

PERMIT RULES, SPECIFICATIONS AND GUIDELINES

FOR



APPROVED BY:

**BOARD OF COUNTY ROAD COMMISSIONERS
FOR SAGINAW COUNTY**

Richard H Crannell P.E.

Todd M. Hare

Richard F. Mallette

John D. Sangster

Wallace J. Warner

February 22nd, 2011

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INTRODUCTION

The following Rules apply to the issuance of permits for activities being done in the right-of-way under the jurisdiction of the Saginaw County Road Commission. These Rules are made part of any permit issued by the Saginaw County Road Commission for these activities. Construction within Saginaw County Road Commission right-of-way shall conform to the following specifications:

1. The current edition of the Michigan Department of Transportation: “Standard Specifications for Construction.”
2. The current edition of the “Michigan Manual of Uniform Traffic Control Devices.”
3. Saginaw County Road Commission: “Supplemental Specifications & Special Provisions.”
4. Saginaw County Road Commission: “Permit Rules, Specifications, and Guidelines.”
5. Saginaw County Road Commission: “Land Development Procedures.”
6. The current edition of the AASHTO: “Policy for Geometric Design of Highways and Streets.”

Questions regarding Construction Specifications or Standards may be directed to the Permits Department at (989) 752-6140.

Application for permits may be made at:

Permits Department
Saginaw County Road Commission
3020 Sheridan Ave
Saginaw, Michigan 48601-4450

Fax number: (989) 752-8934

Web Site: www.scrc-mi.org

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RESOLUTIONS

August 6th 1969

On August 6th 1969, Governor Milliken signed into law Act 200 of the Public Acts of 1969, authorizing the Department of State Highway and the County Road Commissions to regulate driveways, banners and parades on and over highways. State law authorizes these highway agencies to develop rules for the administration of the Act.

Tuesday July 7th, 1970.

In accordance with the above mentioned statute, the Board of County Road Commissioners of Saginaw County, on Tuesday, July 7th, 1970, took the following action:

Commissioner Falkenhagen moved the adoption of the following resolution:

That the rules published by the Board of County Road Commissioners, pursuant to the provisions of Section 5, Public Act 200 of the Public Acts of 1969, are effective from this date forward; that the definitions, conditions and provisions of this Act and part of these rules with the same force and effect as if enumerated within the rules so published.

Supported by Commissioner Janson.

Bruce McDonagh – Aye
Lloyd Falkenhagen – Aye
Albert Janson – Aye

Resolution adopted.

Tuesday September 23rd, 1975

Commissioner Janson moved the adoption of the following resolution:

WHEREAS, the Board of County Road Commissioners of Saginaw County, Michigan, did on July 7th, 1970, establish rules and standards governing the granting of permits for the construction of driveways, the placement of banners and the conducting of parades, on and along highways on the Saginaw County road system, and

WHEREAS, there are certain occasions when deviations or modifications of these standards could prove beneficial to citizens of Saginaw County, and would in no way be detrimental to the county road system,

NOW, THEREFORE BE IT RESOLVED, that effective September 23rd, 1975, whenever it is the desire of a permit applicant to establish a driveway or driveways, from or adjacent to the county highway, at variance with established Road Commission standards, and when in the opinion or the County Highway Engineer, this modification or change can be made without harmfully effecting the use of the highway by the traveling public of this county, that this Board will consider such request and if in agreement with the opinion of the County Highway Engineer, will authorize such variation from the standards established pursuant to law.

Supported by Commissioner Falkenhagen. Ayes-3, Nays-0.

I, Ermin Sallmen, duly appointed Secretary to the Board of County Road Commissioners of Saginaw County, Michigan, do hereby certify that the above is a true and exact copy of a resolution adopted by the Board and extracted from the minutes of a regular meeting held on Tuesday, September 23rd, 1975, at the Road Commission office at 3020 Sheridan Avenue, Saginaw, Michigan.

Ermin Sallmen, Secretary

FRIDAY, MARCH 21st, 2003

Commissioner Mallette moved the adoption of the following resolution:

WHEREAS, the Board of County Road Commissioners of Saginaw County, Michigan, did on July 7, 1970, establish rules and standards governing the granting of permits for the construction of driveways, the placement of banners and the conducting of parades, on and along highways on the Saginaw County road system, and

WHEREAS, from time to time there occurs a need to revise and update these rules and standards in order to utilize the best available technology; and

WHEREAS, it is to the best interest of the general public, and particularly the people of Saginaw County, Michigan, that such rules and standards be provided to guide developers and private individuals and to assure the public that any construction in the public right-of-way be constructed in a manner that adequately guarantees the safety of the public.

NOW, THEREFORE BE IT RESOLVED, that the revised “Permit Rules, Specifications and Guidelines for Activities in the Right of Way” as approved by the Board of County Road Commissioners this date are hereby adopted as the “Permit Rules, Specifications and Guidelines for Activities in the Right-of-Way” by the Board of County Road Commissioners of Saginaw County, Michigan, and that previous specifications and regulations are suspended.

Supported by Commissioner Sangster.

Ayes 2 (Sangster, Mallette) Nays 0.

I, Julie Lightfoot, duly appointed Secretary to the Board of County Road Commissioners of Saginaw County, Michigan, do hereby certify that the above is a true and exact copy of a resolution adopted by the Board and extracted from the minutes of a regular meeting held on Friday, March 21, 2003, at the Road Commission office at 3020 Sheridan Avenue, Saginaw, Michigan.

Julie L. Lightfoot, Director of Finance & HR/Board Secretary

****Revised and approved by the Board of County Road Commissioners of Saginaw County February 22nd, 2011**

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PART 1 GENERAL PROVISIONS

RULE 1.1 ACTIVITIES THAT REQUIRE PERMITTING

- 1.1.1** Subsequent to the effective date of these Rules, no person, organization, or governmental unit shall undertake or conduct any of the following activities on, within, beneath, or along County roads, County road right-of-way, or highway easement unless a permit to allow such activity shall have been obtained from the Saginaw County Road Commission Permits Department:
- A.) Construct, reconstruct, relocate, surface, widen, or resurface a driveway or private road connection to a County road.
 - B.) Erect or suspend a banner, decoration, or similar object.
 - C.) Close a section of a County road to normal traffic for the purpose of staging a parade, celebration, festival, or similar activity.
 - D.) Install or maintain landscaping including berms, plantings, sprinklers, lights, signs, entrance markers, or other decorative items.
 - E.) Install or repair a non-motorized pathway.
 - F.) Install, maintain, or connect to any underground or overhead public or private utility, pipeline, wire, conduit, or sewer.
 - G.) Conduct geophysical or hydrological investigation.
 - H.) Any other activity, which requires excavation in the right-of-way, working from the right-of-way to reach private property, or disruption of normal traffic patterns.
 - I.) Any addition or change of a property address on either a public or private road.
- 1.1.2** Construction of a new road that will become a public road shall be allowed only after an approved permit for the approach has been obtained from the Permits Department. All roads both public and private shall be addressed in accordance with the current Saginaw County House Addressing Ordinance. Construction of the approach, tapers, passing lane, and new road shall be in accordance with plans and specifications approved by the Engineering Department of the Saginaw County Road Commission. Geometric and construction standards may be found in the Land Development Procedures for the Saginaw County Road Commission.” Approaches for private roads shall be constructed or reconstructed to the same geometries and specifications as a new public road unless otherwise approved by the Saginaw County Road Commission Permits Department.
- 1.1.3** When the use of the land served by the driveway is changed or expanded, and the change or expansion causes the existing driveway to be a safety concern, the driveway will be considered a new driveway as per Act 83, Public Acts of 1978 (Section 7 of 1969 PA 200) added by 1978 PA 83 (MCL 247.327). Factors that constitute a safety hazard shall

include but are not limited to the following:

- A.) Increased accident rate at or near driveway or private road.
- B.) Increased traffic volume on main road.
- C.) Increased turning movements using driveway or private road.
- D.) Improper drainage.
- E.) Inadequate sight distance.
- F.) Excessive grades of driveway.
- G.) Improper driveway design for use.
- H.) Creation of a potential risk of harm to the traveling public.

RULE 1.2 DEFINITIONS

1.2.1 APPLICANT

A property owner or the property owner's authorized legal agent who is applying for a permit to connect a "driveway" as defined by Section 1 of Act 200 of the Public Acts of 1969, (MCL 247.321) as amended, to a County road. The term also includes authorized governmental officials applying for a permit to temporarily close a County road for a parade, celebration, festival, or similar activity authorized by Act 200 of the Public Acts of 1969, as amended (MCL 247.321 et seq.). The term also includes the party (City, County, Corporation, Property Owner, etc.) making applicant for a permit to construct, operate, use, and/or maintain a facility within County right-of-way.

1.2.2 APPROVED EXCAVATED MATERIAL

Material excavated from within the right-of-way excluding peat, marl, muck, blue clay, frozen material, topsoil, and other organic or hydria soils, that has been classified, optimum moisture and maximum density determined, that has been approved by the Saginaw County Road Commission as acceptable for backfill material.

1.2.3 APPROVED PLANS

The plans submitted by the Applicant and approved by the Saginaw County Road Commission as part of permit approval. Approved plans include notes and comments made by the Saginaw County Road Commission. The approved plans do not include contracts, proposals, and other documents unless specifically noted or approved by the Saginaw County Road Commission.

1.2.4 BANNER

Any arrangement of words, lettering, symbols, or decorative device, including Christmas decorations, suspended over any portion of a road or adjacent to a travel lane.

1.2.5 BOND

A document of financial assurance that guarantees a specific level of expenditure for restoration of a site. The Saginaw County Road Commission can draw upon the funds guaranteed by the bond and restore the site, if the Permit Holder does not accomplish the restoration in a reasonable time interval. Bonds are required for all permits issued which would threaten, or otherwise present a potential for surface damages. For clarification of the above, requirements or other questions call the Permits Department at (989) 752-6140 ext. #210.

1.2.6 BORINGS

Holes drilled in the earth to obtain samples of soil and/or groundwater and/or to measure water levels. When utilized in conjunction with testing, are routinely plugged and abandoned immediately after sampling is completed. Borings are also utilized for some types of geophysical testing.

1.2.7 BOARD

The Board of County Road Commissioners of the County of Saginaw, State of Michigan, a Public Body Corporate.

1.2.8 BUFFER AREA

An area of the public right-of-way adjacent to a roadway, which serves as a physical barrier to vehicular travel between road traffic and activity on the adjacent private property.

1.2.9 BUTT JOINT

A saw-cut joint, to provide a clean edge in the existing pavement to butt new construction against.

1.2.10 CERTIFIED CLOSURE

A report by a certified Consultant which attests that a former underground storage tank site has been re-mediated and now conforms to state standards in regards to onsite contaminate concentrations, following the removal of a underground storage tank and the remediation of site contamination.

1.2.11 CIRCLE DRIVEWAY

A private driveway, which enters and leaves private property at two points within the same frontage.

1.2.12 CLEAR VISION AREA

Land acquired or used by and in accordance with standard practices of the agency having jurisdiction over a road for the purpose of maintaining unobstructed vision.

1.2.13 COMMERCIAL DRIVEWAY

A driveway serving a commercial establishment, industry, [private road for land division](#), governmental or educational institution, hospital, church, apartment building, mobile home Park, and all other facilities not included in the definitions for residential, field or utility structure driveways.

1.2.14 DIRECTIONAL DRIVEWAY

A driveway system designed so that traffic leaving the road is separated from and does not conflict with traffic entering the road (with critical turning movements to and from the property restricted) at certain access points. (Also known as a “one-way” drive.)

1.2.15 DIVIDED DRIVEWAY

A driveway so designed that traffic entering the driveway is separated by a traffic island from the traffic leaving the driveway.

1.2.16 EMERGENCY ACCESS

Access maintained for the purpose of emergency vehicles including all police, fire, and paramedic equipment.

1.2.17 FIELD DRIVEWAY

Any driveway serving a farmyard, out-building, cultivated or uncultivated field, timberland, or undeveloped land not used for industrial, commercial, or residential purposes.

1.2.18 FRONTAGE

The private property that abuts the road right-of-way.

1.2.19 INTRUSIVE

Testing which penetrates the land surface and may take away physical samples. It can include sampling, and/or soil borings, and/or monitor wells, and these samplings can be conducted manually, by drilling rigs, and/or by Geo-Probe equipment (or the equivalent).

1.2.20 LANE CLOSURE

Blocking one lane of a multi-lane roadway in such manner that the lane is unavailable for normal traffic usage.

1.2.21 PERMIT HOLDER (Permittee)

A person, partnership, or corporation including contractors acting pursuant to the

authority, control, and responsibility of the applicant to perform the work requested by the applicant in accordance with the requirements set forth in these rules and those of 1969 PA 200, as amended (MCL 247-321 et seq.). May be referred to as “License holder” in S.C.R.C. permits and associated documents.

1.2.22 LIMITED ACCESS

Road right-of-way in respect to which owners or occupants of abutting lands and other persons have no legal right to access to or from the same except pursuant to limited areas and manners determined by the public authority having jurisdiction over such road, street or highway.

1.2.23 LOCAL TRAFFIC

Traffic, which uses a particular street or route to access residences, businesses, or other abutting properties and has no alternative route to said residence, business, or other abutting property.

1.2.24 MAJOR ROADS

County Primary Roads or County Local Roads that carry substantial traffic volume (greater than 500 vehicles per day) and provide continuous route for through traffic.

1.2.25 M.D.E.Q. or M.D.N.R.

Michigan Department of Environmental Quality or the Michigan Department of Natural Resources.

1.2.26 M.D.O.T.

Michigan Department of Transportation.

1.2.27 MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION

The current Standard Specifications for Construction that shall also include the current Saginaw County Road Commission Supplementary Specifications and Design Standards on file at the Permits Department, and any other Standards published by a recognized authority and accepted for use by the Saginaw County Road Commission.

1.2.28 MONITORING WELLS

Temporary subsurface sampling stations (wells) installed to obtain periodic groundwater samples and/or water levels.

1.2.29 M.M.U.T.C.D.

The current edition of the Michigan Manual of Uniform Traffic Control Devices as amended.

1.2.30 NONINTRUSIVE:

Testing and investigations that do not penetrate the surface of the soil or take away physical samples. These will generally include geophysical or hydro geological investigations or surveys.

1.2.31 ONE-LANE TRAFFIC

Alternating one-way traffic operation using flag, persons, or other traffic control measures.

1.2.32 OWNER'S ENGINEER

The Professional Engineer registered in the State of Michigan who is employed by the property owner to prepare plans and supervise construction.

1.2.33 PERMITS DEPARTMENT

The Department within the Saginaw County Road Commission which issues Permits and inspects activities which take place within the County right-of-way for compliance with the Board Rules and procedures.

1.2.34 PRIVATE ROAD

A road, which is not under the jurisdiction of a public body and serves two or more Businesses, homes, or lots.

1.2.35 PROPERTY OWNER

A natural person, firm, association, partnership, corporation, or combination of any of these or any other party having an ownership interest in the land involved.

1.2.36 RESIDENTIAL DRIVEWAY

A driveway serving one single-family dwelling.

1.2.37 RESOLUTION

A resolution passed by a local governing body authorizing a specific official or officials to apply to the Permits Department for an individual permit, or for all permits in the case of a blanket resolution, and wherein the governing body agrees to indemnify and save harmless the Board and all Saginaw County Road Commission employees from claims of every kind arising out of operations authorized by such Permit(s) as is (are) issued.

1.2.38 RIGHT-OF-WAY (R.O.W.)

The land over which the Saginaw County Road Commission has highway jurisdiction and which is subject to use for highway purposes. Right-of-way may be obtained by deed, statutory or plat dedication, condemnation, or by a ten-year period of use. It may be held either in fee or may be an easement.

1.2.39 RIGHT-OF-WAY LINE

A boundary along the road frontage, which denotes the limit of width of the right-of-way.

