

CHAPTER 3. PLATS AND STREETS

- 3.1 **APPLICABILITY.** To establish proper procedure and standards for the design and construction of all streets, both public and private, in plats, it is deemed necessary to adopt these requirements. Inspection, both field and office, of submitted streets in plats and the approval of these streets shall be based on the requirements as outlined in this publication. The contents of this publication do not supersede any part of Act 288, Public Acts of 1967, as amended, and is intended for use only as an instrument to expedite the processing of proposed plats in the Village of Vermontville, Eaton County.
- 3.2 **ORDER OF PROCEDURE.** The following steps, which will be explained in detail in subsequent sections, will be followed by considering any plat:
- A. Approval of a Preliminary Plat.
 - B. Approval of Construction Plans for Road and Utilities.
 - C. Construction of Roads and Utilities.
 - D. Final Inspection Approval and Acceptance of Constructed Road.
 - E. Approval of Final Plat.
- 3.3 **DEFINITIONS.** Unless the context specifically indicates otherwise, the meaning of terms in this Chapter shall be as follows:
- A. A.A.S.K.T.O.: The American Association of State Highway and Transportation Officials.
 - B. ASTM: The American Society for Testing Materials.
 - C. Board: The Board of County Road Commissioners of the County of Eaton, State of Michigan.
 - D. Clear Vision Area: Additional right of way which may be required at or near intersections which must be kept free of obstructions in order to provide adequate sight distance for motorists.
 - E. County Engineer: The Engineer-Manager or other representative designated by the Board to carry out the duties entailed by the Subdivision Act and these Subdivision Regulations.
 - F. Final Plat: A map of all or part of the subdivision prepared and certified by the Proprietor's Engineer or the Proprietors Land Surveyor In accordance with the requirements of the Subdivision Control Act of 1967, Act 288 of the Public Acts of 1967, as amended.
 - G. Governing Body: Township Board, City Council or Village Board having Jurisdiction of the land in which the plat is to be located.
 - h. Laboratory: Any materials testing laboratory, which is approved by the County Engineer.
 - I. MDOT: Michigan Department of Transportation.

- J. MDOT Specifications: The current edition of Michigan Department of Transportation Standard Specifications for Construction.
- K. Pre-Preliminary Plat: A Pre-Preliminary Plat is a sketch plan or informal plan drawn to scale and may be in pencil, if desired, showing the existing features of a site and its surroundings and the general layout of the proposed subdivision.
- L. Preliminary Plat: A map showing the preliminary layout of subdivision in sufficient detail to allow review by the Board and other interested agencies.
- M. Proprietor: A natural person, firm, association, partnership, corporation or combination of any of them which may hold ownership interest in land whether recorded or not.
- N. Proprietor Engineer or Proprietor's Land Surveyor:
 - 1) With reference to the Preliminary Plat, and/or the Final Plat means a civil engineer who is licensed in the State of Michigan as a licensed professional engineer or a land surveyor who is licensed in the State of Michigan as a licensed land surveyor and who is representing the Proprietor.
 - 2) With reference to design and construction plans means a civil engineer who is licensed in the State of Michigan as a licensed professional engineer and who is representing the Proprietor.
- O. Rural or Rural Area: All areas of Eaton County not designated as urban.
- P. Service Road: A roadway, either public or private, which generally parallels a public road, and which serves to separate the public road from adjacent land use. A service road limits access to the through road while providing for free circulation of local traffic for the adjacent land use.
- Q. Subdivision Control Act of 1967: Act 288 of the Michigan Public Acts of 1967 and all amendments thereto.
- R. Urban or Urban Area: The urbanized area of Eaton County defined as all of the Charter Townships of Delta, Windsor and Oneida, and those areas of the remaining townships which lie within two (2) miles of the corporate limits of the following cities and villages: Charlotte, Eaton Rapids, Olivet, Bellevue, Vermontville, Sunfield, Mulliken, Potterville, or such other areas that the Board deems necessary.
- S. Utilities: All persons, firms, corporations, co-partnerships or municipal or other public authority providing gas, electricity, water, steam, telephone, sanitary sewer, storm sewer or other services of a similar nature. Also included is the service that these utilities would provide.

