANCES

Field entrances may be permitted for outbuildings, cultivated land, timberland, or undeveloped land. The dimensions of a field entrance and of a utility structure driveway shall conform to those given in Table 6-7.

Table 6-7:

Field Entrance and Utility Structure Driveways

Design Features		Typical	Range
Intersecting Angle	A	90'	
Driveway Width	B	16'	12' to 24'
Entering Radius	C	10'	5' to 35'
Exiting Radius	D	10'	5' to 35'
Total Opening			
B+C+D=	R	36'	22' to 94'



NOTE:

The TYPICAL dimension shall be used unless the Permits Department specifies or the applicant shows cause for, a different value. The RANGE in dimensions indicates the working value for each design feature.

RULE 6.7 AUXILIARY LANE AND TAPER REQUIREMENTS

6.7.1 The permit applicant is strongly encouraged to consider the benefits of auxiliary right-turn deceleration lanes and left-turn passing lanes. These additional lanes, located at the driveway, will enhance the accessibility, safety, and image of the proposed development. Traffic volumes or safety issues may warrant the prohibition of left turns at driveways on two-way, two-lane roads without passing lanes.

6.7.2 Figure 6-2 shows when left turn prohibition is warranted. Table 6-8 shows the dimensions of passing lanes.

Table 6-8:

PASSING LANE

Design Features		Typical	Range
Approaching Taper	V	150'	100' to 150'
Departing Taper	W	150'	100' to 150'
Approaching Lane Length	S	150'	100' to 200'
Departing Lane Length	T	100'	50' to 100'
Pavement in Width passing lane	U	12'	11' to 12'

NOTE:

The TYPICAL dimension shall be used unless the Permits Department specifies or the applicant shows cause for, a different value. The RANGE in dimensions indicates the working value for each design feature.