1.2.40 ROADBED

That portion of the roadway between the finished edge of the road shoulders or two feet behind the curbs. On unpaved roads or roads without shoulders or curbs, the limit of the roadbed is two feet outside the traveled portion of the roadway.

1.2.41 ROAD CLOSURE

Physically or operationally blocking all improved lanes of a roadway preventing the flow of through traffic. Local traffic and emergency access is maintained.

1.2.42 S.C.R.C.

Saginaw County Road Commission

1.2.43 SHARED DRIVEWAY

A driveway that serves two residential parcels or lots when said driveway is constructed on a common lot line and divides immediately outside of the public R.O.W. to serve each lot. Both lots have access to an existing public road.

1.2.44 SIGHT DISTANCE

The length of clear view along a highway required so that a specified object is visible to the driver, or the required distance of clear vision required to safely enter or cross a county road.

1.2.45 TEMPORARY APPROACH

A place of access that will be used for a particular purpose for a specified short period of time not to exceed one year. After said period of time, either a permanent approach permit must be acquired and the approach built or the approach must be removed and the right-of-way restored to its original condition.

1.2.46 THROUGH TRAFFIC

Traffic whose destination or origin is not to or from residences, businesses, or other properties, which abut a particular street or route.

1.2.47 UTILITY STRUCTURE DRIVEWAY

Any driveway serving a structure or utility installation such as a pump house or substation, which operates automatically and requires only occasional access.

1.2.48 WORK AUTHORIZATION

In the event that the activities of an Applicant or Permit Holder result in a condition that,

in the opinion of the Permits Department, is unsafe, is causing unacceptable delay or inconvenience to the traveling public, damage to the roadway, drainage systems or appurtenances, or damage to public or private property due to flooding, the Permits Department may issue a work authorization to correct the situation after reasonable efforts to notify the applicant or Permit Holder. Such work authorizations provide for labor and equipment to install signs, barricades or barriers, and any such equipment and materials required to restore the roadway and drainage systems.

1.2.49 ZONE OF INFLUENCE

That area outside of the roadbed, but within the area defined by a one-on-one slope extended from the edge of the roadbed. Other definitions not specifically listed herein may be found in the Michigan Department of Transportation Standard Specifications for Construction and other manuals incorporated by reference in this document.

1.2.50 HOUSE ADDRESSING ORDINANCE

Saginaw County House Addressing Ordinance #113

1.2.51 S.C.P.W.C.

Saginaw County Public Works Commission.

RULE 1.3 PRESERVATION OF GOVERNMENT LAND CORNER SURVEY MONUMENTS

To ensure compliance with the provisions of 1970 PA 74, as amended, being MCL 54.201 et seq., regarding the monumentation of survey monuments and witnesses, the following procedures shall apply to all permit applicants, their engineers, and permit Holders performing work within the Saginaw County right-of-way:

- A.) Public Land Survey Corners and Property Controlling Corners located within a construction area shall be witnessed prior to the commencement of construction and their locations shall be noted on plans submitted as part of a permit application. They shall then be re-established in accordance with Public Act 74 of 1970 as amended. It is the responsibility of the Permit Holder and Contractor to coordinate the work with a Land Surveyor Licensed in the State of Michigan during the appropriate construction activities for the purpose of placing monument boxes in new pavement, etc.
 - 1.) If a survey corner is located in a public roadway that is hard surfaced, the monument shall be flush with the finished pavement elevation on all sides.
 - 2.) If a survey corner is located in a public roadway that is not surfaced, the monument shall be at least six (6) inches below the surface of the finished road.
 - 3.) All monuments shall be in accordance with M.D.O.T. specifications and M.D.O.T. standard plan R-11-A.
- B.) Upon completion of the requirements of Public Act 74, the Licensed Land Surveyor shall submit two copies of the recorded Land Corner Record Certificate (with Liber and Page); one shall be sent to the Project Engineer and one shall be sent to the County Permit Officer at the following address:

Saginaw County Road Commission
Permits Department
3020 Sheridan Ave
Saginaw, MI 48601-4450

PART 2 –PERMITTING PROCESS

RULE 2.1 AUTHORIZED APPLICANT

Applications for permits may be accepted from property owners, the owner’s contractor, or authorized agent, or from governmental agencies.

RULE 2.2 APPLICATIONS FOR PERMIT (S)

Applications for permits shall be submitted in the manner prescribed by and on the appropriate forms supplied by the Permits Department. Applications shall be accompanied by plans or drawings containing the information required by Rule 2.3 and the appropriate fee as established by the Board. (Rule 2.3 does not apply to replacement of existing residential drives.)

RULE 2.3 PLAN REQUIREMENTS FOR PROPOSED RIGHT-OF-WAY ACTIVITY (S)

All copies of permit applications shall be accompanied by two (2) sets of plans or drawings clearly indicating the following features or as the Permits Department may require to adequately review the proposed work:

- 2.3.1** Existing road surface, ditches, right-of-way and property lines, road appurtenances, medians (if existing) and dimensions thereof, driveways on adjacent property and on property opposite the frontage, names of existing and proposed roads, utilities, sight distance, and other physical features which may impact the design, approval, and construction of the proposed work.
- 2.3.2** All buildings, both proposed and existing, appurtenances to any business being conducted and, dimensions thereof including a notation as to present or proposed use of the buildings.
- 2.3.3** Driveways, tapers, right turn lanes, passing lanes, and center lane for left turns to be constructed, reconstructed, relocated, surfaced, resurfaced, operated, used, or maintained shall be designed in accordance with Part 6 of these Rules and include the following dimensions and features:
 - A.) Widths of all driveways.
 - B.) Radii of driveway returns and other points of curvature.
 - C.) Driveway grades or profile view of driveway.
 - D.) Angle of the driveway(s) relative to the roadway edge of pavement.
 - E.) Dimensions of roadside control island, other traffic islands adjacent to the road and traffic control island/islands in the road.
 - F.) Driveway surface material and traffic island surface material.
 - G.) Sight distance for the approach.

- H.) Rumble strips.
 - I.) Dimensions of all taper lengths, lane widths and length, length of curb.
 - J.) Cross-section of proposed pavement showing depth and type of material.
- 2.3.4** Distance from existing driveway(s) and proposed driveway(s) to the nearest Intersecting street or crossroad and dimensions to property lines, property lines extended to the road pavement and buildings and business appurtenances.
- 2.3.5** All roadside features, in addition to driveways, to be constructed within the road right-of-way including roadside control island, curb, sidewalks, authorized traffic signs, landscaping, and other roadside features such as manholes and poles.
- 2.3.6** All existing and proposed underground and overhead public and private utilities including but not limited to water main, storm sewer, sanitary sewer, gas main, electric, and fiber optic.
- 2.3.7** Existing and proposed drainage structures, ditches, sewer, and controls to include:
- A.) Type, Grade, Size and length of culverts, sewer pipe, outlet controls, and/or ditches, with supporting calculations.
 - B.) Direction of surface water flow on proposed site.
 - C.) Type, size, and location of drainage structures.
 - D.) Retention volume and outlet control calculations.
 - E.) Other hydrologic/hydraulic information as necessary.
- 2.3.8** North directional arrow and scale of drawing.
- 2.3.9** Location map relating the proposed site to major county roads.
- 2.3.10** All Government land corner survey monuments and witnesses located within the project limits.
- 2.3.11** The name, address, and phone number of the person preparing the plan. When required by law, the seal of the Professional Engineer who prepared the plans along with his/her name, address and phone number must appear on the plan.
- 2.3.12** All parcels that will have a primary structure constructed and/or require utility service will need an addressing permit, in accordance with Saginaw County House Addressing Policy #113.

RULE 2.4 DESIGN AND PLACEMENT REQUIREMENTS

The design, location, construction, and operation of those activities covered under Rule 1.1 and related construction within road right-of-way shall meet requirements of the current Michigan

Department of Transportation Standard Specifications for Construction, Guidelines of the American Association of State Highway and Transportation Officials (A.A.S.H.T.O.), and design standards set forth in these Rules and any other standards in use or authorized by the Saginaw County Road Commission.

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 M.I.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 Public Works 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.
- 2.5.30** Ingress and egress to properties adjoining roads under the jurisdiction of the Saginaw County Road Commission are the responsibility of the property owner. The construction of private driveways including furnishing culvert and surface material are not considered qualified expenditures of public road funds. Therefore the total cost of constructing and future maintenance of all driveways connecting to a county road shall be borne by the respective property owners.

RULE 2.6 REVIEW OF PERMIT DENIAL OR REQUEST FOR VARIANCE

- 2.6.1** A person wishing review of a denial of either a permit application or request for variance from permit specifications may submit a written request for review, stating with specificity the facts in support of the request, to the Director of Engineering.
- 2.6.2** Within 30 days of submission of the request, the Director of Engineering shall either grant the request or forward the request and his recommendation to the Managing Director. The applicant will be furnished with a copy of the Director's recommendation, and have an opportunity to respond in writing to said recommendation.
- 2.6.3** The Managing Director shall make a final written determination within 45 days of submission of the request; either granting or denying said request. The requester shall be forwarded a copy of the determination by first class mail. If the request is denied, the response shall set forth the reasons for denial.
- 2.6.4** Failure to meet the above time guidelines shall not be construed as an approval of the variance requested.

RULE 2.7 INSTALLATION WITHOUT PERMIT OR IN NON-COMPLIANCE WITH PERMIT CONDITIONS

- 2.7.1** The Permits Department may issue a written notice of violation for any activity covered under Rule 1.1, which is constructed, installed, or performed in violation of these Rules.
- 2.7.2** The Permits Department may issue a written notice of violation for a driveway constructed in violation of these Rules, unless said driveway was in existence on August 6, 1969 and the use of the land served by said driveway was not changed.
- 2.7.3** The notice of violation shall specify which rules are violated, the correction required, and the time for said correction (not less than 30 days). The notice shall be sent by certified mail, return receipt requested, to the owner of the subject property.
- 2.7.4** If the violation is not corrected in the time required by the notice, the Saginaw County Road Commission may perform the necessary correction and invoice the owner for its reasonable costs.
- 2.7.5** This procedure is in addition to and does not negatively affect the right of the Permits Department to issue a stop work order or of the Saginaw County Road Commission to correct conditions within the right-of-way creating hazards to vehicular travel.

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.

RULE 2.9 PERMIT FEES

Fees in the form of a certified check, bank check, money order, credit card or cash shall be required in the amounts indicated on the approved application form for permit fee, deposit, estimated inspection fee, sign fee, signal fee, and pavement striping fee. These amounts may be combined into one check. Personal or corporate checks may be accepted subject to the approval of the Permits Department. Inspection fees are estimated and any amount over and above the amount estimated, including any costs associated with work authorizations, shall be deducted from the permit deposit. Any charges in excess of the permit deposit will be billed to the Permit Holder. Any unused portion of the permit deposit will be returned to the Permit Holder. The bond and permit will not be released until such payments are received by the Saginaw County Road Commission.

RULE 2.10 SECURITY FOR ROAD RESTORATION

Security in the form of cash, a certified check, or surety bond ~~shall~~ **may** be required for permits for any activity covered under Rule 1.1 to secure the cost of restoring the disturbed portion of right-of-way to an acceptable and safe condition. Surety bonds shall be on a form accepted by the Legal Department of the Board. The amount of the security shall be determined by the Permits Department.

RULE 2.11 REFUNDS OF APPLICATION FEES, PERMIT FEES, DEPOSITS, AND UNUSED BALANCES

Application fees are non-refundable once fees received have been deposited and/or the application has been approved or denied. Permit fees, sign fees, and signal fees are nonrefundable upon issuance of the permit. In the event that the work covered by a permit does not commence, deposits and inspection fees will be refunded to the Permit Holder upon receipt of a written request to revoke the permit and return the deposit and inspection fees. In the event, upon completion of the work covered by the permit, that unused balances remain either deposits or estimated inspection fees, a refund will be issued to the Permit Holder. Sign fees and pavement striping fees are non-refundable if the Saginaw County Road Commission has incurred costs in reliance on the permit issuance, even if work does not proceed. Refunds will be processed after final inspection of the work by the Permits Department. Final inspection will not occur until the Saginaw County Road Commission has been satisfied that all repairs have been made, vegetation has been established, and that no settlements will occur.

PART 3 – MAINTAINING TRAFFIC AND TRAFFIC CONTROLS

RULE 3.1 SIGNS AND SIGNING

- 3.1.1** The necessary signs and sign support standards, barricades, and traffic control devices necessary for the protection of traffic shall be in accordance with Michigan Manual of Uniform Traffic Control Devices as approved by the Saginaw County Road Commission. All such devices shall be furnished, installed, and maintained by the Permit Holder.
- 3.1.2** Traffic control signs and street name signs shall be removed, temporarily reset, and maintained by the Permit Holder. The traffic control signs shall be reset in locations where the regulations apply and continue to serve their intended purposes. The signs shall be mounted so as to be easily visible and legible to traffic.
- 3.1.3** Upon completion of the project, the Road Commission will reset traffic control signs and street name signs in their proper position. The Road Commission may furnish and erect temporary speed limit signs along the project. The Permit Holder shall relocate and maintain the temporary speed limit signs as directed by the Road Commission.
- 3.1.4** All signs erected or relocated by the Road Commission shall be at the expense of the Permit Holder. All erection and replacement of existing signs that are damaged during the course of construction will be charged to the Permit Holder at the rate of no less than \$100.00 for each sign. The Road Commission will inventory all signs at the beginning of a project and upon project completion before final acceptance is made.
- 3.1.5** The Permit Holder shall be responsible for the protection of all traffic control devices within the project area from damage due to their operation including material hauling, storage, equipment moves, and parking.
- 3.1.6** Advisory or information signs may be required in order to direct traffic to commercial or public facilities located within the work area. The Permit Holder shall be responsible for fabrication, installation, maintenance, and removal of such signs.
- 3.1.7** Temporary lane markings shall be placed immediately after paving where needed to control traffic.

RULE 3.2 LANE CLOSURES

Where a lane closure is approved by the Road Commission for purposes of open-cut crossings, construction within, or immediately adjacent to the traveled portion of the road, or parallel to the roadway, the following requirements shall apply.

- 3.2.1** Signage requirements shall be in accordance with temporary traffic controls as shown or described in current edition of the “MMUTCD” as amended, and shall comply with M.D.O.T. Typical for traffic control or as approved by the Engineer for the Saginaw County Road Commission.

- 3.2.2** Lane closures will be restricted to the hours of 9:00 a.m. to 3:00 p.m. unless specifically authorized by the Saginaw County Road Commission.
- 3.2.3** All required signing shall be in place and by-pass lanes and other improvements, if required, shall be completed before the lane closure begins.
- 3.2.4** Warning signs in construction areas shall have a black legend on an orange background. Color for other signs shall follow the standard for all highway signs. For speed limits of 40 M.P.H. or less, 36 inch warning signs can be used. If the speed limit is 45 M.P.H. or greater, 48 inch warning signs shall be used.
- 3.2.5** Two yellow flashing lights shall be placed on all construction or maintenance signs. The lights are used to draw the attention of motorists.
- 3.2.6** The bottom height of a sign should be five feet from the roadway's elevation and a minimum of 6 feet off the edge of pavement. In cases where pedestrian traffic may occur, the minimum sign height is to be seven feet while the lateral placement may be a 2-foot minimum from the edge of the walkway.
- 3.2.7** For short-term activities where portable sign mountings are used, the minimum bottom sign height may be one foot.
- 3.2.8** Markings for barricades shall be alternate orange and white stripes sloping downward at a 45-degree angle in the direction traffic is to pass. They are to be reflectorized for night use.
- 3.2.9** Three steady burn lights are to be installed on each barricade if used at night.
- 3.2.10** Cones may be used to delineate the working area and to channelize traffic. They shall be a minimum of eighteen inches in height with a broadened base and, be fluorescent orange in color. Cones shall only be used during daylight hours.
- 3.2.11** Plastic drums shall be thirty to fifty-five gallon capacities, and shall be marked with orange and white reflective material. The predominant color shall be orange with at least two horizontal, circumferential white stripe four to six inches wide.
- A.) Plastic drums can be used to channelize traffic or to delineate a hazard. However, they should never be placed in the roadway without advance warning signs.
 - B.) For nighttime use of barrels, a steady burn warning light shall be used on the plastic drum when used in a series for channelization. When used singly, however, a flashing warning light shall be used on the drum.
- 3.2.12** A flag-person is required at work sites to control traffic intermittently as required by work progress, or to maintain continuous traffic past a work site at reduced speeds, the following requirements shall apply.
- A.) At all one-way traffic blocks, which are two hundred and fifty (250) feet or less in length and where there are no visibility problems, one flag-person will be

required in the working area.