3.4 GENERAL REQUIREMENTS

- A. The terms of this Chapter shall not supersede any part of the Subdivision control Act of 1967.
- B. A Pre-Preliminary Plat may be made by a Proprietor or a Proprietor's Engineer to submit to the Village of Vermontville. This Pre-Preliminary Plat should contain basic information

- concerning the proposed development for discussion prior to commencing with the Proprietor's land plans and preliminary designs. The preliminary plat shall be presented to the Village in an informal discussion intended to advise both the Village and the Proprietor of potential conflicts or plans which may have a bearing on the development.
- C. Private roads within plats shall conform to the minimum requirements for public roads as established in this Chapter.
 - D. Streets that are to be public streets in unplatted areas shall conform to Village's procedures for Plat Street Development. The fees covering engineering review costs and construction inspection costs required for these streets and all costs incurred will be paid by the Proprietor.
 - E. Proprietors desiring variations from these requirements may submit their requests in writing to the Council. The Council in cases, which it considers meritorious, may waive individual requirements in specific instances.
 - F. When a proposed plat incorporates an existing village road which is not constructed to current standards, said road shall be reconstructed by the Proprietor as necessary to improve the road to conform with standards acceptable to the Village. The Village Council may require service roads to be constructed by the Proprietor where commercial development is proposed. When a proposed lot is bordered by an interior subdivision street, an existing local road or a primary road, access will be allowed only from an interior subdivision street in the proposed plat.
 - G. Permits shall be obtained from the Village by the Proprietor for any construction within the right-of-way of existing village roads.
 - H. All work, including plans for such work, within any proposed road right-of-way must be reviewed and approved by the Village Council or its Engineer.
 - I. All initially proposed public underground utilities in the street right-of-way shall be installed prior to the construction of the subbase and base of the street. The final determination is to be made by the Council or its Engineer.
 - J. Street base construction and underground utility work shall be accomplished in one construction season, and the final wearing course of the street surface shall be installed after construction traffic and one freeze/thaw season has passed. Proper construction methods and materials shall be used to achieve 95% density of the roadway to the satisfaction of the Council or its Engineer.
 - K. The Council reserves the right, at its discretion, to add requirements and to delete or modify existing requirements in the exercise of its statutory authority to maintain streets in a condition reasonable safe and convenient for public travel.

- 3.5 PRELIMINARY REQUIREMENTS.** Approvals of the Preliminary Plat by the Village Council and the Eaton County Drain Commissioner shall be required under the Subdivision Control Act. If a preliminary plat approved by the Council is revised because of requirements of such approving agencies or revisions are otherwise made by the Proprietor, such revisions shall be incorporated in a revised preliminary plat and resubmitted for approval or disapproval by the Council. If approval of other agencies, such as the Michigan Department of Transportation, the Michigan Department of Natural Resources, the Michigan Water Resources Commission and/or the Eaton County Health Department are also required, such approvals must be documented prior to final approval by the Village Council. When received, the final approval of the Preliminary Plat by the Council confers upon the Proprietor for a period of two years from date of approval, the conditional right that the general terms and conditions, under which Preliminary Plat approval was granted, will not be changed.
- A. Preliminary Plat. Four (4) copies of the Preliminary Plat layout drawn to scale not smaller than one inch to 200 feet on a 24" x 36" sheet by the Proprietor's Engineer shall be submitted to the Council for approval. The preliminary plat layout shall show plainly all of the following and meet the requirements listed:
- 1) Show locations and extent of property. This shall include a location map showing the plat in relation to the village road system.
 - 2) Show plat dimensions on the portion of layout for which approval is requested. Approximate dimensions are sufficient.
 - 3) Give the location of the plat with reference to the part of section and township in which the parcel is situated.
 - 4) Each initial Preliminary Plat layout shall be accompanied by a topographic map showing relief with not more than two foot contour intervals (referenced to USGS elevation datum) and upon which the overall plat layout is superimposed. Provided the dimension scale allows it without sacrificing other details, the plan layout complete with contours can be submitted as a single unit.
 - 5) Show locations and names of proposed streets and alleys together with arrows showing drainage flow.
 - 6) Show plainly all-governing conditions such as:
 - a) Adjoining named subdivisions, lot numbers and adjacent named streets.
 - b) State highways.
 - c) Rivers, one hundred-year flood plain datum, natural water courses, existing county or private drains, sewers and cross culverts on existing roads.
 - d) Railroads, cemeteries and parks.