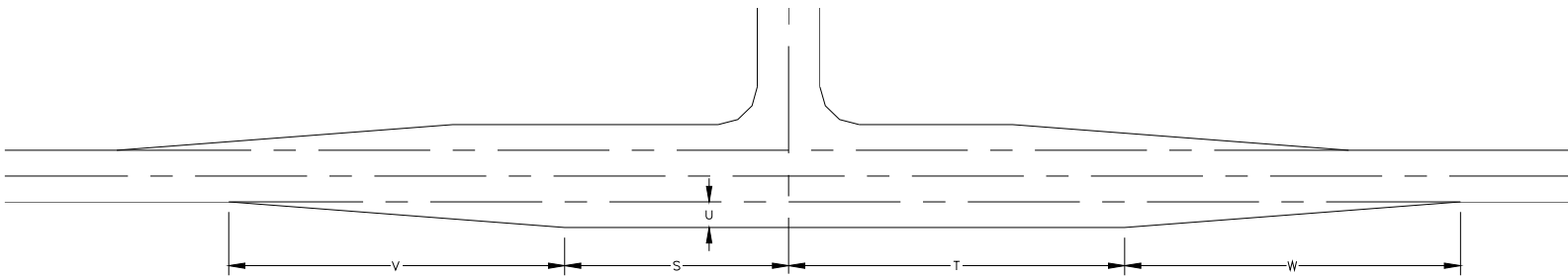
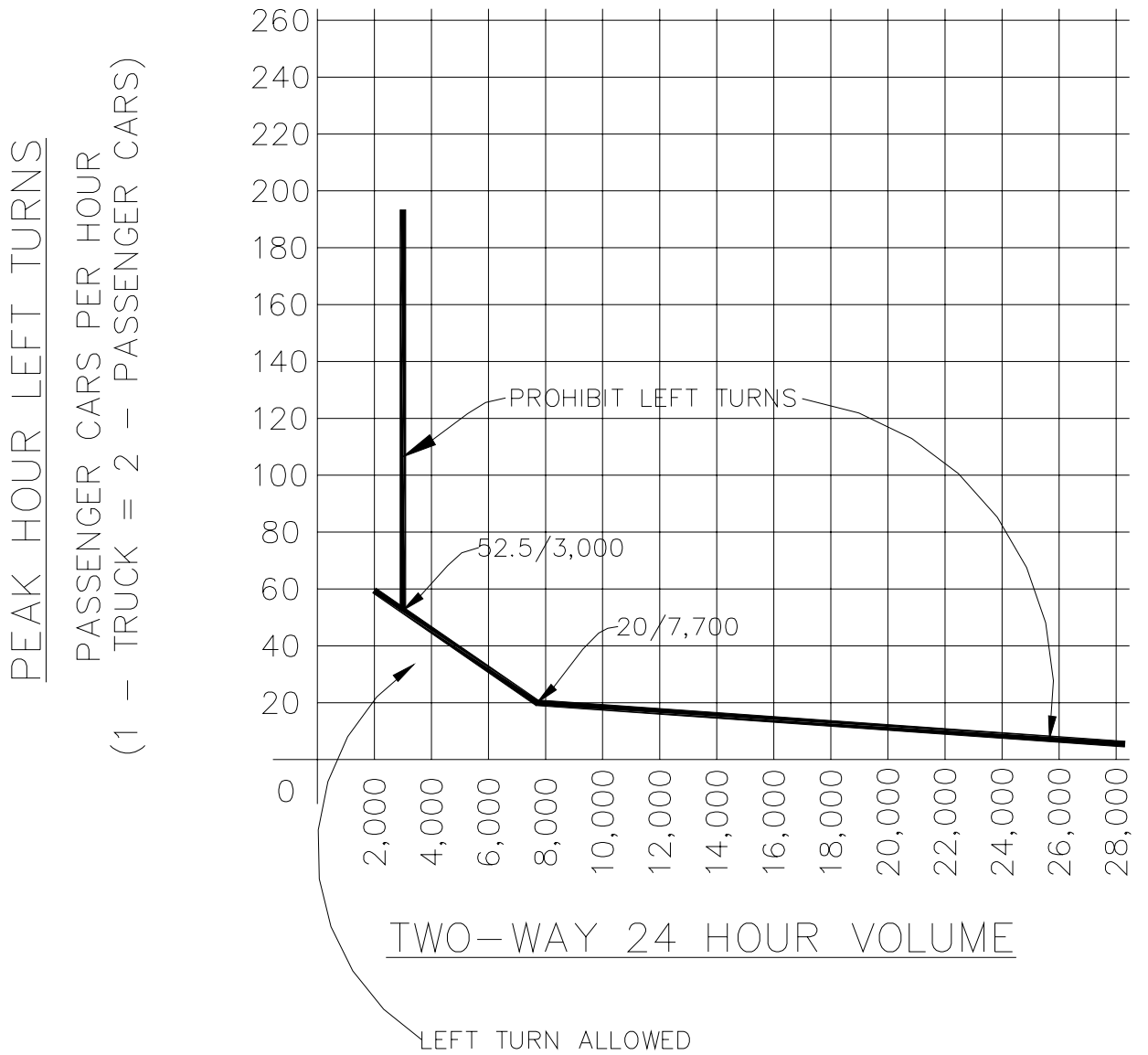


Figure 6-2

WARRANT FOR PERMITTING
LEFT TURNS
(BASED ON TOTAL DEVELOPMENT)



6.7.3 Figure 6-3 shows when a right-turn deceleration lane or taper is warranted. Table 6-9 shows the dimensions of right-turn deceleration lanes and tapers for commercial or private road approaches.

Table 6-9

COMMERCIAL RIGHT-TURN LANE AND TAPER

Design Features Range		Curbed Road		Uncurbed Road	
		Typical	Range	Typical	Range
Curb Ending Range)	E	Not Applicable		10'	(No
Right-Turn Lane Length to 150' Pavement/Width from CL of Road 22' to 24'	F	25'	0' to 150'	25'	0'
	G	24'	22' to 24'	24'	
Entering Taper to 150'	H	100'	75' to 150'	100'	75'
Exiting Lane Length to 100' Exiting Taper 50' to 100'	X	25'	0' to 100'	25'	0'
	J	75'	50' to 100'	75'	

NOTE:

The TYPICAL dimension shall be used unless the Permits Department specifies or the applicant shows cause for, a different value. The RANGE in dimensions indicates the working value for each design feature.