- B.) Where there are one-way traffic blocks over two hundred and fifty (250) feet in length or where there is a visibility problem, one flag-person shall be required at each end of the working area. Additional flag-people may be required due to heavy traffic, intersections, etc., as determined by the Saginaw County Road Commission.
- C.) Generally, a flag-person should be located on both sides of the construction to direct the traffic flow from both directions (200 to 300 feet prior to the construction area). They should stand on the shoulder adjacent to the traffic and be in direct communication with each other.
- D.) The flag-person shall devote full-time to the control of traffic and shall not be used to assist in the construction operations. During the flag-person's coffee breaks, lunch period, etc., another person must be assigned to perform these duties as long as the lane closure is in effect.
- E.) Flag-people shall wear MIOSHA approved vests and be equipped with handheld "STOP/SLOW" paddles, as shown in the current edition of the M.M.U.T.C.D.
- F.) Where a flag-person or flag-persons are used, the "Flagman Ahead" sign (W20-7 or W20-7a of the appropriate size) shall be posted in advance of the flag-persons station in accordance with the current edition of the M.M.U.T.C.D.

3.2.13 Traffic controls operations shall be conducted in a courteous and professional manner, and every reasonable effort must be made to minimize delay and congestion in the work area including cross-streets.

3.2.14 After working hours, signs, which are not appropriate, shall be covered or removed so that traffic will not be confused.

- A.) When a lane closure must remain in effect overnight, proper lighting will be required.
- B.) All warning signs to be used during hours of darkness shall be reflectorized and require two flashers.

3.2.15 When traffic conditions warrant, in the opinion of the Road Commission, the Road Commission reserves the right to require that the Permit Holder cease operations and restore the road to full use during periods of peak traffic hours.

RULE 3.3 APPROVAL OF ROAD CLOSURES AND DETOUR ROUTES

State Law requires, prior to approving the closure of public roads, that the Board of County Road Commissioners approve the road closure and establish and sign appropriate detour routes. Prior to closing a road in order to construct a facility covered by a permit, it is necessary for the Board to approve by resolution the time and date and section of road to be closed. The Applicant or Permit Holder must satisfy the following items prior to commencing work, which requires closure of a road under the jurisdiction of the Board of County Road Commissioners of the County of Saginaw.

- A.) Submit in writing a request to close the road in question and establish a detour.
- B.) Indicate the date and times of the beginning and ending of the road closure.
- C.) Submit a proposed detour route showing all signing requirements, in accordance with the Michigan Manual of Uniform Traffic Control Devices, current edition.
- D.) Submit written approval of the local community/communities involved.
- E.) If the proposed detour route involves roads not under the jurisdiction of this Board, submit written indication of the approval or processing of approval to use roads not under the jurisdiction of this Board as detour routes.
- F.) Indicate in writing the party responsible for fabricating and installing road closure and detour route signing. All costs associated with road closure and detour signing shall be borne by the Applicant or Permit Holder.
- G.) Submit the above information not less than three weeks prior to the anticipated road closure date.
- H.) Submit the following phone and/or fax numbers:
 - 1.) Office headquarters of the agency or contractor closing the road.
 - 2.) The job supervisor.
 - 3.) The job site.
 - 4.) A 24-hour emergency number.

Upon review and approval of the proposed detour, route and signing the Permits Department staff will propose to the Board of County Road Commissioners a resolution authorizing road closure and establishment of the detour route. The Permits Department will notify the permit applicant of approval (or denial) and authorize installation of signs for the closure. Detour routing signs must be covered until the road is closed and covered or removed immediately after the road is re-opened. The appropriate local officials including; police, fire, schools, and ambulances will be notified by the Permits Department of the closure one-week before the date of commencement.

RULE 3.4 DETOURS

3.4.1 No road or street will be closed to through traffic without specific permission of the Board of County Road Commissioners. Requests for permission to close a road or street and establishment of a detour will be made in writing by the Applicant, or by the Permit Holder. If the Permit Holder makes the request it must be concurred by the Applicant prior to submission to the Saginaw County Road Commission.

3.4.2 Signing for all approved detours will be installed and maintained by the Permit Holder, unless the Saginaw County Road Commission approves other arrangements in advance. The Permit Holder must give the Road Commission at least three weeks advance notice,

not including Saturdays, Sundays, or holidays for all detours. Special information signs, including closure dates, shall be posted at least one week prior to closure.

- 3.4.3.** The Permit Holder shall be responsible for notifying all concerned parties, such as police and fire departments, school officials, etc., with a work schedule. Upon completion of use of the detour, the Permit Holder shall notify the same concerned parties that the road has been re-opened and that the detour is no longer in effect.
- 3.4.4** If, in the opinion of the Road Commission, the road or roads over which the detour will be routed cannot reasonably be expected to handle the resulting increased traffic, the Saginaw County Road Commission shall notify the Permit Holder, it shall be the responsibility of the Permit Holder to make necessary improvements to handle the increased traffic prior to the posting of the detour, and to maintain the route in the improved condition as directed by the Road Commission during the life of the detour. If conditions warrant, the Road Commission may require additional improvements during the use of the detour.
- 3.4.5** The Saginaw County Road Commission may require additional informational or advisory signs to ensure convenient access to schools, churches, businesses, local residents, or other facilities within the area affected by the road closure. The cost of such signs and their installation shall be the responsibility of the Permit Holder.
- 3.4.6** Upon completion of use of the detour and re-opening of the closed road, a final inspection of the detour route will be made. The Permit Holder prior to release of the permit must repair any damage as a result of the detour use.

RULE 3.5 STEEL PLATING

- 3.5.1** Whenever possible, all excavations will be backfilled and repaired prior to opening for traffic. Whenever small openings such as “window cuts” are made in a road pavement that must remain open to traffic during the time there is no work activity; they shall be covered with steel plates. The steel plates shall be of adequate size and thickness to support all legal axle loads and shall overlap existing pavement by at least one (1) foot on all sides of the hole for trenches less than six (6) feet deep and two (2) feet on all sides of the trench for trenches deeper than six (6) feet. The following table shows the minimum size and thickness required for a range of hole sizes:

Minimum Hole Area Plate Size Thickness

Up to 3' x 4'	5' x 6' x ¾"
Up to 4' x 6'	6' x 8' x ¾"
Up to 4' x 10'	6' x 12' x 1"

- 3.5.2** Side by side plating may be used to cover cuts longer than ten (10) feet provided the abutting edges are supported by a steel beam of adequate strength, firmly supported on sound earth for at least one (1) foot on each end. Steel plates shall be bedded in cold patch and held in position by bolts or pins at least three inches long. Cold patch ramps shall be used along all edges of the plates. Steel plates shall also be used to cover concrete patches during the curing period. Upon removal of the steel plates, all cold patch shall be removed from the pavement and disposed of outside the road right-of-way. The necessary steel plates must be on the job site before the pavement is removed.

- 3.5.3** The use of steel plates will only be allowed when no other option is available and must be approved in advance by the Saginaw County Road Commission Permits Department.
- 3.5.4** Steel plates shall not be used in winter if possible. If so, Saginaw County Road Commission Maintenance department must be notified.

RULE 3.6 TRAFFIC CONTROL DEVICES AND EQUIPMENT

The Permit Holder shall be responsible for the protection from damage, and interference with, all traffic control devices and equipment including, but not limited to hand holes, conduit, wiring, detectors, cabling, supports, cameras, beacons, signals, control boxes, and any other equipment associated with the control of traffic signals, signs, and warning devices. The Permit Holder may not remove, adjust, relocate, tamper with, or interfere with the operation of these traffic control devices without the express permission of the Permits Department for the Saginaw County Road Commission unless specifically indicated on the permit and on the approved plans. All necessary repairs, restorations, or adjustment to these systems if required will be made, at the expense of the Permit Holder.

RULE 3.7 GUARDRAIL

The Permit Holder shall be responsible for the removal or protection of guardrail, guardrail posts, guideposts, and end treatments that conflict with the proposed work or the operations of the Permit Holder. Removal of guardrail must be made with prior permission of the Road Commission. In the event that guardrail is removed, temporary lighted barricades shall be placed, and the guardrail restored as soon as the conflict no longer exists. The Permit Holder may elect to eliminate guardrail with the permission of the Road Commission by flattening slopes, removing obstacles, or other actions that result in the guardrail no longer being warranted by the current A.A.S.H.T.O. guideline at the Permit Holder's expense. If the guardrail and posts are removed or damaged, they shall be restored to the current A.A.S.H.T.O. standard for height, type, construction, and end treatment. If the height of the guardrail is changed, in relation to the roadway or shoulder, as a result of the work performed by the Permit Holder the guardrail must be upgraded at the direction of the S.C.R.C. at the expense of the Permit Holder.

RULE 3.8 PAVEMENT MARKINGS

- 3.8.1** Unless indicated on the approved plans or provisions made specifically on the permit, the Permit Holder shall be responsible for the restoration of and the protection of, or the replacement of all pavement markings including lane lines, pedestrian crossings, legends, and reflectorized pavement markings that may be disturbed or damaged by the work or the contractor's operations.
- 3.8.2** Permanent pavement markings shall be placed immediately after the placement of replacement pavement. Temporary markings may be used on temporary pavements, but must be replaced before November 1st with permanent markings if the permanent pavement replacement will not occur until the following year. Temporary markings will not be allowed during the winter season. The Permit Holder is responsible for regular inspection of temporary pavement markings and repair or restoration of damaged or disturbed markings.
- 3.8.3** The Saginaw County Road Commission at the Permit Holder's expense will conduct any

repair to damaged or disturbed pavement markings, either temporary or permanent.

PART 4 – TREE REMOVAL, TRIMMING, OR TUNNELING

RULE 4.1 PERMIT REQUIREMENTS

- 4.1.1** A permit is required for any tree removal, trimming, or tunneling unless specifically authorized by the Saginaw County Road Commission. A separate permit will not be required if the tree removal, trimming, and tunneling are in conjunction with other permitted activities on County highways and streets such as the construction of approaches, turning lanes, pathways, or utility connections provided such tree removals are shown on the plans. An owner of a residential property, clearing or trimming trees from his frontage along the County road or street, must obtain a permit, however no fees will be charged.
- 4.1.2** Permits must be obtained from the Saginaw County Road Commission Permits Department.
- 4.1.3** The Permit Holder will be required to show on the construction plans or on separate sheets similar to the plans, the location, size, and species of all trees, which may be affected by the proposed construction in such a way as they are readily identifiable in the field. They must also indicate thereon which individual trees are to be removed, tunneled, or trimmed. If a tree is to be trimmed, the type and extent of trimming must be indicated.
- 4.1.4** Before removing or trimming any tree located in the platted, dedicated, unplatted, or, acreage rights-of-way under the jurisdiction of the Road Commission, in an area not directly fronting on the applicants property on a Road Commission road or street, a wood disposal agreement shall be obtained from the adjacent property owner. A separate agreement shall be obtained from each individual property owner on whose frontage trees are being removed or trimmed. The wood disposal agreement shall be evidence of the property owner's permission to remove the trees as shown on the plans on their frontage. It is the responsibility of the applicant to negotiate terms with each individual property owner to obtain a signed wood disposal agreement. The applicant may obtain the wood disposal order directly from the property owners or via certified mail. Copies of all necessary wood disposal agreements must be on file with the Permits Department before a permit can be issued. The permit holder shall notify the adjacent property owner's prior starting tree removal operations.

RULE 4.2 DISPOSAL OF MATERIALS

All stumps, limbs, litter, and logs are to be disposed of outside of the road right-of-way. The abutting property owner has the right to the wood. Logs and major limbs may be cut into fireplace lengths and piled neatly in the right-of-way, at least ten feet from the traveled road for removal by others. If, after one week, others have not removed the wood, the Permit Holder shall dispose of it and repair any damage to lawn/grass caused by the storage.

RULE 4.3 TUNNELING OR BORING UNDER TREES

The tunnel or boring must be below the major root system and extend a distance of one foot on either side of the tree for each two inches of trunk diameter. All voids around the tunneled or bored facility shall be backfilled with excavated material and thoroughly compacted to avoid settlement. If the tree is severely damaged or dies within one year as a result of the tunneling or boring, the Permit Holder will be required to remove it at his or her own expense.

RULE 4.4 REPLACEMENT OF TREES

Replacement of trees removed during the course of construction is not required by the Saginaw County Road Commission, however if trees are replaced placement of new trees shall be in accordance with our current policy. See Part 8 of this publication for tree placement policy.

PART 5 – UNDERGROUND CONSTRUCTION STANDARDS

RULE 5.1 ROAD CROSSINGS

5.1.1 All underground utility crossings of paved roads and gravel primary roads will be done by an approved method of boring unless so indicated on approved plans or approved in advance by the Saginaw County Road Commission Permits Department.

5.1.2 If tunneling under the roadbed is proposed, the tunnel shall be adequately sheeted or shored to prevent the sides and top from collapsing and the pavement from settling or cracking. Voids between shoring/sheeting and the side of the excavation shall be eliminated.

5.1.3 If **Directional Boring** is proposed the following requirements must be followed:

A.) Equipment:

- 1.) Shall be of type with radio location boring head.
- 2.) Location equipment shall be used to track bore head location.
- 3.) Back reaming by approved methods only.
- 4.) Compactor back reaming is not allowed.
- 5.) Proper drilling lubricant shall be provided.
- 6.) Only steerable type boring is allowed and hammer moles are not allowed.

B.) Operations:

- 1.) The path of the proposed bore must be marked in advance of the boring to check for conflicts with utility and structures.
- 2.) The top bore hole shall be a minimum of 48” below, the pavement, sub grade, or ditch line, whichever is deepest.
- 3.) Bore pits shall be a minimum of 10 feet off the edge of the pavement or behind the curb.
- 4.) When boring near electrical supply cables, proper care shall be taken to protect the operator, locator, and others from shock hazards.
- 5.) When back reaming pilot holes, and dragging product, the use of compaction type cutter heads is prohibited. The contractor shall use a cutting lead suitable to cutting a hole large enough to accommodate the product and lubricating fluid. Plain water will not be used as a lubricating fluid on bores exceeding 2 inches in diameter.

- 6.) After boring operations and connections are completed, the contractor shall restore the bore pit areas to the same or better than original conditions.
- 7.) In the event of damage to the pavement or roadside due to drilling operations, the contractor shall repair the pavement or roadside in a manner specified by the Saginaw County Road Commission before further boring operations can continue.
- 8.) The Saginaw County Road Commission shall be provided with a log of the bores on all conduits over 2 inches in diameter showing the final depth and path of the conduit under the roadway.

5.1.4 If Boring and Jacking is proposed the following requirements must be followed:

- A.) If a pipe is to be installed under the roadbed by Boring and Jacking, the leading edge of the pipe shall precede the auger by $\frac{1}{2}$ times the diameter of the pipe. If the auger cannot be operated inside the utility pipe, a casing pipe will be required. A casing pipe may also be required at other times when deemed necessary by the Permits Department. All pipes greater than four inches in diameter shall be bored using an auger.
- B.) All shafts or pits shall be located at least ten (10) feet off the edge of pavement on major roads and five (5) feet off the edge of pavement on subdivision roads. If the shaft or pit must be closer to the road than the above dimensions due to the location of the utility to be tapped, sheeting or shoring must be used on all sides of the excavation, which are closer to the road than the above requirements. Backfill and compaction methods shall meet trench backfill requirements.
- C.) All casings shall meet the minimum wall thickness as required by the current issue of the M.D.O.T. standard specifications.
- D.) If any settlement or other change in grade of the roadway, curbs, or ditches occurs, the road and/or drainage facilities shall be repaired or reconstructed to proper grade as directed by the Saginaw County Road Commission [Engineering](#) or Permits Department.