- e) All other features that the location or existence of which might influence the layout of the plat, including streets and driveways, existing and proposed, within 300 feet of the proposed subdivision.
- 7) Show typical cross section of street to be constructed including right of way width, which shall comply with the requirements as established in the Procedures for Plat Street Development.
- 8) Show the name of the Proprietor and Proprietor's Engineer or land Surveyor, with mailing address and telephone number of each.
- 9) In the case where the Proprietor proposes to subdivide a given area but wishes to begin with only a portion of the total area, the original preliminary plat shall include the proposed general layout for the entire area (master plan). The part proposed to be subdivided first shall be clearly superimposed upon the master plan in order to illustrate clearly the method of development, which the Proprietor intends to follow. Each subsequent plat shall follow the same procedure until the entire area controlled by the Proprietor is subdivided. If an individual phase is part of a preliminary master plan approved by the Council within the last twenty-four months (24 months), and is in accordance with the current standards, the individual phase will not require separate preliminary approval. However, the individual phase shall require construction plans approved by the Council or its Engineer. The minimum street length to be constructed in each subdivision or phase of a subdivision shall not be less than 500 feet.
- 10) The layout of roads, streets and alleys in the proposed plat shall provide a continuous circuit for travel except when, in the opinion of the Council, the lands are limited in area or are subject to a natural barrier. In such cases a dedication that provides access to a public highway on one end only will be acceptable, if a dedication or easement is given on additional land at its terminus so as to permit turning in a continuous circuit or by some other means approved by the Council. The street layout shall fit the pattern established by the adjacent roads and streets and/or as may be required by the Comprehensive Plan of the Village. All existing public roads, streets or alleys that terminate at the boundaries must be connected with the road and street system of the proposed plat. When the proposed plat abuts unplatted land, provisions shall be made for street extensions to the title line of the unplatted area. In this regard, the Village of Vermontville shall not approve plats which result in the creation of narrow or irregular shaped parcels of land of negligible economic or aesthetic value, where the predominant function of such parcels is to unreasonably deny access to public roads, utilities, or services from adjacent land.
- 11) The edge of pavement, both left and right of the centerline must maintain a parallel alignment. "Elbows" and other non uniform sections of road way will not be allowed.
- 12) All streets and highways, which are extensions of, or in line with, existing streets must carry the names of those in existence. Other streets and highways shall be given such

names as the owner may choose, subject to the recommendation of the Tri County Regional Planning Commission and the approval of the Council.

- 13) Half width streets or alleys will be acceptable only when the boundary of the proposed plat coincides with the boundary of a recorded plat on which a half width street or alley has previously been dedicated.
- 14) Strip type subdivisions along existing roads where access to each lot is from the existing roadway shall be discouraged. The concept of fronting lots on an internal road system is encouraged for reasons of safety.
- 15) The Preliminary Plat shall be filed with the Village Clerk for the consideration by the Council. The Council will give approval or disapproval of the Preliminary Plat in writing within 30 days. If the Preliminary Plat is rejected, the reasons for the rejection will be provided to the Proprietor.
- 16) If construction has not commenced, preliminary plat approval by the Council shall expire after two years from the date of approval unless otherwise extended in writing.
- 17) Approval of the Preliminary Plat shall provide authorization for the Proprietor's Engineer to proceed with the road and drainage plans.

B. Preliminary Construction Plans

1) General.

- a) After approval of the Preliminary Plat, three copies of a preliminary road and utility construction plan as prepared by the Proprietor's Engineer covering all the roads within the plat shall be submitted to the Village Council for approval. These plans shall consist of plan and profile drawings and cross sections, which shall comply with the current specifications required by the Council. The preliminary plans shall show all pertinent data necessary to develop construction plans and shall be drawn on standard size (24" x 36") sheets to a scale of not less than one inch to 50 feet.
- b) All dead-end streets shall be provided with a turnaround (cul-de-sac). This treatment shall be designed in accordance with the Council's specifications. Cul-de-sac length shall not exceed 1,320 feet measured from the centerline intersection of the streets to the center point of the cul-de-sac circle. Special consideration may be given by the Council for longer cul-de-sacs for topographic conditions or other unusual situations. Galvanized steel beam guardrails, erected by the Proprietor, shall be required at the stub end of streets, which are temporarily dead-ended at the subdivision limits. At such dead-end streets, the Proprietor will be required to place such signs as the Village Council specifies, informing the public that the street is not a through street. Temporary turnarounds may be required regardless of the length of the stub end street.