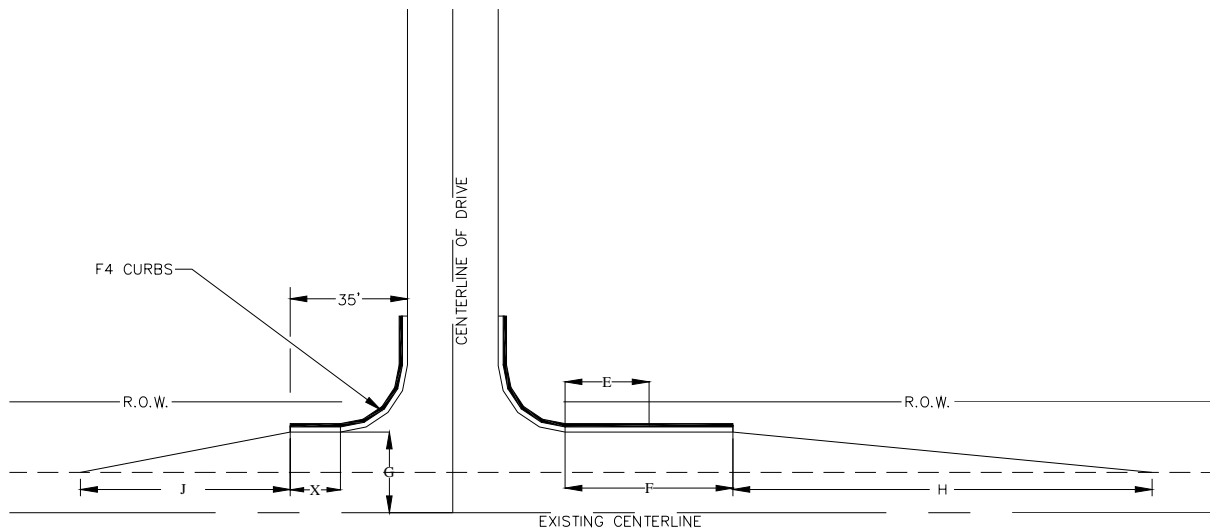
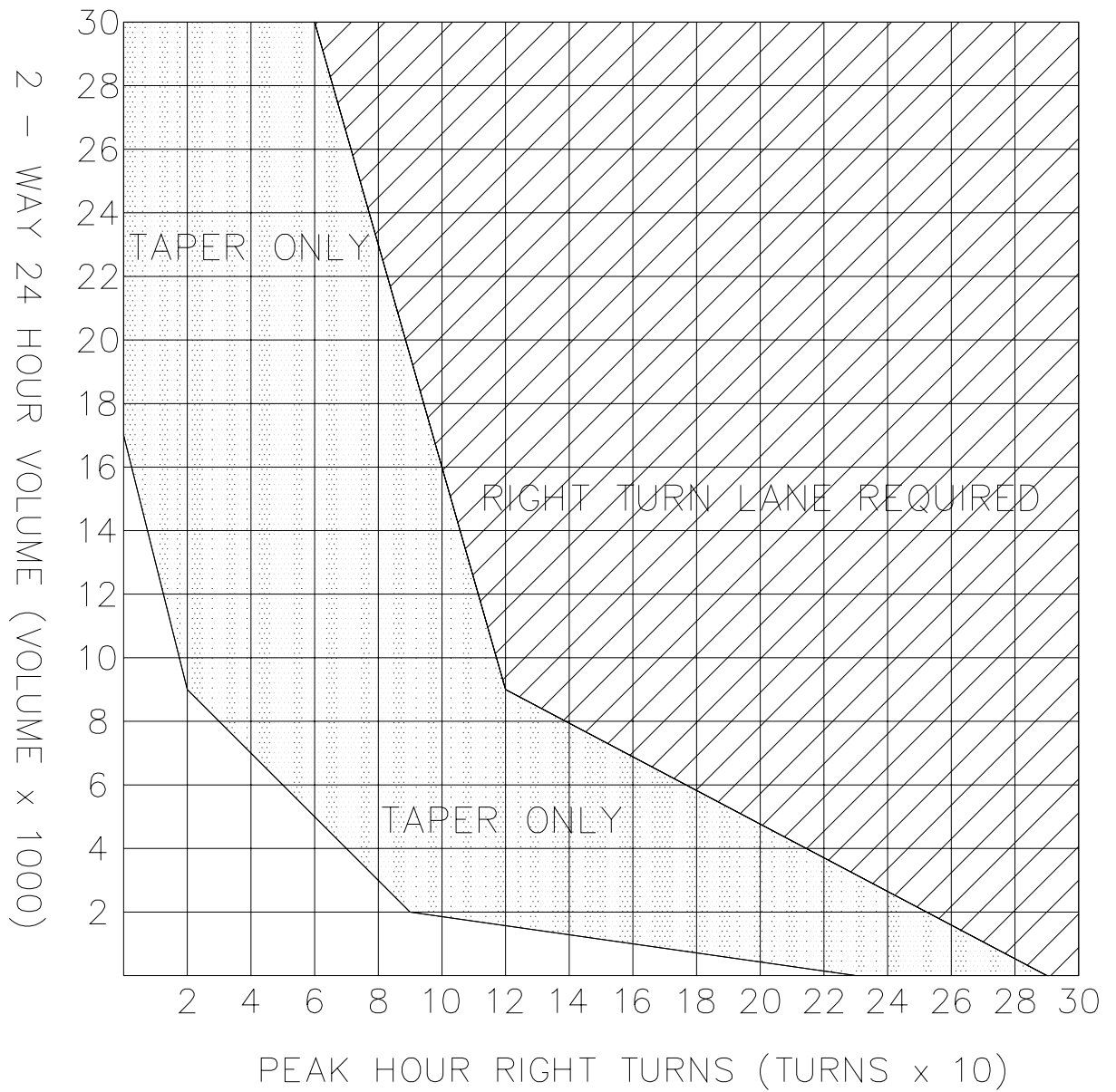