5.1.5 If Open-Cutting is proposed the following requirements must be followed: see section 5.5.4 for typicals

- A.) If a crossing cannot be bored due to extenuating circumstances, an Open-Cut crossing may be approved by the Saginaw County Road Commission Engineering or Permits Department. Provisions for handling traffic will be as directed by the Permits Department. All expenses including but not limited to signing, pavement marking, and traffic control shall be borne by the Permit Holder.
- B.) Open-cut crossings shall be made during off-peak traffic hours said times must be coordinated and approved by the Engineering or Permits Department of the Saginaw County Road Commission. Open-cut crossings shall not be started until

all equipment and material necessary for restoration is on-site or immediately available. Open-cuts will not be allowed to begin if inclement weather is threatening which may impede the contractor's ability to restore the traveled way in a timely manner.

- C.) No road shall be closed without prior approval of the Engineering or Permits Department of the Saginaw County Road Commission. Approval of road closures will require that detours be installed in accordance with Part 3, Maintaining Traffic and Traffic Controls. Requests for road closures must be made in writing and include the location, length of time the road will be closed, approximate starting and completion dates, reasons for the request, and a signing diagram showing all detour signing.
- D.) If a road closure is not approved, through-traffic must be maintained at all times.
- E.) Sheeting of the excavation may be required to protect the road if field conditions warrant sheeting.
- F.) Multiple open cut crossings such as might occur during installation of sanitary sewer, water main, etc. in an existing subdivision justifies permanent repair of the crossing followed by an asphalt cap over the entire width and length of effected roadway and shall be performed as defined in rule 5.4, Pavement Replacement.

RULE 5.2 PAVEMENT REMOVAL

- 5.2.1** All crossings of paved roads by the open-cut method shall include removal of the pavement to a minimum width of at least six (6) feet and at least three (3) feet beyond the limits of the trench to the nearest lane line and one (1) foot beyond the limits of any damaged pavement. Disturbance of any portion of a traffic lane shall necessitate complete pavement removal across the entire disturbed lane.
- 5.2.2** If the pavement removed is concrete or asphalt over concrete, the remaining slabs shall have a minimum width of at least five (5) feet from the patch to an existing joint. The cutting of the pavement shall be made by saw-cut method, to a minimum depth of five inches. Cuts in concrete residential and commercial drives shall be as above except that the patch width shall be a minimum of three (3) feet and the remaining slab width from the patch to the existing joint shall be a minimum of three (3) feet.
- 5.2.3** If the pavement is asphalt, the pavement shall be cut by sawing prior to excavation unless otherwise indicated on approved plans. Cuts in driveways or street approaches may require an overlay of the entire approach as determined by the Saginaw County Road Commission Permits Department.
- 5.2.4** All saw-cuts shall be made in a straight line and shall be parallel to existing transverse and longitudinal joints unless otherwise approved.
- 5.2.5** All equipment and material necessary for restoration, including but not limited to compaction equipment and sand, shall be on site prior to beginning excavation or pavement removal. Material, which cannot be stored, such as hot mix asphalt, shall be immediately available.

5.2.6 If contractor operations remove or damage 20% or more of the road surface, or the surface is three (3) years or less old, or it is determined that any open cut will result in substantial surface deterioration the entire roadway shall be over-laid or reconstructed as required by the Saginaw County Road Commission Permits Department.

RULE 5.3 BACKFILLING AND COMPACTION OF BACKFILL

5.3.1 General requirements:

- A.) Compaction shall be accomplished by suitable mechanical compaction equipment and methods as shown on approved plans or by methods approved by the Saginaw County Road Commission.
- B.) Where granular material is specified on approved plans or when required by this section, it shall be class II granular backfill.
- C.) Where granular material is not specified on approved plans or required by this section, excavated material capable of meeting identified compaction requirements may be used. Topsoil, peat, muck, marl, silt, and blue clay are not approved materials and shall not be used. The Permit Holder is responsible for identifying the excavated materials to be used, compaction methods, testing requirements, including moisture and density, handling and material management methods in writing to the Saginaw County Road Commission. The S.C.R.C. must approve prior to commencing operations.
- D.) Backfill materials shall be free of broken concrete, asphalt, woody material, sod, debris, clumps, frozen material, or clods.
- E.) Excavated material, which is proposed to be used as backfill shall be tested and approved prior to commencing operations. Soil borings and tests should be submitted with the application. The material must meet the following criteria:
 - 1.) Minimum 50% sand.
 - 2.) Maximum 10% wash (passing a #200 sieve).
 - 3.) Must be at or below optimum moisture content.
 - 4.) Must be able to be compacted to meet density requirements.
 - 5.) No plasticity due to excess moisture or overworking.
 - 6.) No appreciable deflection under-load from heavy construction equipment.
 - 7.) If moisture content changes due to precipitation or humidity, re-testing or special handling will be required.

5.3.2 Requirements based on excavation locations:

- A.) Within roadbed limits or under concrete or asphalt sidewalks, driveways, or

parking areas.

Backfill Requirements:

Class II Granular material shall be used unless shown on approved plans or otherwise approved in writing by the Saginaw County Road Commission Permits Department. If the Permit Holder proposes to use excavated material, not shown on approved plans, the S.C.R.C. will require that the Permit Holder agree to material sampling, testing, material storage and handling, and other requirements that may be identified prior to the use of other backfill materials. The backfill shall be placed in layers of not more than nine (9) inches in thickness. Each layer shall be compacted to not less than 95% of maximum unit weight as determined by appropriate test method.

- B.) Outside the roadbed but within the zone of influence or under sidewalks, driveways, or surfaced areas.

Backfill Requirements:

Class II Granular material shall be used unless shown on approved plans or otherwise approved in writing by the Saginaw County Road Commission Permits Department. If the Permit Holder proposes to use excavated material, not shown on approved plans, the S.C.R.C. will require that the Permit Holder agree to material sampling, testing, material storage and handling, and other requirements that may be identified prior to the use of other backfill materials. The backfill shall be placed in layers of not more than nine (9) inches in thickness. Each layer shall be compacted to not less than 95% of maximum unit weight as determined by appropriate test method.

- C.) Outside the roadbed and zone of influence and not under sidewalks, driveways, or surfaced areas.

Backfill Requirements:

Approved excavated material may be used provided that requirements of Rule 5.3.1 E can be met. The backfill shall be placed in layers of not more than twelve (12) inches in thickness. Each layer shall be thoroughly compacted to 95% of maximum unit weight.

- 5.3.3** The Permit Holder shall supply sufficient density tests conducted by an approved independent testing laboratory to assure the Saginaw County Road Commission that compaction requirements are being accomplished. The Permit Holder shall notify the S.C.R.C. of the name, address, and phone number of the testing laboratory 72 hours prior to beginning backfill operations.
- 5.3.4** If the required in-place compaction or stability cannot be obtained, the Permit Holder shall remove the material and class II granular material will be required.
- 5.3.5** Field compaction test methods shall be employed which give immediate test results.
- 5.3.6** All under-drain systems that are disturbed shall be rebuilt in a manner that completely restores their function.

5.3.7 Any geotextile fabric or geogrid encountered in the excavation must be restored in a manner that ensures the integrity of the material as it was originally intended. The Saginaw County Road Commission must approve the material and methods of repair prior to installation.

RULE 5.4 PAVEMENT REPLACEMENT

5.4.1 Temporary Replacement (Patching)

The Permit Holder in accordance with the following shall temporarily replace all pavements removed in crossing and/or paralleling paved County roads, or as a result of damage caused by the Permit Holder.

- A.) From May 1 through November 14 a minimum of four (4) inches compacted thickness of hot mixed bituminous asphalt (MDOT 4C or better, placed in two lifts) over twelve inches of compacted 21AA modified aggregate. Crushed concrete will not be allowed unless approved by the Saginaw County Road Commission.
- B.) From November 15* through April 30* when hot mixed bituminous material is not normally available, a minimum of three inches compacted cold patch asphalt over twelve inches of compacted 21AA will be required. The Road Commission for Saginaw County may require a temporary concrete patch based on anticipated maintenance or traffic considerations.
 - The dates shown here are approximate only. If hot mixed bituminous material is reasonably available between November 15 and April 30, it shall be used if suitable weather allows. Open-cutting pavement will generally not be allowed if asphalt availability or weather conditions are expected to preclude paving in the opinion of the Saginaw County Road Commission.
- C.) Temporary pavements must be placed immediately after utility installation in the crossing of main roads and within five days after crossing on subdivision streets. Failure to do so shall be just cause of either the temporary or permanent suspension of the Permit Holder's permit. Temporary pavements may be placed in accordance with the requirements of Rule 5.4.2, as permanent pavements, subject to acceptance by the Saginaw County Road Commission at the time of final inspection.
- D.) All temporary pavements must be maintained and kept in good condition by the Permit Holder until the final pavement replacement is made. Costs for emergency repairs by the Saginaw County Road Commission will be billed to the Permit Holder.

5.4.2 Final Pavement Replacement

- A.) Final pavement replacement shall be made within the first paving season (May 1 through November 14) following completion of the excavation providing suitable settlement has taken place over a period of at least four months or unless otherwise directed in writing by the Saginaw County Road Commission. If more than 20% of the width of a lane of an asphalt-surfaced road (or section thereof) is removed or damaged by the Permit Holder's operations, a full cap of the roadway width (or section thereof) will be required. The full cap shall consist of a bituminous overlay, of a minimum thickness of two (2) inches of MDOT 4C asphalt mix or better bituminous aggregate pavement (Note: a thicker bituminous cap may be required in high traffic areas), placed over the entire road (or section thereof) after replacing the damaged pavement or removed asphalt in accordance with these Rules.
- B.) The final area of the pavement to be replaced and/or capped shall be determined by the Saginaw County Road Commission. An approved paving contractor in accordance with the current Saginaw County Road Commission Standards shall do the final repaving. The name of the proposed paving contractor and a list of equipment and source of materials that will be used during pavement replacement shall be submitted in writing to the S.C.R.C. and approved in writing by the S.C.R.C. before pavement replacement is started. The S.C.R.C. must be notified two working days before pavement replacement is started. The S.C.R.C. reserves the right to test and inspect at the point of origin all materials to be used at the Permit Holder's cost. All pavements in the right-of-way damaged due to the Permit Holder's operations shall be restored to the satisfaction of the S.C.R.C. This includes all traveled lanes including turn lanes, passing lanes, tapers, paved shoulders, driveways, and street approaches that may be damaged directly by the work performed or indirectly due to material handling, trucking, equipment, or temporary roads.
- C.) The final pavement replacement shall be structurally equivalent to and of the same type as the pavement being replaced and in accordance with the following conditions.

- 1.) Asphalt on a sand, gravel, unknown or undetermined base:

Match existing pavement thickness with the following minimums:

Standard Roads

- Minimum of four (4) inches of MDOT 4C bituminous aggregate pavement placed in two (2) two (2) inch lifts on eight (8) inches of 21AA modified aggregate base.

All Season Roads

- Minimum six (6) inches "deep strength" asphalt placed in three (3) lifts, on suitable, granular, compacted sub-base. "Deep strength" asphalt shall consist of one (1) two (2) inch lift of MDOT 4C asphalt mix, over one (1) two (2) inch lift of MDOT 3C asphalt mix, over two (2) two and one-half (2 ½)

inch lifts of MDOT 11A asphalt mix.

2.) Asphalt on concrete:

Sub-base is to match existing sub-base; Concrete pavement shall be replaced to original grade using grade 35P concrete and shall be anchored to existing concrete pavement in accordance with M.D.O.T. current Standard plans as amended, after concrete has achieved sufficient strength asphalt surface shall be placed in accordance with current Standard Specifications for Construction as published and amended by the Michigan Department of Transportation.

3.) Concrete pavement:

Replace with concrete pavement of the same thickness and type as the existing pavement on sand or gravel sub-base equal to the existing sub-base in thickness and compacted to 98% density. All concrete shall be M.D.O.T. Grade A 35-P unless otherwise required by the Road Commission and shall be anchored to existing concrete pavement in accordance with M.D.O.T. current standard plans as amended. High early or “extra” high early 35HE should not be used unless required by the Saginaw County Road Commission based upon traffic volumes and the Permit Holder operations.

- D.) Final Pavement restoration shall include wedging as necessary with suitable asphalt to establish or reasonably restore pavement cross-slope, super-elevation, or transitions including adjustments to driveways, side streets, and paved shoulders. The Permit Holder is responsible for adjustment to shoulders including adding material to achieve a smooth cross-slope. Special care shall be taken to maintain positive drainage at all locations including driveway aprons. The Saginaw County Road Commission may require paved shoulders on primary roads.
- E.) Deviations in pavement design or materials must be approved by the Saginaw County Road Commission Permits Department prior to construction.
- F.) The Permit Holder and/or Applicant are responsible for survey or measurement of existing roadway conditions sufficient to allow road restoration prior to removing or disturbing the roadway. This includes determining lane widths, shoulder width, cross slope, super elevation, vertical or horizontal curve, ditch cross-section and grades, pavement thickness, and subgrade type. Where vertical curves or horizontal curves with super elevations exist, cross-sections shall be provided at maximum 25 feet intervals. Should the Permit Holder and/or Applicant fail to provide this information on approved plans or prior to removal or disruption, then current design guides shall prevail for restoration.
- G.) Curb lines shall be milled or otherwise adjusted to accept the new roadway surface. Butt joints shall be provided at intersections, driveways, at the end of an overlay, or other locations. Said joints shall be clean, straight, and perpendicular

or parallel to the roadway.

5.4.3 The Permit Holder shall repair any damaged pavement, including sub-grade repair prior to placement of the wearing course of asphalt surfacing.

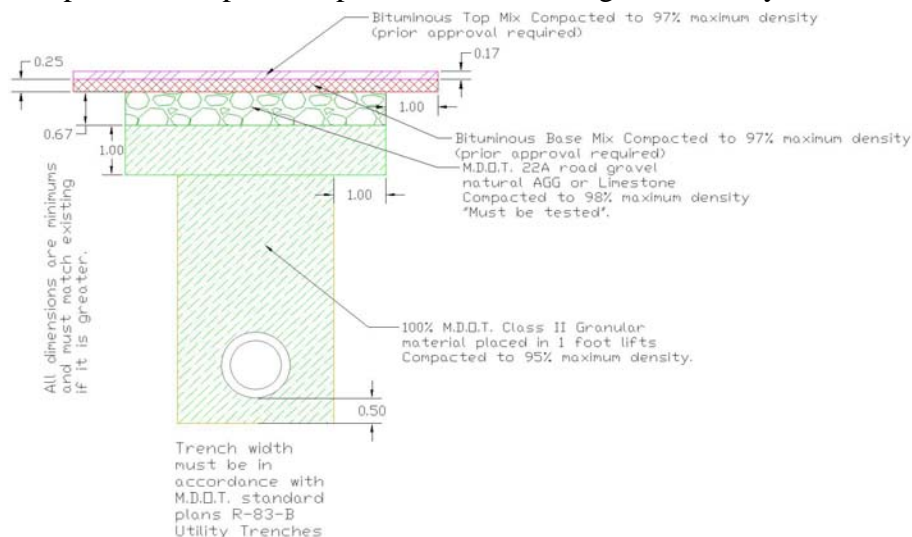
RULE 5.5 GRAVEL ROADS

5.5.1 All excavations are to be backfilled with material as shown on approved plans within the limits of the roadbed. Alternate backfill materials must be approved in writing by the Saginaw County Road Commission and are subject to Rule 5.3.