- c) Intersections shall not be permitted less than 250 feet apart. Intersections of platted streets entering primary roads shall not be permitted less than 660 feet apart.
 - d) The maximum length of blocks shall be 1,320 feet. The maximum distance between access points (public streets) to abutting property shall be 1,320 feet.
 - e) All streets and alleys shall be provided with facilities for adequate surface drainage. This may be accomplished by the use of ditches, county drains, natural watercourses, or constructed tributaries thereto. In the Village of Vermontville, the storm drainage system shall be of the underground type.
 - f) Where ditches, other than standard roadside ditches, or underground drainage are provided, they shall be made a part of the county drain system, by proper legal procedures through the Eaton County Drain Commissioner, and meet all necessary requirements as to right-of-way, easements and permits for use of land.
 - g) No construction of roads or utilities shall be started until the preliminary road and utility construction plans have been approved.
 - h) When the plans are approved or disapproved, such action will be marked on the plans and one copy will be returned to the Proprietor's Engineer. Revised plans will be approved when they show compliance with all requirements. If sidewalk and/or curb and gutter are to be provided in the subdivision they must be detailed in the preliminary road and drainage plans.
- 2) Preliminary Road and Utility Plans. All work within the proposed right of way must have plans reviewed and approved by the Village Council. The plan must show plainly all of the following information:
- a) Plan view with the centerline profile or top of curb profile directly below the plan view.
 - b) Typical cross section of the road to be constructed.
 - c) The proposed grades shall coincide with datum determined by the USGS or USC&GS, if practicable. A permanent benchmark shall be established in the plat and shown on the plans.
 - d) The location, size and depth of all underground utilities used for road drainage within the plat including:
 - i) the sizes, lengths and locations of all cross road culverts.
 - ii) the location and type of inlets and cleanout points for underground drainage systems.
 - iii) the standard plan for all catch basins, inlets, manholes, etc. This may be done by reference to MDOT Standard Plans.

- e) Show locations and profile of all drains outside of the roadway area that are to be utilized for roadside drainage.
 - f) Soil borings will be required and shown on the plans if unstable soils are present.
 - g) The preliminary utility plan may be superimposed on the preliminary road plan if this can be done without sacrificing clarity.
- 3) Locations for underground utilities:
- a) Storm sewers: Either side, 13 feet from property line.
 - b) Sanitary sewers: Near centerline of roadway.
 - c) Water Mains:
 - i) North side of road, near 8 feet from property line.
 - ii) West side of road, near 8 feet from property line.
 - d) Gas Mains and Electric:
 - i) South side of road, near 8 feet from property line.
 - ii) East side of road, near 8 feet from property line.
 - iii) Depth of cover in roadway, 48 inch minimum.
 - iv) Depth of cover outside of roadway, 36 inch minimum.
 - e) Other: By approval of the Village Council.
- C. Right-of-Way Requirements. The following road right-of-way requirements shall be the minimum standards acceptable, unless adjusted by the Council, pursuant to Section 3.4, K, of this Chapter.
- 1) All street construction shall be centered on the street right-of-way. Section line and quarter line roads shall be centered on those lines unless the Council approves an exception.
 - 2) State or U.S. highways shall be of the width required by the Michigan Department of Transportation.
 - 3) All primary roads and local roads (excluding subdivision streets) shall be a minimum right-of-way width of 100 feet.
 - 4) Residential subdivision street right-of-way shall be a minimum width of 66 feet.
 - 5) One way streets may have a minimum of 33 feet.
 - 6) The right-of-way on all curvilinear streets shall be the same width as the right-of-way on the tangents.

- 7) Widths of right-of-way in excess of the widths required above may be required by the Council when considered necessary due to situations including, but not limited to, commercial areas, multilane roadway, non-motorized travelways, utilities, cut or fill sections of roadway, clear vision areas, or for reasons of safety.

3.6 FINAL PLANS AND SPECIFICATIONS FOR STREET CONSTRUCTION

- A. Construction Plans. The construction plans shall be of the same dimension and clarity as the preliminary construction plans. The approved preliminary construction plans may be used as final construction plans if approved by the Council or Village Engineer. If a change in the road design effects a utility, the Proprietor's Engineer shall inform the utility owner. The drawings shall include drawings of all construction details, paving layout, sanitary sewer layout, water main layout and drainage layout, together with profiles of the above. The plan and profile drawings shall be on standard size 24" x 36" sheets with horizontal scale not smaller than 1" = 50' and vertical scale not smaller than 1" = 5'. The construction plans shall include the following drawings and shall bear the seal of a professional engineer licensed to practice in Michigan.
 - 1) Typical cross section
 - 2) Paving and drainage layout
 - 3) Sanitary sewer and water main layout
 - 4) Construction details referred to
- B. Pavement Requirements. The requirements for sub-base, base and pavement shall be as set forth in Tables B-1 and B-2 on the following pages:

TABLE B-1 TYPICAL PAVEMENT SECTIONS – URBAN

Pavement Section/ Design Feature	Light Residential Section	Medium Heavy Residential Section	Heavy Residential Section	Indus.or Heavy Commercial Section
No. of Lots Served	0-25	26-50	51+	-----
Width of R/W. ft.	66	66	66-80	66-100
BITUMINOUS PAVEMENT WITH GRANULAR BASE:				
Curb & Gutter, Face to Face, ft.	30	30	36	To be determined
Bit. Top, inches	1.5	1.5	2	To be determined
Bit. Leveling	2.5	2.5	3	To be determined
22A Aggregate Base, inches	8	8	8	8
Chase II, Subbase, inches	8	8	12	12
Edge Drain, inches	4	4	6	6
FULL DEPTH ASPHALT PAVEMENT:				
Curb & Gutter, Face to Face, ft.	30	30	36	36 Minimum
Bit. Top, inches	2	2	1.5	2
Bit. Leveling	-----	-----	1.5	2
Bit. Base, inches	5	6	6	6
Subbase Under Curb And Gutter, inches	8	8	12 or 8 w/C4 C & G	12 and C4 C & G
Edge Drain, inches	4	4	6	6
CONCRETE PAVEMENT:				
Curb & Gutter, Face to Face, ft.	30	30	36	36-60

Portland Cement Concrete, inches	6	6	7	9
Class I Subbase, inches	6	6	6	6
Edge Drain, inches	4	4	4	4

TABLE B-2 TYPICAL PAVEMENT SECTIONS - RURAL

	Light	Medium	Heavy	Indus. Or Heavy
Pavement Section/ Design Feature	Residential Section	Residential Section	Residential Section	Commercial Section
No. of Lots Served	0-25	26-50	51+	----
Width of R/W, ft.	66	66	66-80	66-100

BITUMINOUS PAVEMENT WITH GRANULAR BASE:

Width of Surfacing, Edge to Edge, ft	22	22	24	To be determined
Shoulder Width ft	3	4	6	To be determined
Bit. Leveling, inches	1.5	1.5	2	To be determined
22A Aggregate Base, inches	8	8	8	8
Class II, Subbase, inches	8	8	12	12
Edge Drain, inches	----	----	----	6

FULL DEPTH ASPHALT PAVEMENT:

Width of Surfacing, Edge to Edge, ft	22	22	24	33
Shoulder Width, ft	3	4	6	C-4 Curb Gutter
Bit, Top, inches	2	2	1.5	1.5
Bit, Leveling, inches	----	----	1.5	1.5
Bit, Base, inches	5	6	6	8
Subbase Under Curb, inches	----	----	----	12
Edge Drain, inches	----	----	----	6

CONCRETE PAVEMENT:

Curb & Gutter, Face to Face, ft.	30	30	36	36-60
Portland Cement Concrete, inches	6	6	7	9

Class II Subbase, inches	6	6	6	6
Edge Drain, inches	4	4	4	4

C. Alignment.

- 1) Minimum sight distance onto existing county roads from subdivision streets shall be as follows:
 - a) Stopping sight distance shall meet or exceed the desirable stopping sight distance in accordance with Table 1 - Minimum Stopping Sight Distance, (See Appendix to this Chapter, Example F).
 - b) Comer sight distance at internal subdivision intersections shall meet or exceed Table 2-Corner Sight Distance at Rural Intersections, (See Appendix to this Chapter, Example F).
 - c) Comer sight distance at an intersection of a subdivision street with a local road or primary road shall meet or exceed the distance in Table 3 - Subdivision Corner Sight Distance at a Local Road or Primary Road Intersection (See Appendix to this Chapter, Example F2).
 - d) Special conditions, in the Village's judgment, may warrant adjustments to the above standards. (See Appendix to this Chapter, See Design Tables - Examples B, C, & D).
- 2) Vertical curves shall be designed with a minimum length of 100 feet and a minimum sight distance as required in Section 3.6, C, l), a), above.
- 3) Horizontal curves shall be designed with a minimum centerline radius as shown in Table 4 - Minimum Horizontal Curves (Centerline Radius). (See Appendix to this Chapter, Example F2).
- 4) The minimum grade on any street shall be 0.5 %.
- 5) The maximum grade on any street shall be 5.0 %.
- 6) The crown on any street shall be 2.0 %.
- 7) A minimum edge radius of 30 feet shall be provided at 90-degree intersections within the subdivision streets and where intersecting streets meet the existing village roads.
- 8) Intersection streets should meet at approximately a 90-degree angle. Skewed intersections shall not be permitted. Edge radii of skewed intersections shall be increased as necessary to comply with current AASHTO guidelines.
- 9) Where intersecting streets meet existing street/roads the grade of the proposed street shall match the cross slope of the existing street/road as extended to the right-of-way lines.