Figure 6-3

WARRANTS FOR RIGHT TURN DECELERATION LANE
OR TAPER



RULE 6.8 PAVING AND CURBING

6.8.1 Residential driveways:

A.) If the road has existing curb and gutter, the driveway shall also have curb and gutter matching at the point of curvature. If the road lacks curb and gutter, the curb and gutter ending adjacent to the road shall be located at least 24 feet from the centerline of the pavement and shall be parallel to the road. With a 10' taper of the back of curb down to the gutter pan.

B.) Connections to a Paved road:

1.) Driveways should be paved between the edge of pavement and the existing sidewalk. If there is no existing sidewalk, the surfacing should extend at least 10 feet from the edge of pavement. Curb cuts and/or curb returns shall be constructed based on the current Board standards for curb and gutter.

2.) Pavement cross section should be as follows:

- Six (6) inches of concrete over a suitable base.
- Three (3) inches of MDOT 36A asphalt mix placed in two equal lifts over six (6) inches of 22A aggregate

C.) Connections to an unpaved road:

1.) If the driveway is to be unpaved, it may be surfaced with stabilized gravel.

2.) If the driveway is to be paved, the paving shall extend no closer to the road than ten feet from the edge of the road.

3.) Pavement cross section should be as follows:

- Six (6) inches of concrete over a suitable base.
- Three (3) inches of MDOT 36A asphalt mix placed in two equal lifts over six (6) inches of 22A aggregate

6.8.2 Commercial driveways and private roads:

A.) If the road has existing curb and gutter, the driveway shall also have curb and gutter matching at the point of curvature. If the road lacks curb and gutter, the curb and gutter ending adjacent to the road shall be located a minimum of twenty four (24) feet from the centerline of the pavement and shall be parallel to the road. With a 10' taper of the back of curb down to the gutter pan.

B.) Connections to a Paved road:

1.) Driveway should be paved between the clean edge of road pavement and the existing sidewalk. If there is no existing sidewalk, the surfacing should extend to the Right of Way line or 10 feet from the edge of pavement which ever is greater. Curb cuts and/or curb returns shall be constructed based on the current Board standards for curb and gutter.

2.) Pavement cross section should be as follows:

- Nine (9) inches of 35-P concrete over a suitable base.
- Nine (9) inches of “deep strength” asphalt pavement consisting of two (2) inches of MDOT 4C asphalt mix, over two (2) inches of MDOT 3C asphalt mix, over five (5) inches of MDOT 11A asphalt mix, over a suitable base, placed in four (4) lifts of 2.5”, 2.5”, 2”, and 2”.