5.5.2 Immediately after the trench is backfilled and compacted, the affected portion of the road and ditches shall be rough graded to the appropriate gravel road cross-section indicated in these specifications and the affected portion of the road surface shall be stabilized with a minimum of eight (8) inches of compacted processed limestone road gravel (M.D.O.T. 23A or approved equal). Cementitious materials such as crushed concrete are not considered equivalent and will not be permitted unless authorized by the Engineer for the Saginaw County Road Commission. If road surface areas outside of the trench excavation are used for storage of construction materials or excavated materials, or are otherwise damaged or contaminated due to construction operations, a minimum of two inches of compacted 23A limestone road gravel shall be placed over such contaminated areas immediately following construction.

5.5.3 All excess construction materials, excavated materials, and other contaminated materials shall be removed prior to the placement of gravel unless otherwise approved. The road surface shall be maintained in good, smooth, dust free condition at all times, and gravel of the type noted above shall be added if settlements occur. Before requesting final inspection, the Permit Holder shall place over the entire road surface within the affected portion of the roadway two inches of compacted M.D.O.T. 23A limestone road gravel suitably stabilized with liquid calcium chloride.

5.5.4 Typical repair for all open cuts performed within Saginaw County.



RULE 5.6 UTILITY STRUCTURES

5.6.1 The height of the top of any utility structure constructed or reconstructed with the right-of-way shall be determined as follows, location shall be as shown in section 5.7.

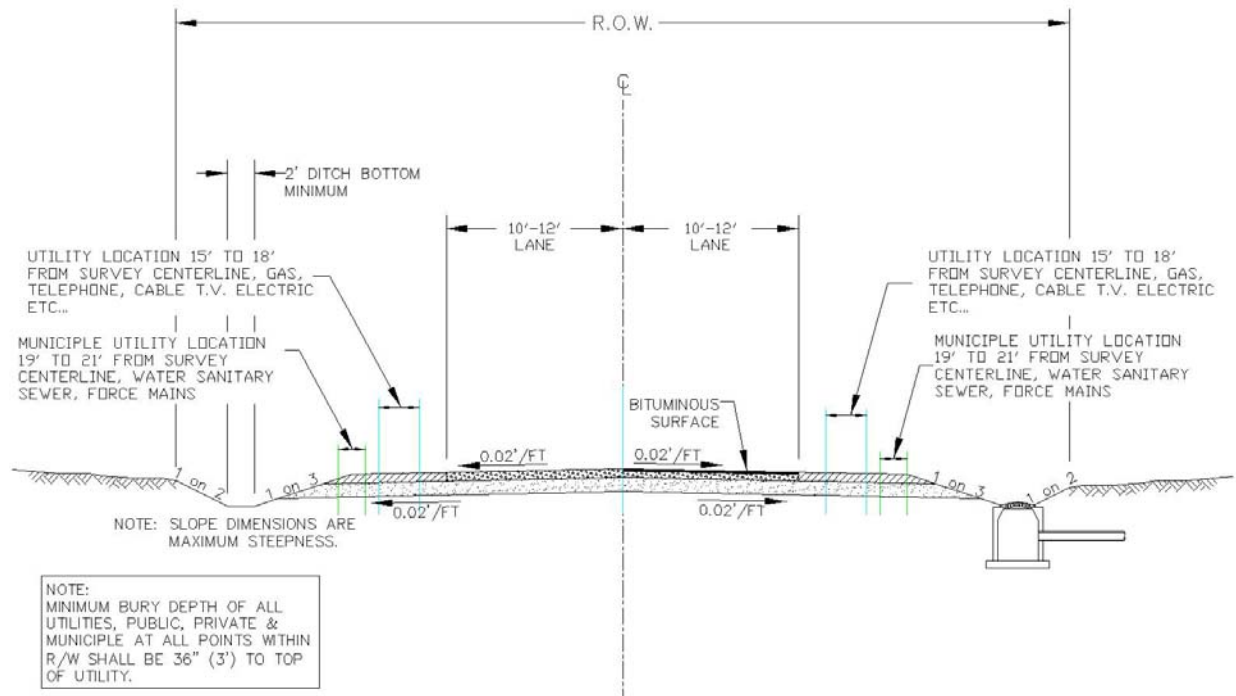
- A.) If the structure falls within a paved road or other paved surface including driveways, side streets, sidewalks, and non-motorized paths, the cover shall be flush with the finished pavement elevation on all sides.
- B.) If the structure falls within the roadbed of a gravel road or the unpaved shoulder of a paved road, the cover shall be 6 inches below the finished gravel surface.
- C.) If the structure falls within a ditch, the cover elevation shall be set at top of ditch slope elevation and the ditch shall be relocated around the structure and away from the road with a stable earth berm around the structure. Where called for on the approved plans or as directed by the Saginaw County Road Commission, a culvert of adequate length and size shall be installed in order to carry storm water around the structure.
- D.) Any structure on the back slope of a ditch shall not protrude more than 6 inches above the slope.
- E.) In the event that a utility cover falls within a traveled lane, turn lane, or taper and final pavement restoration will take place more than 30 days after temporary pavement repair then, such structure covers will be set flush with the temporary surface or the first course of asphalt. The structure cover will be re-adjusted at the time of final surface restoration.

5.6.2 Structures within the county right-of-way shall be able to with stand expected traffic volume and load. Structures shall be of masonry construction or pre-cast concrete construction with all joints and holes sealed with anti-hydro cement. The castings shall meet the requirements of the current standard specifications for gray-iron castings A.A.S.H.T.O. M 105, and shall have a minimum strength as provided for class number 30 gray-iron castings. Current approved blasting methods shall be used to clean all castings. The seating face of the lid and the seat for the same on the frame shall be ground or machined so that the lid will have an even bearing on its seat to prevent rocking or tilting. The castings shall be free of poring faults, blowholes, cracks, and other imperfections. They shall be sound, true to form and thickness, clean and neatly finished, and shall be coated with coal tar pitch varnish.

5.6.3 Structures that must be located within the roadway shall be located at the road centerline or lane centerline not within the wheel track.

RULE 5.7 DEPTH OF UTILITY COVER

Unless shown on approved plans all new or replacement utilities shall be installed at locations illustrated below and be a minimum of three feet (to top of pipe) below the gutter, edge of pavement, or shoulder elevation of the road surface regardless of location within the road right-of-way. The minimum depth requirement for all buried electrical, telephone, and cable T.V. shall be 36" (3.0 feet) below existing grade. Where approved plans require a depth greater than three (3) feet; the approved plan depth shall govern.



RULE 5.8 GEOPHYSICAL AND HYDROGEOLOGICAL INVESTIGATIONS

5.8.1 Application requirements for Non-Intrusive Testing.

Since the character, time limits, area, and particulars of each non-intrusive testing project varies greatly from one to another, such permits are generally addressed on a case by case basis; therefore fees, insurance, general requirements, and performance bonds will also be handled accordingly. The permit does not sanction drilling or the taking of physical samples and since there is a potential for surface damages when moving heavy equipment within the right-of-way, permits are also required for such purposes.

5.8.2 Application requirements for Intrusive Testing.

The applicant is advised that the approval of locations for borings within the right of way is influenced by the testing method generally being a short-term operation followed by an immediate restoration of the disturbed area. If borings are later to be converted into monitoring wells, the applicant is requested to initially indicate this intent on the application. The proposed plans can then be reviewed accordingly, and delay can be lessened.

- A.) Prior to issuing permits for borings and/or monitoring wells to be situated in the right-of-way, the Permit Holder must obtain written permission from the owners of adjoining lands not owned by the Applicant. The documented evidence of this permission shall be submitted with the permit application.
- B.) Borings and/or monitoring well locations will not be permitted in the paved or traveled portions of the roadway nor the shoulder. They must be situated outside the shoulders and traveled portions of the road.
- C.) Permits will be issued in increments or groups of six (6) borings and/or wells, thus an Increment #1 Permit designates up to and including 6 borings or wells, see below:
 - 1.) Increment #1: up to and including 6 wells and/or borings,
 - 2.) Increment #2: up to and including 12 wells and/or borings,
 - 3.) Increment #3: up to and including 18 wells and/or borings,
 - 4.) Increment #4: and so forth:
- D.) Applicants are encouraged, when applying for a permit, to initially identify all borings and/or monitoring wells which they reasonably expect to drill and/or install on a site. This will greatly expedite the issuance of permits and reduce the processing time required for permit amendments.
- E.) It is presumed that typical bore holes drilled for subsurface information will be 20 feet deep or less and 6 inches or less in diameter, and will contain a 2 inch diameter casing or less, when/if converted to a monitoring well. Should the applicant's planned tests exceed these dimensions, the applicant should specify the proposed dimensions in its drilling and/or well completion program. The boring and/or completion designs shall be drilled and installed in accordance with industry standards.

5.8.3 Operational procedures for borings and monitoring wells.

- A.) All soil and water (drilling mud included) produced during the boring/drilling, testing, and/or sampling operations shall be disposed of outside of the right-of-way in a manner acceptable to the M.D.E.Q.
- B.) All operating monitoring wells are to be completed with a cap that is mounted flush with the ground or paved surface to minimize interference with landscaping, mowing, pedestrian, and/or automotive traffic using the right-of-way.
- C.) As soon as possible following completion of intrusive test borings and/or abandoning monitoring wells, the right-of-way is to be restored to its previous condition. All borings or monitoring wells (whether successful or not) shall be sealed (plugged) and abandoned as prescribed by M.D.E.Q. regulations.

5.8.4 Permit & Restoration Bond release procedures.

The following work must be completed before a permit and restoration bond release request will be honored; therefore it is essential that the status of the following work items be reported on in the release request. Upon submittal of a permit release request by the permit holder, the release process will be initiated.

- A.) Directly following the termination of monitoring and/or testing operations, all borings and/or monitoring wells (whether successful or not) shall be sealed (plugged) and abandoned as prescribed by the M.D.E.Q. regulations. The metal and/or plastic well casings associated with these test boring/monitors are to be removed from the ground, and the bore holes are to be filled with bentonite clay and/or cement.
- B.) The surface area of the right-of-way shall be restored to its previous condition, and all other tasks designated on the permit will have been completed previous to submittal of the permit release request.
- C.) An as-built diagram, which identifies the final location of all borings and/or monitoring wells in the right-of-way, will be provided as an index map that accompanies the permit release request. If either soil or groundwater contamination was encountered in the right-of-way, then it will be necessary to submit the official laboratory analyses of all analyzed samples taken from the test wells in the right-of-way. It is preferable that this analytical data be submitted when first received from the laboratory; however, if not done then, this information must accompany the request for release of the restoration bond.
- D.) Also, if any boring/well(s) associated with the right-of-way permit encountered soil and/or groundwater contamination, or evidence of contamination was observed in the right-of-way, a copy of the certified Closure Report, as it applies to the right-of-way, (or the final remediation report) shall accompany the request for permit release submitted to the S.C.R.C. However, it would be preferable if this report were submitted at the same time it is filed with the M.D.E.Q., since the S.C.R.C. will be asked to comment or review the closure prior to its approval. Also the Closure Report will be needed to facilitate bond release.

1) The above-described data is to be sent to:

The Saginaw County Road Commission
Permits Department
3020 Sheridan Ave
Saginaw, MI 48601-4450

5.8.5 If the original or designated Permit Holder is no longer responsible for a right-of-way investigation, action should be initiated to remove/release this individual from the restoration bond and permit. This is accomplished by having the sites new responsible parties apply for a new permit. After the new permit is issued, the previous permit will be released, the applicable refunds can be made, and the previous restoration bond can be canceled (if no open issues remain). The new Permit Holder will then be liable for all issues including, but not limited to those identified in the new site investigations.

RULE 5.9 DISCHARGE OF STORM WATER FROM PRIVATE PROPERTY TO ROAD DRAINAGE SYSTEM

- 5.9.1** Any water diverted or discharged by the Permit Holder into the Saginaw County Road Commission road drainage system shall not exceed normal agricultural run-off rates as determined by chart shown below, unless specifically approved by the S.C.R.C.
- 5.9.2** The minimum pipe diameter used in restricting storm water discharge into the road drainage system shall be as specified by the Saginaw County Road Commission or Local Township having jurisdiction over said discharge.
- 5.9.3** Any water diverted or discharged by the Permit Holder shall be done in such a manner as not to cause a hazardous condition to either pedestrian or vehicular traffic or to cause erosion, siltation, or ponding, which adversely affects the stability of the roadway or damages adjacent property, or causes harmful interference of existing drainage.
- 5.9.4** If the existing road drainage system lacks the capacity to handle a new discharge or diversion the Saginaw County Road Commission reserves the right to deny access to the drainage system.
- 5.9.5** If agricultural rates of discharge cannot be accomplished naturally the Permit Holder must propose a detention system with an outlet control approved by the Saginaw County Road Commission Permits Department prior to being granted access to the existing road drainage system.

A_{ex} = Existing Area Draining to SCRC Right - of - Way (Acres)

A_t = Total Proposed Area Draining to SCRC ROW (Ac)

A_i = Total Impervious Area Draining to SCRC ROW (Ac)

t_c = Time of Concentration (min.)

I = Intensity, if $t_c \leq 30$ min, $I = \frac{136}{t_c + 20}$

if $t_c > 30$ min, $I = \frac{175}{t_c + 25}$

C_i = Impervious Runoff Coefficient, if $t_c \leq 30$ min, $C_i = \frac{t_c}{t_c + 8}$

if $t_c > 30$ min, $C_i = 0.7$

C_p = Pervious Runoff Coefficient, if $t_c \leq 30$ min, $C_p = \frac{t_c}{80 + 4t_c}$

if $t_c > 30$ min, $C_p = 0.1$

Q_A = Allowable Runoff = $C_i I A_{ex}$ (Cubic Feet per Second)

$Q_o = \frac{Q_A}{A_i}$

$T = \sqrt{\frac{4080}{Q_o}} - 20$

$V_s = \left(\frac{8160T}{T + 20} \right) - 40Q_oT$

V_t = Storage Volume Required = $V_s A_i$ (Cubi Feet)

Other methods may be utilized including MDOT and TR-55.

PART 6 - DRIVEWAY DESIGN STANDARDS

RULE 6.1 DRIVEWAY LOCATION AND GRADE

- 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 Shared access drives:

- A.) 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.
- B.) Driveways on Tittabawassee road east of M-47 must conform with the Tittabawassee road corridor overlay requirements adopted by Carrollton, Kochville, Saginaw, Tittabawassee Townships, City of Zilwaukee, and the Saginaw County Road Commission.

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. The finished surface elevation of drive shall be equal to the surface elevation of the adjacent shoulder or lawn area and must allow rain water to shed from edge of roadway onto the surface of drive. The last 10 foot of drive where it meets roadway should be constructed using asphalt. Concrete may be allowed in the last 10 foot of drive where it meets the roadway, but is not recommended.
- 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 be 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.