D. Storm Sewer

- 1) Design

- a) Size shall be in accordance with the Eaton County Drain Commissioner's design standards and approved by the Eaton County Drain Commissioner and the Village Engineer.
 - b) Material shall meet the requirements of the current MDOT Standard Specifications for Construction.
- 2) Structures and Covers
- a) All structure design shall be in accordance with the current MDOT Standard Plans for Manholes, Catchbasins and Inlets.
 - b) Covers - all structure covers shall be in accordance with current MDOT Standard Plans, or approved equivalent.
- 3) Spacing of Structures
- a) Catchbasins and inlets and culverts shall be placed such that all intersections, low points and necessary intermediate points are properly drained or as indicated and approved by the Village Engineer.
 - b) The drainage structures should, if practical, be placed in alignment with the side lot lines and/or their intersection to avoid conflict with driveway openings.
 - c) Manholes shall be located at all changes in alignment, size or grade and be spaced a maximum of approximately 300 feet apart.
- 4) Construction

All Storm Sewers are to be inspected by the Proprietor's Engineer and shall be true to line and grade and properly bedded and backfilled. See Subsection H. below, Utilities and Backfill.

E. Roadside Ditches and Crossroad Culverts

1. The minimum ditch grade shall be 0.5%. Grades from 1% to 4% shall be sodded. Grades over 4% shall be rip-rapped or paved. Grades of ditches less than 1 % shall have an established growth of vegetation provided by topsoiling, seeding and mulching in accordance with the current MDOT Specifications.
2. Where drains cross the roadway at depths of three feet or less, the crossing shall be made with reinforced concrete culvert pipe or as specified by the Eaton County Drain Commissioner.
 - a. Reinforced concrete culvert pipe shall meet or exceed the current specifications of ASTM, Designation C-76, without elliptical reinforcement.
 - b. Corrugated metal pipe shall meet the current specifications of ASTM, Designation M-36.

- c. Materials and methods for construction of culverts shall be in accordance with current MDOT Standard Specifications for Construction.
- 3. Roadside ditches shall be stabilized and free of sedimentation and erosion prior to acceptance of the streets for maintenance by the Village Council.
- 4. Where drainage ditches, other than standard roadside ditches, or where enclosed drainage is provided, all shall be made part of the Village of Vermontville by the proper legal procedures and shall meet all the necessary requirements of the Eaton County Drain Commission if applicable. Proprietor or proprietor's engineer or agent shall provide certified written acceptance by the Eaton County Drain Commission, if applicable of all drainage areas, systems, facilities and structures accepted and adopted into the Village Drain System.
- 5. The maximum distance that surface water may be carried in an open roadside ditch should be 600 feet.
- 6. The Proprietor shall provide an acceptable system of drainage to enable lot owners to drain sump pump outlets, roof drains and similar private drainage. In all cases, discharge of any water or drainage on the roadway is prohibited.
- F. Clearing and Grubbing. All trees and brush including the roots thereof shall be removed from the right-of-way of the streets within the limits of the subdivision, unless otherwise permitted in writing by the Council or its Engineer.
- G. Existing Road Cleanup. Ditches along existing roads shown on the plat shall be cleaned out to such a depth as to provide positive drainage. All brush, fences, obstructions, etc., shall be removed from the right-of-way. Trees shall be removed as directed by the Village Council or its Engineer.
- H. Utilities and Backfill. All utilities should be located in accordance with Section 3.5, B, of this Chapter and all lot or house services stubbed to the right-of-way line prior to curb and gutter construction. All public underground utilities shall be installed after the rough grading has been completed. (See Appendix to this Chapter, Example K).
 - 1) Trench Backfill in Roadway: The following standards shall apply to all utilities located within an area delineated by a 1 on 1 slope measured from a point on the bottom of the back of curb or a point on the outside edge of shoulder. At all times, MDOT Class II Granular material shall be placed and compacted to least one foot above any buried pipe with minimum 95% compaction. Sound native material may be used for backfill from one foot above pipe to top of subgrade. Ninety five percent compaction shall be obtained on all material, and shall be verified by density tests.
 - 2) Catchbasin and Manhole Backfill in Roadway: At all times, structures shall be backfilled with MDOT Class II granular material, compacted to the same requirements for trench backfill in roadway.
- I. Finished Earth Grade. The finished subgrade shall be free of all topsoil, stones, stumps, organic matter, muck, peat, and frost heave material and shall be prepared in accordance with the current MDOT Standard Specifications for Construction. The backfill of all