C.) Connections to an unpaved road:

1.) If the driveway is to be unpaved, it may be surfaced with stabilized 22A gravel.

2.) If the driveway is to be paved, the paving shall extend no closer to the road than ten feet from the edge of the road.

3.) Pavement cross section should be as follows:

- Six (6) inches of concrete over a suitable base.
- Four (4) inches of MDOT 4C asphalt mix placed in two equal lifts over six (6) inches of 22A aggregate

6.8.3 Field entrances and Utility Structure driveways

Field entrances and Utility Structure driveways may be surfaced with stabilized gravel and may be uncurbed. In certain locations, paving and curbing may be required on utility structure driveways.

6.8.4 Additional lanes and accompanying tapers

Additional lanes and accompanying tapers shall be surfaced with the same material as the pavement of the road unless the Permits Department allows the use of an alternate equivalent pavement.

- A.) Where the existing road surface is asphalt tapers, right turn lanes, and passing lanes shall be 9 inches “deep strength” asphalt, consisting of two (2) inches of MDOT 4C asphalt mix over two (2) inches of MDOT 3C asphalt mix over five (5) inches of MDOT 11A asphalt mix, on suitable, well-drained subsoil.
- B.) Where the existing road surface is concrete, tapers and additional lanes shall be 9 inches non-reinforced concrete with anchor bolts to the existing concrete at 40 inches on center.
- C.) The Permits Department may request a special pavement design under special conditions including but not limited to poor soil, industrial or heavy truck use, all weather route, etc.
- D.) If an overlay of the entire road is warranted the following cross-section shall be used; two (2) inches of MDOT 4C asphalt mix, over two (2) inches of MDOT 3C asphalt mix, over four (4) inches of MDOT 11A asphalt mix.
- E.) The cross-slope of all additional lanes and all tapers shall be a continuation of the cross-slope of the existing road pavement unless otherwise specified by the Permits Department.

6.8.5 The road shoulder

The road shoulder adjacent to all additional lanes and tapers shall conform to the current Michigan Department of Transportation Standard Specifications for Construction.

- A.) In areas with existing paved shoulders, the paved shoulder shall be removed and replaced with specified pavement. At a minimum a three (3) feet wide paved shoulder, consisting of two (2) inches of MDOT 4C over

two (2) inches of MDOT 3C over eight (8) inches of 22A, and a three (3) feet wide eight (8) inch thick 23A processed road gravel shall then be constructed next to the new widening.

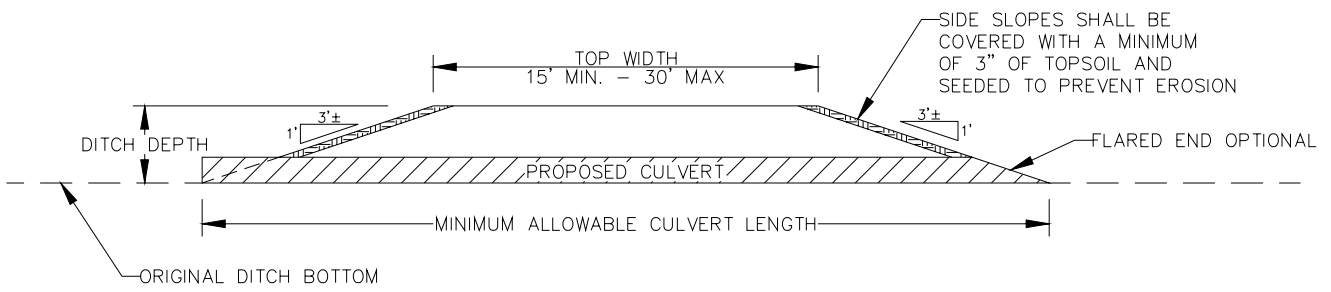
6.8.6 Curb and gutter

Curb and gutter either shall be the same detail as the existing curb or shall conform to the current Board standards for curb and gutter, at the discretion of the Permits Department.