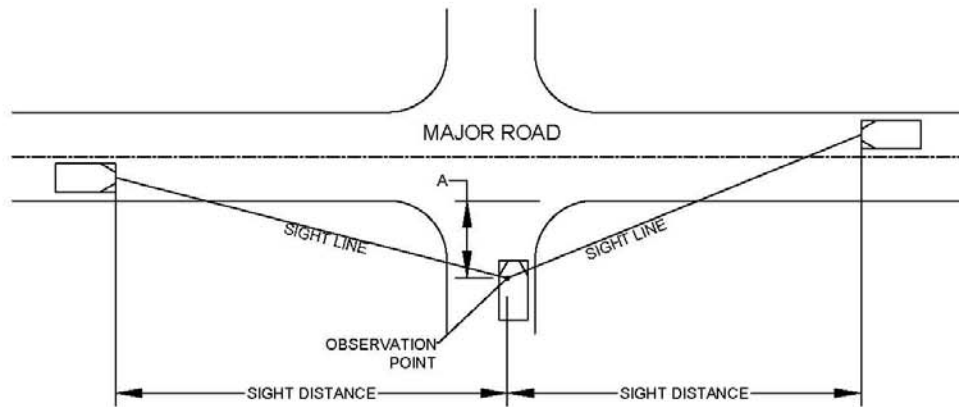
Table 6-1:

Speed Limit, M.P.H.	25	30	35	40	45	50	55
Minimum Sight Distance	280-335	390	445	500	555	610	

· Sight distance will be measured from an eye height of 3.5 feet to an object height of 2.0 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

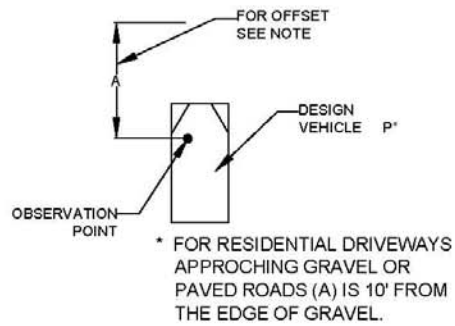


POINT OF OBSERVATION

MAJOR ROAD - PAVED SURFACE:
 (A) TWENTY (20) FEET FROM EDGE OF
 PAVEMENT OF THROUGH LANES

MAJOR ROAD - GRAVEL SURFACE:
 (A) TWENTY (20) FEET FROM EDGE OF
 GRAVEL.

For gravel surface roads an assumed speed
 of 45 mph shall be used to determine sight
 distance unless otherwise posted. Certain
 existing conditions may require an engineering
 study to determine the sight distance.



MAJOR THROUGH ROAD POSTED SPEED	SUBDIVISION STREETS RESIDENTIAL DRIVEWAYS COMMERCIAL DRIVEWAYS
IN MPH	IN FEET
25	280
30	335
35	390
40	445
45	500
50	555
55	610

Note:
 The above data is based on a left turn
 maneuver into the intersection major
 roadway as described in AASHTO.
 Due to the higher potential accident
 severity, the left turning sight distance
 was used to determine the corner sight
 distance required.

The point of vision shall be from the height of eye, 3.5 feet above the proposed intersection elevation to a height of object 2.0 feet above the existing or proposed road centerline and shall be continuously visible within the specified limits.

Any deviation from given data requires an engineering study by the S.C.R.C. Traffic Safety Department.
 For new reconstruction roadway projects the Design Division shall address corner sight distance as suggested by AASHTO (green book 1990) for at-grade intersection design; and at minimum, shall meet sight distance show in table 1. This design guide also applies to new Permit & plot construction projects.



GUIDE FOR CORNER SIGHT DISTANCE

DRAWN BY: G.L.S. DATE: 12/2002 MODIFIED BY S.A.H. 12/10

APPROVED BY: R.P.W. DATE: 12/2010
 ENGINEER MANAGER

6.2.5 Accessibility Requirements for new drive approaches including new parcels created under the “Land Division Act”.

1. Trees within road right-of-way must be removed.
2. Parcel must have positive drainage.
 - a) If this drainage does not currently exist, applicant must construct a system of drainage prior to access to roadway being granted from parcel.
3. Drawing showing location of new drive on said parcel
4. Driveway permit
5. Application for address if required.

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.

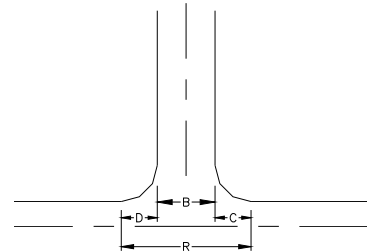
RULE 6.4 STANDARD DIMENSIONS FOR RESIDENTIAL DRIVEWAYS

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'	0 to 10'
Exiting Radius	D	10'	0 to 10'
Total Opening			
B+C+D=	R	36'	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'	0 to 15'
Exiting Taper Width	D	6'	0 to 15'
Taper Depth	Q	10'	10' to 20'
Total Opening			
B+C+D=	R	36'	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.

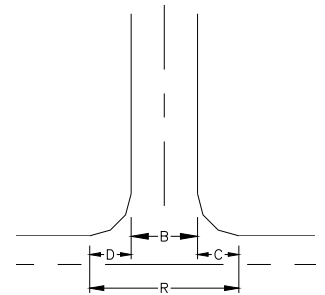
RULE 6.5 STANDARD DIMENSIONS FOR COMMERCIAL DRIVEWAYS AND PRIVATE ROADS

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 36'
Entering Radius	C	15'	10' to 30'
Exiting Radius	D	15'	10' to 30'
Total Opening			
B+C+D=	R	54'	26' to 90'

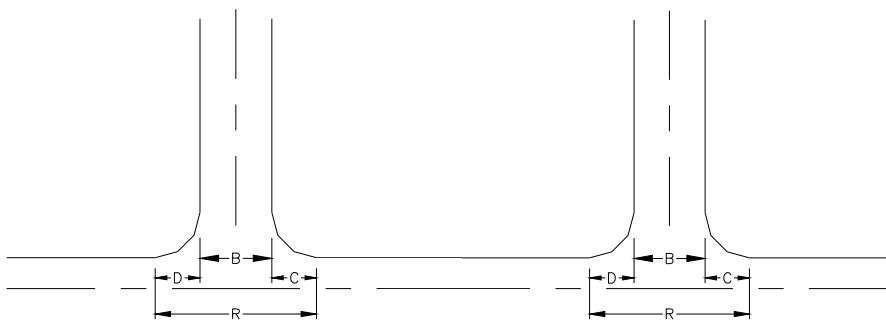


NOTE:

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:



Commercial "ONE WAY" drives shall have a minimum separation of 70' center to center see rule 6.1.7 C

Directional (One-Way) Commercial Driveway Dimensions

Design Features		Typical	Range
ONE WAY IN	Intersecting Angle	A	90'
	Driveway Width	B	16'
	Entering Radius	C	15'
	Exiting Radius	D	15'
ONE WAY OUT	Entering Radius	C	15'
	Exiting Radius	D	15'
	Total Opening B+C+D=	R	46'
			26' to 80'

NOTE:

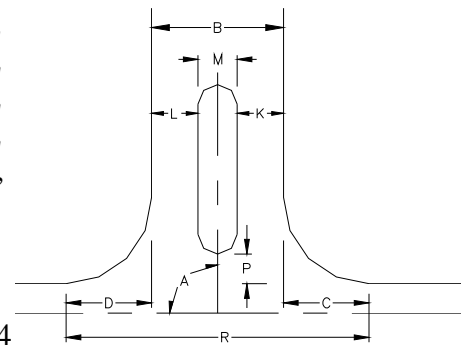
The TYPICAL dimension shall be used unless the Permits Department specifies or the applicant shows cause for, a different value. The RANGE in dimensions indicates the working value for each design feature.

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.

6.5.4 When it is determined by the Saginaw County Road Commission that in the interest of public safety left turns into and out of the commercial development need to be prohibited, the applicant shall construct a curbed island in accordance with M.D.O.T. typical GEO-680-B or as directed by the Engineer for the Saginaw County Road Commission that will prevent this left turn movement.

6.5.5 Traffic impact study may be required see section 6.7.1 for details.

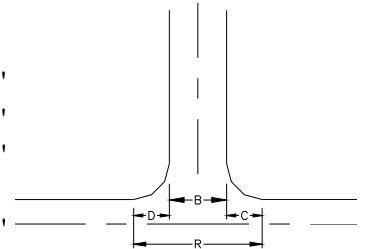
RULE 6.6 STANDARD DIMENSIONS FOR UTILITY STRUCTURE DRIVEWAYS AND FIELD ENTRANCES

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 Traffic Impact Studies

When required by the Saginaw County Road Commission or the local township in which proposed commercial development is located shall be conducted in accordance with the following requirements.

- (1) **Intent:** Saginaw County Road Commission officials recognize that land use decisions can have a significant impact on traffic operations and safety. Therefore, the Road Commission requires traffic impact studies in certain cases to identify the anticipated traffic impacts to assist in decision making. The intent of this section is to provide specific direction for the preparation of traffic impact studies where such studies are required by this Chapter. The requirements of this section are also intended to help Road Commission officials determine the appropriateness of certain uses at proposed locations in terms of traffic impacts and the adequacy of proposed access design. Traffic impact studies may also be used by the applicant to justify additional access points.
- (2) **Applicability:** A traffic impact study shall be required when a proposed development would be expected to generate over seventy-five (75) directional trips during the peak hour of the traffic generator or the peak hour on the adjacent streets, or over seven hundred fifty (750) trips in an average day. This requirement applies new developments, or changes to an existing development and new phases of an existing development where a traffic study is more than two (2) years old and roadway conditions have changed significantly (volumes

increasing more than 2 percent annually) or a change in use or expansion at an existing site.

- (3) **Submittal Procedures:** The traffic impact study shall be submitted with the site plan or other submittal material. The applicant must discuss or meet with the Director of Engineering or the Permit Enforcement Officer to determine if a study is needed, what type of study is needed and specific items to be addressed. The Road Commission shall submit a copy of the traffic impact study to the all applicable road agencies and township officials to give them the opportunity to provide input prior to the Road Commission taking action on the request.
- (4) **Preparation:** The traffic impact study will be prepared by a qualified individual or consultant as selected by the Saginaw County Road Commission. The cost of the traffic impact study shall be the sole responsibility of the developer.
- (5) **Traffic Impact Study Contents:** The extent of information to be provided depends upon the expected trip generation of the proposed project. The information provided in the traffic impact study shall be in accordance with the items below.
 - (a) **Description of the site, surroundings and study area:** Illustrations and a narrative should describe the characteristics of the site and adjacent roadway system (functional classification, lanes, speed limits, etc.). This description should include surrounding land uses, expected development in the vicinity which could influence future traffic conditions, special site features and a description of any committed roadway improvements. The study should define and justify the study area selected for analysis.
 - (b) **Description of the requested zoning or use.** If the proposed development requires a rezoning, the traffic impact study shall describe potential permitted uses within the requested zoning district, and applicant must also submit to local township planning commission for consideration of the rezoning request. When the request is for a specific use, factors which relate to traffic generation should be provided such as the number and types of dwelling units, the gross and usable floor area, the number of employees and shift change factors. Intended phasing or future expansion should also be noted.
 - (c) **Description of existing peak-hour traffic volumes (and daily volumes if applicable) at intersections and on streets adjacent to the site.** Existing level of service analysis shall be provided for intersections in the vicinity which are expected to experience an increase in traffic of at least five percent (5%) due to the proposed project. Existing traffic counts shall not be over two (2) years old from the date of report submittal.
 - (d) **Roadway characteristics shall be described and illustrated, as appropriate.** Features to be addressed include existing right-of-way, lane configurations, geometries, signal timing, traffic control devices, posted speed limits, average running speeds, sight distance information, existing driveways and potential turning movement conflicts in the vicinity of the site.
 - (e) **Projects must analyze background traffic, i.e., the expected increase in traffic volumes related to approved projects and historic annual percentage increases.**

- (f) Forecasted trip generation of the proposed use for e a.m. peak hour (if applicable), the p.m. peak hour and an average weekday are required. A weekend forecast may also be required for certain commercial uses. The forecasts shall be based on the average rate outlined in the most recent edition of Trip Generation published by the Institute of Transportation Engineers (ITE). The applicant may use other commonly accepted sources of data or supplement the standard data with data from at least three (3) similar projects in Michigan. For rezoning requests, the study should contrast the traffic impacts of typical uses permitted in the requested zoning district with uses permitted in the current zoning district. The determination of typical uses shall be made by the Zoning Administrator. Any trip reduction for pass-by trips, transit, ride sharing, other modes, internal capture rates, etc., shall be based both on ITE findings and documented survey results acceptable to the Saginaw County Road Commission. The Road Commission may accept in whole or in part the trip reduction rates used. For projects intended to be developed in phases, the trip generation by phase shall be described.
- (g) The projected traffic generated shall be distributed (in-bound versus out-bound, left turn versus right turn) onto the existing street network to project turning movements at site access points and nearby intersections where required. Project peak hour turning movement volumes shall be illustrated in the report. A description of the application of standard engineering procedures for determining the distribution should also be attached (trip distribution model, market studies, counts at existing driveways, etc.).
- (h) Level of service or "capacity" analysis at the proposed access points shall be completed using the procedures outlined in the most recent edition of the Highway Capacity Manual published by the Transportation Research Board. For projects requiring a Traffic Impact Statement or Regional Traffic Analysis, before and after capacity analyses shall also be performed for all street intersections where the expected traffic generated by the proposed project will comprise at least five percent (5%) of the existing intersection capacity, and/or for roadway sections and intersections experiencing congestion or a relatively high crash rate, as determined by the community or applicable road agency. The City may require gap studies for un-signalized intersections where applicable.
- (i) The report shall include a map and description of the location and design of proposed access (driveways or new street intersections).
- (j) Mitigation/Alternatives: The study shall outline mitigation measures and demonstrate any changes to the level of service achieved by these measures. Any alternatives or suggested phasing of improvements should be described. The mitigation measures may include items such as roadway widening, need for bypass lanes or deceleration tapers/lanes, changes to signalization, use of access management techniques or a reduction in the proposed intensity of use. Documentation shall be provided from the applicable road agency regarding the proposed mitigation measures. The responsibility and timing of roadway improvements shall be described. Proposal improvements requiring applicable road agency approval (new signals, roadway improvements, etc.) require a

submission of correspondence from the applicable road agency outlining their agreement.

- (6) **Modification of Study Requirements:** The requirement for a traffic impact study, or the study elements listed in Item 5 above, may be modified by the Road Commission. Reasons for the modification shall be documented by the applicant and may include the following factors:
 - (a) Roadway improvements are already scheduled which are expected to mitigate any impacts associated with the proposed project,
 - (b) The existing level of service is not expected to be significantly impacted by the proposed project due to specific conditions at the subject location.
 - (c) A similar traffic study was previously prepared for the site and is still considered applicable.

6.7.2 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.

6.7.3 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.