trenches (such as trenches for sewer, water, utility or culverts) that are within the grade of the proposed streets shall be thoroughly compacted. The entire width of the right -of-way shall be graded so that any point on the right -of-way shall be not more than 1.0' above or below the finished centerline grade. The Village Engineer may vary this requirement if topographic conditions warrant.

J. Subbase Base Material and Construction Methods

- 1) Subbase and base materials and construction methods for this placement shall be in accordance with the current MDOT Standard Specifications for Construction.
 - a) The Proprietor's Engineer shall present to the Village Representatives a Certified analysis, made by a laboratory, of all aggregates that are intended to be used on the streets. This analysis must be presented and approved before any surfacing is placed on the streets.
 - b) The use of bituminous base course mixture is permissible. The method of construction shall be according to Section 4.00 of the current MDOT Standard Specifications for Construction laid at a compacted uniform depth as shown in Tables B-1 or B-2 in two or more courses. A tolerance of one quarter inch, plus or minus, will be allowed in the compacted bituminous aggregate base course. The bituminous mixture shall be in accordance with the current MDOT Standard Specifications for Construction Section 7.10 for Bituminous Base Mixture No. 700, 20C Aggregate
- 2) The completed aggregate or bituminous base course shall conform to the required line, grade, and cross section. Water or chemical admixtures to aid in the consolidation of the aggregate base course may be used subject to the prior written approval of the Village Engineer.
- 3) Road construction specifications for industrial streets and/or collector streets will be as outlined in general requirements and as shown on the typical section for industrial streets.

K. Surfacing Materials and Construction Methods

- 1) Bituminous surface courses shall be constructed in accordance with the current MDOT Standard Specifications for Construction Section 4.00. The bituminous mixtures shall be in accordance with the current MDOT Standard Specifications for Construction Section 7.10 for mixture No. 1100, 20AA designation.
- 2) Concrete pavements shall be constructed in accordance with the current MDOT Standard Specifications for Construction Section 4.50. Pavement integral with the curb will be permitted at the option of the proprietor.

L. Sidewalks and Curb and Gutter

- 1) Sidewalks. Sidewalk, when called for on the plans, shall meet the current M.D.O.T. Standard Specifications for Construction. The depth of walk shall be not less than four inches, except at driveways where it shall be not less than six inches. Sidewalk grades shall be shown on the plans, when the walks are to be constructed. Concrete for sidewalk shall meet all requirements of M.D.O.T. Grade 35S concrete.
 - 2) Curb and Gutter:
 - a) The roadway, curb elevation, and Village curb and gutter cross section shall be shown on the plans. Materials and methods for construction of concrete curb and gutter shall meet the requirements of the current MDOT Standard Specifications for Construction and shall include three, one half inch reinforcing bars. MDOT Standard C-4 or F-4 curb may be used at the proprietor's option.
 - b) Expansion Joint material shall be placed at all spring points and at 100' intervals. Contraction joints shall be located at 10 foot spacing.
 - c) Either straight faced curb and gutter or rolled curb and gutter may be used at the option of the Proprietor. (See Appendix to this Chapter, Example K).
 - d) All concrete shall meet the requirements for MDOT Grade 35S.
 - e) All standard curb cuts shall be done by sawcutting to a minimum depth of two inches.
- M. Topsoil, Seed, Fertilizer and Mulch. All graded areas within the right-of-way shall be seeded, fertilized and mulched. The methods and time of seeding and mulching shall meet the requirements of the current MDOT Standard Specifications for Construction. All disturbed areas shall be covered with a minimum of 2" of topsoil. No road will be accepted by the Village Council where ditch or bank erosion or sedimentation is evident. All disturbed areas within the road right-of-way, excluding the roadbed, must have vegetative ground cover established to such an extent that washing will not occur.