- A.) The curb height shall be constant if there is no existing or proposed sidewalk.
- B.) Where a driveway grade meets the grade of an existing sidewalk, the curb shall be lowered to provide a sidewalk curb opening.
- C.) All walks and curbs shall conform with the requirements of MCL 125.1361 and the Americans with Disabilities Act of 1990, which requires appropriate curb cuts to walks for handicapped access.

RULE 6.9 RIGHT-OF-WAY DRAINAGE

- 6.9.1** The driveway shall be constructed so that the driveway does not adversely affect the drainage of the road. The drainage and the stability of the road sub-grade shall not be altered by driveway construction or roadside development.
- 6.9.2** Drainage from adjacent private property in excess of assumed agricultural run-off should not be discharged directly into the road drainage system. Drainage from areas, which did not previously contribute to the road drainage system, will not be accepted unless specifically authorized by the Permits Department. (See Rule5.9)
- 6.9.3** All culvert pipes used shall be of a size adequate to carry the anticipated flow of the ditch based on a “ten year storm” event. The culvert shall be no smaller than 12 inches inside diameter. All culverts, catch basins, drainage channels, and other drainage structures required within the road right-of-way shall be manufactured or constructed and installed in accordance with the current Michigan Department of Transportation Standard Specifications for Construction. The minimum length of the culvert may be determined as the sum of the width of the driveway plus the adjacent fore slope and back slope, maximum slope of 1 on 3. The use of headwalls on culvert ends will not be permitted. The use of flared end sections is encouraged.



		<u>TOP WIDTH</u>			
		15'	20'	25'	30'
<u>DITCH DEPTH</u>	2'	30'	35'	40'	45'
	2.5'	30'	35'	40'	45'
	3'	35'	40'	45'	50'
	3.5'	35'	40'	45'	50'
	4'	40'	45'	50'	55'
	4.5'	40'	45'	50'	55'
	5'	45'	50'	55'	60'

MINIMUM ALLOWABLE
CULVERT LENGTH

6.9.4 Existing ditches may not be eliminated, reduced in cross-section, or enclosed beyond the end of normal culvert length unless specifically approved by the Permits Department. An approved ditch enclosure must satisfy the following conditions:

- A.) Submittal of two (2) sets of plans or drawings clearly indicating the proposed work including pipe inverts and finished surface grades.
- B.) Installations of catch basins to collect surface and road drainage.
- C.) Installation of a culvert designed to carry the existing ditch flow, twelve (12) inch minimum.
- D.) Approval from the Saginaw County Road Commission Permits & Maintenance Department.

RULE 6.10 PARKING AND STORAGE

Adequate storage for vehicles parking or waiting to be serviced must be provided so as not to interfere with pedestrian and vehicular safety, vision requirements, or traffic operations on the road. No parking areas will be allowed in the right-of-way other than on street parking as authorized by the Michigan Vehicle Code. No permits will address said on-street parking.

RULE 6.11 TRAFFIC CONTROL DEVICES AT DRIVE APPROACHES

The Permit Holder shall provide and properly maintain temporary traffic signs and pavement markings that are necessary for the proper operation of the driveway. All signs and pavement markings shall conform to the current Michigan Manual of Uniform Traffic Control Devices. The Road Commission will determine what permanent signs, markings, and traffic control devices are necessary and install them at the expense of the Permit Holder. Permanent signs, markings, and other traffic control devices will be in conformity with Michigan Manual of Uniform Traffic Control Devices. Sign and pavement marking fees are non-refundable and are payable at the time the permit is issued. Street name signs on private roads will be installed following completion of the approach, notification of completion of the work by the Permit Holder, and inspection of the work by the Permits Department.

RULE 6.12 PRIVATE ROADS

A private road is a road not under the jurisdiction of a Public Body that provides access to two or more businesses, homes, or lots. Applications for a permit to connect a private road to a County road shall include plans as identified in Rule 2.3, as well as a letter of approval from the local governing body granting permission for said road. The applicant shall provide three (3) names for the proposed private road. A non-refundable sign fee will be collected at the time of permit issuance, which will cover the cost of fabrication and installation of a stop sign and street name sign at the connection of the private road and the Public road. The signs will be installed at the completion of the approach work.