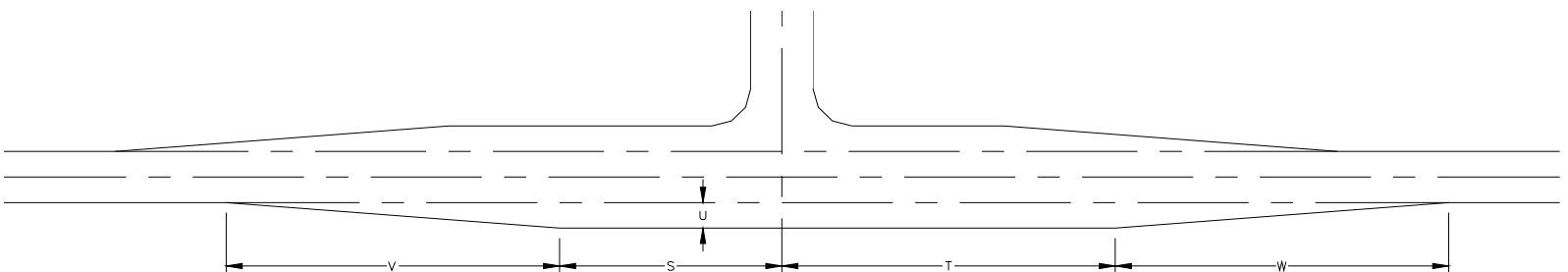
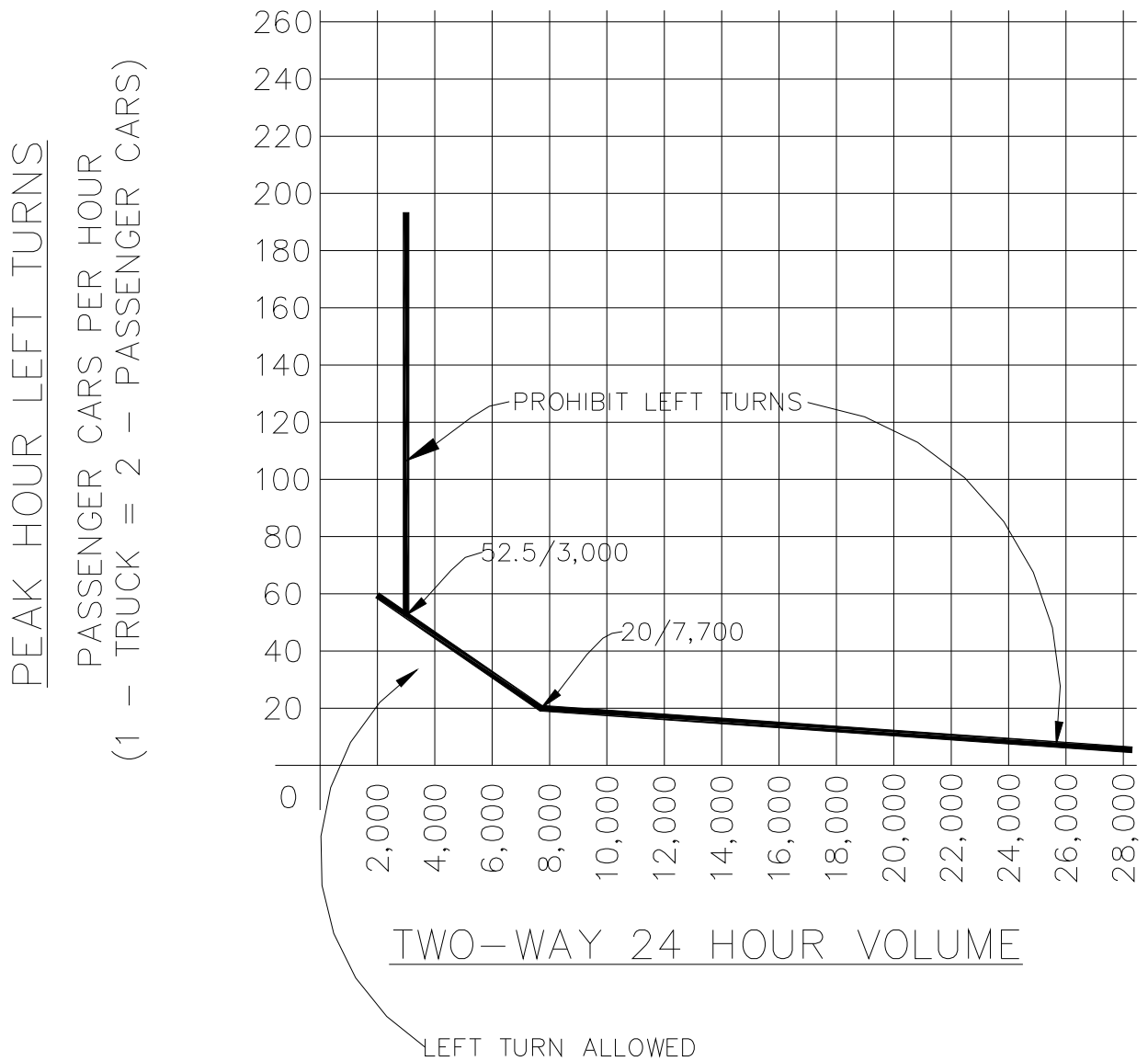


Figure 6-2

WARRANT FOR PERMITTING
LEFT TURNS
(BASED ON TOTAL DEVELOPMENT)



6.7.4 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		Curbed Road		Uncurbed Road	
		Typical	Range	Typical	Range
Curb Ending	E	Not Applicable		10'	(No Range)
Right-Turn Lane Length	F	25'	0' to 150'	25'	0' to 150'
Pavement/Width from edge of Road	G	12'	12'	12'	22' to 24'
Entering Taper	H	100'	75' to 150'	50'	50' to 150'
Exiting Lane Length	X	25'	0' to 100'	0	0' to 100'
Exiting Taper	J	75'	50' to 100'	75'	50' to 100'

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.

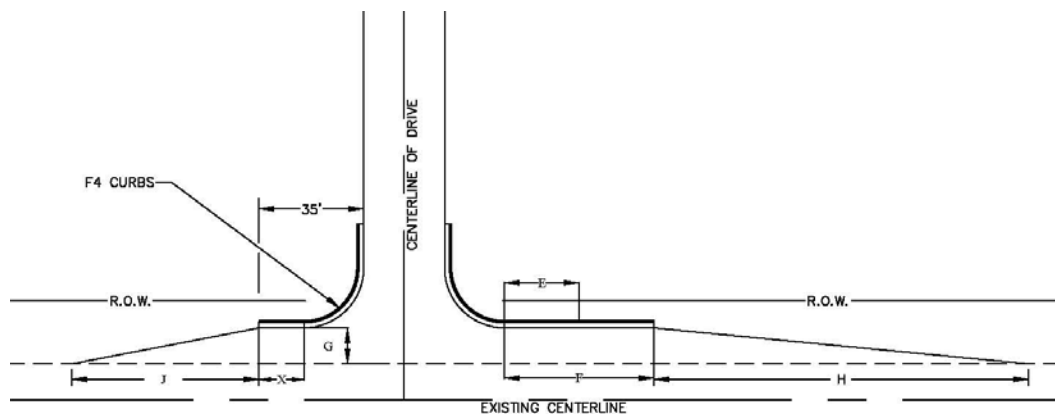
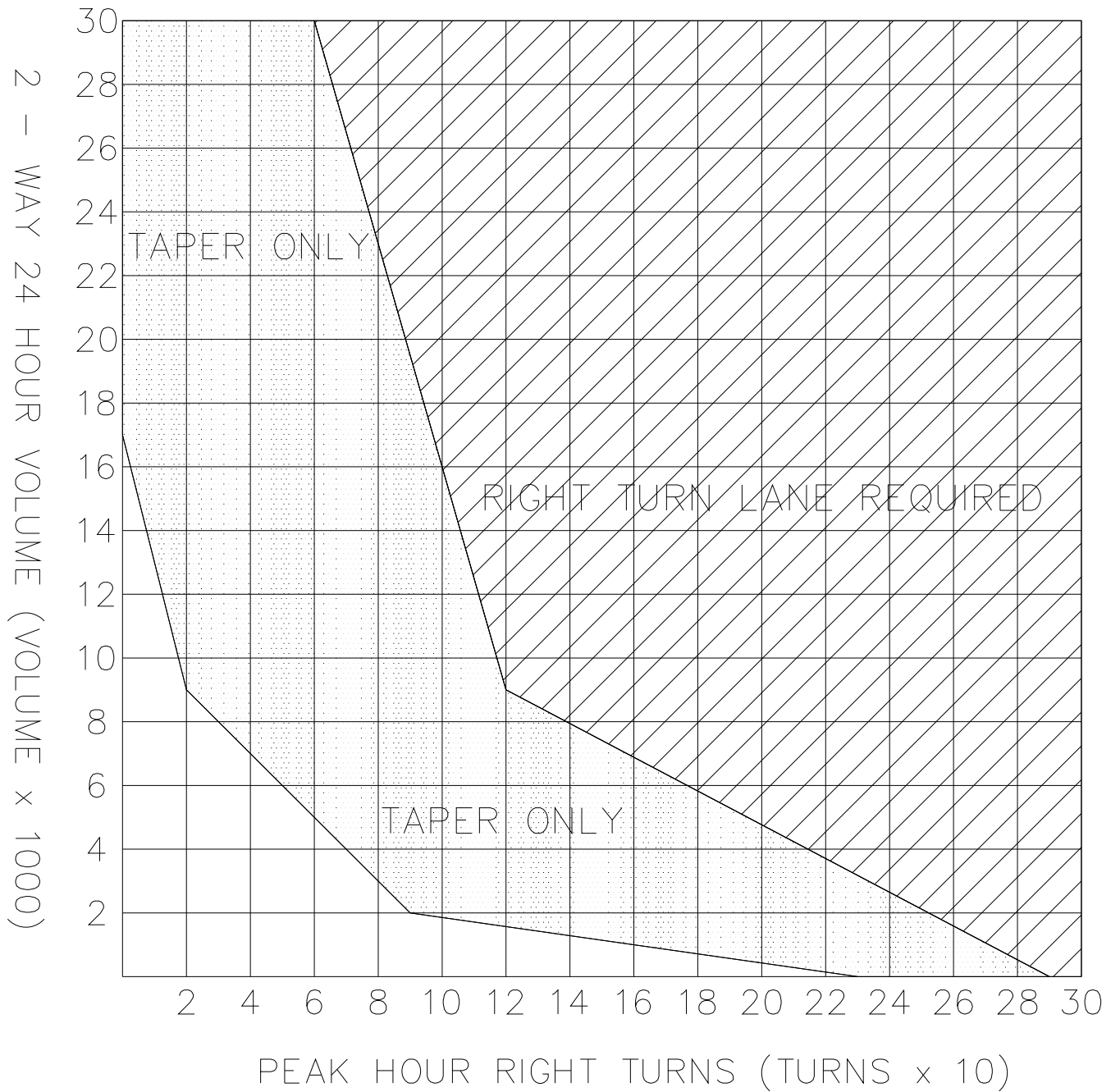


Figure 6-3

WARRANTS FOR RIGHT TURN DECELERATION LANE OR TAPER



RULE 6.8 PAVING AND CURBING

6.8.1 Residential driveways:

A.) Connections to a paved road with curb & gutter:

- 1.) 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. See table 6-9 for illustrations described here.

B.) Connections to a Paved road without curb & gutter:

- 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:

- If the driveway is to be unpaved, it may be surfaced with stabilized gravel.
- 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.
- 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.) Connection to a paved road with curb & gutter:

- 1.) 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. See table 6-9 for illustrations described here.

B.) Connections to a Paved road without curb & gutter:

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 whichever 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.

Residential Private Roads:

- Suitable existing base, or 12" class II sand sub-base
- 9" Aggregate base 22A Limestone
- 3.5" Bituminous Asphalt placed in 2 lifts compacted to 98%

Commercial Drives:

- Suitable existing base, or 12" class II sand sub-base
- 9" Aggregate base 22A Limestone
- 3.5" Bituminous Asphalt placed in 2 lifts compacted to 98%

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.

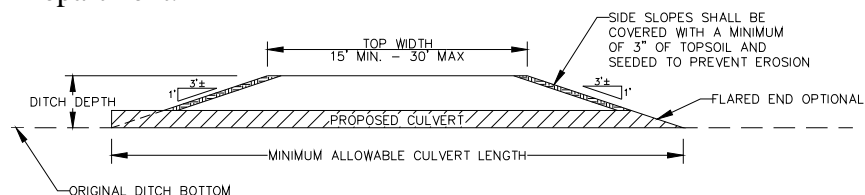
6.8.6 Curb and gutter

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 Rule 5.9)
- 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 (supporting calculations in accordance with equations show in section 5.9 must be submitted). 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.
- 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.



DITCH DEPTH	TOP WIDTH			
	15'	20'	25'	30'
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

6.9.5 Drive Culverts and ditch enclosure owner responsibilities:

Ingress and egress to properties having frontage along roads under the jurisdiction of the Saginaw County Road Commission is the sole responsibility of the property owner.

- 1. The Saginaw County Road Commission and / or its employees will attempt to clear a plugged tile to restore drainage.*
- 2. The Saginaw County Road Commission and / or its employees will not repair any damaged tile unless the damage is caused by our equipment.*
- 3. The Saginaw County Road Commission will allow a maximum time for replacement of any failed tile of thirty days' (30), if in the interest of protecting the road or safety of the general public the road commission may remove any drainage obstruction located within the right-of-way at the owner's expense.*

Driveways exist only for the use of the property owner or occupant and, if a problem shall develop as a result of any type of failure of the culvert, the owner or occupant, whatever the case may be, shall be directed by the Road Commission to correct the problem to insure uninterrupted flow of the ditch water. If the owner or occupant fails to correct the problem within 15 calendar days after notification by the Road Commission, or if after a good faith attempt the Road Commission is unable to notify the owner or occupant, the failed culvert shall be removed forthwith by the Road Commission without any further notice.

Removal of a failed culvert may occur immediately in the event of an emergency. The property owner or occupant shall pay all of the costs of any such removal prior to obtaining a permit from the Road Commission for a replacement culvert.

- 6.9.6** If existing ditch is not adequately setback for roadway, the permit holder shall be responsible to reconstruct ditch so the center of said ditch is located 27' from the center line of road, in cases of multilane road this distance will be determined by the permit enforcement officer or other member of the engineering department of the Saginaw County Road Commission.

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. All private roads shall meet all of the requirements for commercial drives, and shall be constructed in accordance with road construction guidelines as shown in the “PROCERURES, STANDARDS, AND SPECIFICATIONS FOR PLAT, CONDOMINIUM, AND LAND DIVISION DEVELOPMENT FOT THE SAGINAW COUNTY ROAD COMMISSION” copies of which can be obtained from our office. A range for addressing the private road will be created for future use by the Saginaw County Road Commission, or agency currently responsible for assigning addresses to parcels.

PART 7 – RESTORATION

RULE 7.1 SHOULDERS

Road shoulders will be restored to the same type (paved, gravel or grassed), width, slope, and thickness as existed before the start of work.

- 7.1.1 Gravel shoulders that are removed during construction are to be replaced and shall match the existing width or be three feet minimum consisting of eight (8) inches of 23A compacted gravel. If the shoulder had a sand sub-base, it shall also be replaced.
- 7.1.2 Gravel shoulders which are not removed but are contaminated, rutted, or otherwise damaged shall be restored by removing the contaminated material and replacing it with 23A gravel to the original thickness, width, slope, and flush with the road surface. If the road is resurfaced, sufficient gravel shall be added to bring the shoulder up to the new surface elevation.
- 7.1.3 If the shoulders were grass covered they shall be so restored to a stable condition. Where gravel existed under the grass, the finished shoulder shall have gravel under the grass. The grass shall be replaced by methods shown on the approved plans or as directed by the Saginaw County Road Commission.
- 7.1.4 If all or a portion of the shoulder is paved, the Permit Holder shall replace the paved shoulder with a minimum of two (2) inches of MDOT 4C over two (2) inches of MDOT 3C over eight inches of 22A modified crushed stone aggregate. If necessary, the edge of the roadway shall be trimmed to present a smooth edge for attachment of the paved shoulder and treated with a bond coat. The width of the paved shoulder shall match the existing width or be three feet minimum.

RULE 7.2 BEYOND THE SHOULDERS

- 7.2.1 All areas within the road right-of-way beyond the shoulders, curbs, or edge of gravel of the road, which are disturbed as the result of the Permit Holder's operations, must be restored as soon as possible during the first growing season and provide positive drainage from the roadway. Restoration shall not be delayed until project completion. Failure to comply with this specification shall be just cause for the Road Commission to stop the remaining construction work until the required restoration is completed. The ground cover specified on approved plans shall be maintained until final settlement of excavated or disturbed areas has occurred and growth is established.

- 1.) Sod will be required at all locations shown on the approved plans. Sod may be required by the Saginaw County Road Commission in areas where topsoil, seeding, and mulching cannot (or has not) provided the effective ground cover required because of steep slopes or grades, velocity or volume of water, or other conditions. Merion Blue Grass shall not be used except where the abutting lawn area is Merion Blue Grass. Sod may be required in areas of established, maintained lawns. Sod placed in established lawns and/or areas indicated for sod on the plans shall be Class A sod. Class B sod shall be used in other locations. All sod

shall be placed on two inches of topsoil following preparation of the surface. The Permit Holder is responsible for the establishment and growth of vegetation. The permit, bond, and deposit will not be released until the Saginaw County Road Commission is satisfied that vegetation has been re-established.

- 2.) Areas that are not to be sodded shall be top soiled, seeded, and mulched or hydro seeded. The seed shall be M.D.O.T. roadside seed mixture, unless shown on approved plans, applied at a rate of 250 pounds per acre. Fertilizer shall be applied at a rate of 240 pounds per acre. If hydro seed method is used the seed and fertilizer must be applied separately from the mulch. Topsoil shall be placed two inches deep. Mulch shall be spread over the ground and held in place by approved tacking methods.

RULE 7.3 DRAINAGE SYSTEM

- 7.3.1** All road drainage shall be restored as soon as possible following construction. Ditches, ditch slopes, and other areas within the right-of-way shall be restored to meet the current standards, unless otherwise noted or shown on approved plans
- 7.3.2** All culverts and ditch enclosures removed in good condition by the Permit Holder may be re-laid in proper position and elevation. All culverts and ditch enclosures or section thereof which are not in good condition after removal shall be replaced with pipe meeting current Road Commission Standards or replaced with an open ditch. Culverts and other drainage structures that are damaged but not removed during the Permit Holder's operations must be fully repaired to the satisfaction of the Road Commission or be replaced in accordance with current Road Commission Standards. Grading or ditching may be required near the inlet or outlet in order to re-establish drainage beyond that as shown on approved plans.
- 7.3.3** The Permit Holder is responsible for restoration or re-establishment of drainage patterns or systems disturbed by the work or their operations. Unless so indicated on the approved plans, the Permit Holder shall be responsible for any survey required in order to establish elevations of culverts, ditches, inlets, outlets, or any other structure elevation required in order to restore function to the drainage system. If necessary, the Road Commission may establish these elevations and grades at the expense of the Permit Holder. The Permit Holder will be required to re-ditch or establish new ditch elevations based on changes to culverts or other structures so that a stable, maintainable ditch results. If the ditches are deep enough or the volume of water is sufficient that erosion of the ditch bottom may occur, then riprap or other structural elements may be required in order to stabilize the roadside ditches or their outlets.
- 7.3.4** Road drainage shall not be diverted onto private property without the written consent of the property owner.
- 7.3.5** In the event that culverts or other drainage structures are discovered during the course of the work, that are not shown on approved plans, the applicant and/or Permit Holder are responsible for replacement and/or restoration of such structures as if they were properly shown on approved plans unless the Saginaw County Road Commission approves

PART 8 – LANDSCAPING

RULE 8.1 LANDSCAPING REQUIREMENTS

The following Requirements apply to landscaping proposed within right-of-way under the jurisdiction of the Saginaw County Road Commission, or in areas that will be transferred to the jurisdiction of the Saginaw County Road Commission.

- 8.1.1** Plantings or installation of walls, barriers, berms, signs, paths, lighting elements, entrance markers, or structural elements associated with landscaping may not be installed unless the Saginaw County Road Commission Permits and Environmental Concerns Department issues a permit.
- 8.1.2** Two (2) sets of scaled drawings or plans showing all proposed landscaping work, existing conditions, size, location and dimensions of proposed landscaping elements, sight distance triangles at approaches, and a location map must be included with an application for permit.
- 8.1.3** Application for permit shall include an agreement to maintain the landscaping and landscaping elements located within the right-of-way.

RULE 8.2 LANDSCAPING GUIDELINES

The following general guidelines shall be used in development and approval of landscaping plan.

- 8.2.1** No plantings, walls, barriers, berms, signs, or other structural elements will be permitted within the road right of way without prior approval of the Permit Department of the Saginaw County Road Commission.
- 8.2.2** No plantings, walls, signs, entrance markers, or structural elements will be permitted within sight distance triangles at driveways and street approaches.
- 8.2.3** No landscaping or landscaping element shall interfere with drainage structures, drainage ditches, easements, or access to these facilities for maintenance.
- 8.2.4** Structural elements such as boulders or retaining walls may be no steeper than one foot horizontally to three feet vertically and shall not present blunt ends to traffic. Such wall ends shall be blended into the grade or slope.
- 8.2.5** Signs, decorative lighting, or other structural elements will not be permitted within a boulevard median in the right-of-way of the primary road or mile type local road.
- 8.2.6** Irrigation systems must be installed and located so that the roadway, non-motorized paths, and sidewalks are not impacted by over-spray, drift, or run-off. Control panels, electrical systems, or water supplies to sprinkler systems shall be located outside of the right-of-way.
- 8.2.7** Landscaping may be permitted within the island of a subdivision or residential street accordance with the following provisions.

- A.) The curb should be non-mountable six (6) inch curb (type “C,” or “F”). All fixed objects higher than eighteen (18) inches must be a minimum of six (6) feet behind the curb. Fixed objects of less than eighteen (18) inches in height must be a minimum of three (3) feet behind the curb.
- B.) All trees planted within the island will be ornamental type trees with a maximum expected diameter at breast height (DBH) of four (4) inches, with a minimum under clearance of six (6) feet.

8.2.8 Aesthetic landscaping adjacent to the Subdivision/residential Street must be a minimum of ten (10) feet behind the curb or twenty-one (21) feet from the edge of pavement if the road is not curbed. Functional landscaping such as earth retaining walls will be reviewed on a case-by-case basis by the Permits Department.

8.2.9 Pillars or subdivision signs may be permitted within the right-of-way of the existing major road, provided they are at the right of way line and do not reduce existing sight distance. Signs in a boulevard island shall be in accordance with section 8.2.7.

8.2.10 Ornamental shrubs may be planted in the existing major road right-of-way, provided they are not expected to attain a height greater than three (3) feet and do not interfere with the sight distance at the intersection. No trees may be planted in the major road right-of way. The Saginaw County Road Commission may remove plants, which grow large enough to reduce sight distance or become a roadside hazard, from the right-of-way.

8.2.11 See current policy for trees within the row on low volume roads speed limit 25 mph or less

**Evergreen and Conifer trees are not permitted within any portion of the road right of way.

8.2.12 See current policy for trees within row speed limit greater than 25 mph with curb & gutter.

8.2.13 See current tree policy for all local roads without curb & gutter and speeds greater than 25 mph

RULE 8.3 NON-MOTORIZED PATHS

8.3.1 Non-motorized paths constructed within the right-of-way will be considered and approved on a case-by-case basis by the Board of County Road Commissioners for Saginaw County.

8.3.2 The contractor shall notify the City, Township, or Village responsible for maintaining sidewalks and/or non-motorized paths, if a sidewalk and/or non-motorized path is removed or damaged during an activity described in Rule 1.1.

PART 9 – BANNER PERMITS

RULE 9.1 AUTHORIZED APPLICANTS

A permit for the installation of banners to be placed within or over County road right-of-way may be issued by the Permits Department only with written approval from the governing body of said location.

RULE 9.2 APPLICATION FORMS

Applications for the permits for the erection of banners shall be in the manner prescribed by or on the appropriate forms supplied by the Permits Department.

RULE 9.3 MINIMUM REQUIREMENTS

9.3.1 Permit applications shall be accompanied by a written statement from the local governing body authorizing placement of said banner. The application shall be submitted a minimum of one month in advance of proposed installation.

9.3.2 Each application shall include the following information:

- A.) Activity in connection with which the banners are to be placed.
- B.) Location of the proposed installation including distance to traffic control devices.
- C.) A description of the banners, including any legend or symbol thereon.
- D.) The height of an overhead banner at its lowest point above the surface of the road.
- E.) The dates on which the banner will be erected and removed shall not exceed a time-period specified by the Permits Department. An acceptable period of time for banners, other than Christmas decorations, to be in place is 3 weeks and acceptable duration for Christmas decorations to be in place is 6 weeks.
- F.) Such other information as the Permits Department may require.

RULE 9.4 DESIGN AND PLACEMENT REQUIREMENTS

9.4.1 The design, method of installation and location of all banners shall be such that they will not be dangerous to those using the road or unduly interfere with sight distance or the free movement of the traffic.

9.4.2 Overhead banners shall be securely fastened and have a minimum bottom height of 18 feet above the surface of the traveled way and be placed not closer than 500 feet on either side of traffic lights or signals and shall be so placed as to not obstruct a clear view of such traffic lights or signals or other traffic control devices. Banners shall not be attached to trees.

9.4.3 Banners shall not have displayed thereon any legend or symbol, which may, in any way,

be construed, to advertise or otherwise promote the sale of or publicize any merchandise or commodity or which may be construed to be political or objectionable in nature.

9.4.4 Banners shall not have displayed thereon any device, which is, purports to be, imitates, resembles, or may be mistaken for a traffic control device or which attempts to direct the movement of traffic.

9.4.5 Decorations shall not include flashing lights.

RULE 9.5 CONDITIONS OF ISSUANCE OF BANNER PERMITS

9.5.1 Permits for the erection or installation of banners may be cancelled by the Permits Department if such installation shall become dangerous to those using the road or unduly interfere with the free movement of traffic. If it becomes necessary to remove the banner due to safety reasons, the permit holder will reimburse the cost of removal.

9.5.2 The person or organization making application shall faithfully fulfill all permit requirements and shall indemnify and save harmless the Board from claims of every kind arising out of operations by any permit or permits issued.

9.5.3 The Permits Department may issue permits to persons and organizations subject to the conditions above.

PART 10 – PARADES, CELEBRATIONS AND FESTIVALS

RULE 10.1 AUTHORIZED APPLICANTS

A permit granting permission for the temporary closure of a County road for a reasonable length of time for a parade, celebration or festival or to use a County road as a detour for traffic around a parade, etc., on a non-county road may be issued by the Permits Department only with written authorization of the governing body having jurisdiction over said location.

RULE 10.2 APPLICATION FORMS

Application for permits to close or partially close or use as a detour a County road for a parade, celebration, or festival shall be in the manner prescribed by or on the appropriate forms supplied by the Permits Department.

RULE 10.3 MINIMUM REQUIREMENTS

A copy of the written authorization shall accompany the permit application requesting permission for the road closure or partial closure or use as a detour. The application shall state the nature of the activity for which the road closure or partial closure or use as a detour is being requested, the dates and times it is proposed to close and reopen the road to traffic or use it as a detour (a reasonable period of time as approved by the Permits Department), and such other information as the Permits Department may require.

RULE 10.4 ROAD CLOSURE PERMIT CONDITIONS

All permits allowing the closure or partial closure of a road shall be issued subject to the following conditions:

- 10.4.1** The closure or partial closure of the road and the use of a detour route shall not unduly interfere with the safe and free movement of traffic.
- 10.4.2** A suitable alternate location is not available for the parade, celebration, or festival that is more acceptable for traffic safety and offers less interruption of traffic.
- 10.4.3** Normally, closures, or partial closures of roads shall be allowed during daylight hours only. In the special case where a temporary nighttime closure is permitted for a parade, celebration or festival, all points of potential hazard and all barricades and warning traffic signs must be lighted at the applicant's expense and such lighting must be in accordance with requirements and specifications of the Board.
- 10.4.4** All traffic control devices installed in conjunction with the road closure or partial closure and the detour route shall conform to the provisions of the current Michigan Manual of Uniform Traffic Control Devices.
- 10.4.5** Required traffic control devices may be furnished and installed either by the local governing body or by the Board but, in either event, all costs arising from the installation, maintenance and removal of such devices shall be borne by the applicant.
- 10.4.6** The permit holder shall assume the responsibility for necessary police supervision and

provide proof thereof, establishment and posting of any necessary detour and shall also assume liability for any and all damage claims which may arise as a result of the road closure or partial closure.

10.4.7 Closures or partial closures of roads shall not be permitted for the purpose of allowing private commercial activities, such as advertising or sale of goods wares or produce.

10.4.8 The applicant shall clean up any litter, debris, etc., occurring in the road right-of-way as a result of the permitted event at the applicant's own expense and within a reasonable time thereafter. In the event that the Board must do the cleanup work, the applicant shall reimburse the Board for the cost thereof.

RULE 10.5 ANNUAL PARADE PERMITS

The Permits Department may issue a permit to cities, villages, or townships that conduct multiple parades or events using the same or similar routes or locations. Such permits are subject to the conditions above.

**SAGINAW COUNTY ROAD COMMISSION
POLICY
FOR TREES WITHIN THE ROW ON LOW VOLUME ROADS
SPEED LIMIT 25 MPH OR LESS**

1. Deciduous and ornamental trees may not be planted closer than 6 feet from the edge of the curb in areas where New Road Construction and Reconstruction projects occur with high back curbs (Types C-4 & F-4) with a traffic volume of projected to be less than 400 vehicles per day. (Includes significant drainage improvements). For all new roads, the LDAC will work to classify the road in terms of projected ADT and/or volume.
2. Deciduous and ornamental trees may not be planted closer than 8 feet from the edge of the curb in areas where New Road Construction and Reconstruction projects occur with high back curbs (Types C-4 & F-4) with a traffic volume greater than 400 vehicles per day. (Includes significant drainage improvements) For all new roads, the LDAC will work to classify the road in terms of projected ADT and/or volume.
3. Existing deciduous and ornamental trees located along a roadway with curbing (high back or rolled) will not be removed if the road project consists of a mill and resurface with minimal drainage improvements. However, it is understood that new trees are not permitted closer than 6 feet from the edge of a high back curb and 8 feet from the edge of rolled curbing. A permit is required for any tree planting within the Road right-of-way.
4. Existing deciduous and ornamental trees located along roads without curbing, regardless of ADT, must be removed to a point 10 feet from the edge of the roadway in areas where a project consists of a mill and resurface with minimal drainage improvements.
5. Existing deciduous and ornamental trees located along roads without curbing, regardless of ADT, must be removed to a point 17 feet from the edge of the pavement if significant drainage improvements are required.
 - a. Exception: If an underground storm sewer system is located closer than 17 feet from the edge of pavement, than consideration will be given to utilizing the existing drainage area. (In other words, the ditch will not be re-established at the right of way.)

**Evergreen and Conifer trees are not permitted within any portion of the road right of way.

APPROVED BY BOARD OF COUNTY ROAD COMMISSIONERS FOR SAGINAW COUNTY ON TUESDAY, FEBRUARY 21, 2006

**Saginaw County Road Commission
Proposed Policy
For Trees within ROW
Speed Limit Greater than 25 MPH**

1. Deciduous and ornamental trees located on a road having high back curb and a traffic volume greater than 400 vehicles per day may not be located closer than 10 feet from the edge of the curb.
2. Deciduous and ornamental trees located on roads having high back curb and a traffic volume less than 400 vehicles per day may not be located closer than 8 feet behind the curb.

**Approved by the Board of County Road Commissioners for Saginaw
County on February 21, 2006**

Tree Policy for All Local Roads without Curb & Gutter and Speeds Greater Than 25 MPH

1. All roads shall be designed to the current ADT and/or 750 vehicles per day, whichever is greater.
2. All roads shall be designed to the prima facie speed limit, posted speed limit and/or the 85th percentile whichever is greater.
3. For the purposes of creating a “Clear Zone” the below listed table shall be used to represent the required distance between the pavement edge and any obstructions.

Design Speed	Design ADT	Clear Zone Ft
40 MPH or Less	750-1500	17
	1500-6000	17
	Over 6000	17
45-50 MPH	750-1500	17
	1500-6000	18
	Over 6000	20
55 MPH	750-1500	18
	1500-6000	22
	Over 6000	23
60 MPH or Greater	750-1500	23
	1500-6000	23
	Over 6000	23

4. Any tree that extends into the proposed clear zone, in whole or in part, at a point three feet above the ground level shall be removed.
5. Trees that exist between the clear zone limits and the ROW line may be left at the discretion of the associated Township if: 1.) A design can be accomplished to accommodate the necessary drainage 2.) The Township is willing to assume all costs associated with any affected design and construction changes.
6. Evergreen and Conifer trees are not permitted within any portion of the road right of way.
7. This policy is intended to address removal requirements only, and shall not restrict in any way the necessity for tree trimming due to issues such as, but not limited to, sight obstructions, or interference with vehicular traffic.
8. This policy shall be in effect during all paving, drainage, construction, and reconstruction projects for roads with speeds higher than 25 MPH and without curb & gutter.
9. The above listed is intended to provide standard design and construction practices. However, where site specific data indicates that there is a high accident rate, or current design indicates a high probability of continued and/or increased accidents, the designer may increase clear zones to the limits of the Right-of-Way or beyond if proper easements can be acquired.

Approved by the Board of County Road Commissioners for Saginaw County on September 9, 2009