N. Trees

- 1) Tree Planting Standards. Any new trees being planted must be a minimum of 15 feet behind the curb.
 2. Existing Tree Standards. The above shall also apply to existing trees except, when in the opinion of the Village Council or Village Engineer, a deciduous tree is of significant aesthetic value and not closer than five feet behind the curb.
- O. Nonspecified Materials and Construction. All items that are not specified within this Chapter but that are essential to the proper construction of the roads in question, shall be of material and construction in accordance with the current MDOT Standard Specifications for Construction.

3.7 CONSTRUCTION OF STREETS

A. Coordination.

- 1) A preconstruction meeting shall be conducted by the Proprietor's Engineer, including the Village Representative, before street construction commences and a systematic procedure of construction shall be followed.
2. At the start of construction the Village of Vermontville may, or contract to, furnish and install a sign(s) stating, "STREET NOT OPEN FOR PUBLIC TRAVEL", at each access point to a public road or extension of a public road until the Village Council determines that the roadway is reasonably safe for the public to travel. The actual cost of the installation and maintenance of such sign(s) shall be included in the street sign installation fee and shall be paid by the Proprietor.

B. Inspection and Testing

- 1) Inspections may be made by the Village Engineer prior to and during any construction operations. Any road cuts made after the placing of the aggregate base shall be properly backfilled and compacted.
- 2) Inspection by the Village Engineer shall not relieve the Proprietor's Engineer of any of his obligations. The Proprietor's Engineer shall inform the Village Engineer or Representative of the start of the various stages of any construction within the street right of way, and keep him informed as the work progresses. The Proprietor's Engineer shall furnish copies of laboratory and field test results, inspection reports, and related information regarding the quality and progress of the work to the Village Representative or Village Engineer in a timely manner during the course of construction.
- 3) The Proprietor's Engineer shall set and check grade and alignment, supervise all construction, and make all inspections necessary during all phases of construction to verify that proper materials and construction methods are used, and that the work conforms to the approved plans and specifications.
- 4) Construction on, or use of, frozen material shall be prohibited.
- 5) Minimum testing requirements shall be documented by the Proprietor's Engineer as follows:
 - a) Subgrade - visual inspection that all unstable material is removed. Uncertain situations may warrant soil borings and/or testing of questionable soils. A minimum 2% slope in the subgrade surface shall be constructed from the centerline to the edge of the subgrade.
 - b) Subbase - one sieve analysis per 3,000 cubic yards of material. Density tests shall be taken at least once every 400 lineal feet per lift per lane of roadway. Frequency of density test may be increased if compaction is a problem and decreased if

consistent acceptable compaction is obtained. This includes granular material under the concrete curb and gutter.

- c) Aggregate Base - one sieve analysis per 1,200 cubic yards of 22A aggregate. Density tests same as for the subbase.
- d) Concrete Curb & Gutter - proper base construction, air, slump and strength tests of concrete. The concrete shall be tested at least once in the a.m. and once in the p.m. Air content at least once every two hours.
- e) Bituminous Mixtures - one extraction/gradation test per 1,000 tons of each mixture, and/or a minimum of one extraction/gradation per day for each mixture.

C. Acceptance and Maintenance.

- 1) After construction of the roads, streets, alleys and drains is completed, the Proprietor shall furnish the Council with a letter requesting an inspection by the Village Engineer, a certificate (See Appendix to this Chapter, Example J) from the Proprietor's Engineer, a set of as built plans reflecting field changes, and a letter from the Eaton County Drain Commissioner stating that the storm drainage system within the plat is a part of the County drain system, if needed (applicable).
- 2) If the work is not complete and acceptable, the Proprietor and the Proprietor's Engineer will be notified by the Village Engineer as to the deficiency. The Village Engineer will make a re-inspection of the work after being notified by the Proprietor that the deficiencies have been corrected.
- 3) Approval of any construction phase by the Village Engineer does not guarantee acceptance by the Council or relieve the Proprietor of responsibilities or liabilities incurred by the development of the plat.
- 4) When all plat procedures have been completed satisfactorily, the Final Plat will be recommended by the Village of Vermontville Engineer for signature by the Council.
- 5) The Village of Vermontville will assume maintenance of the street(s) if the construction has been accepted by the Vermontville Engineer and the plat has been recorded at the Eaton County Register of Deeds. However, before assuming maintenance, if any material or reconstruction is required, it shall be accomplished at the expense of and by the Proprietor.
- 6) If the Village of Vermontville has assumed maintenance of streets that have not received the final bituminous top course, only routine maintenance such as blading for snow removal will be included at Village expense. Any maintenance, other than routine maintenance, completed by the Village, shall be at the Proprietor's expense.
- 7) In no case will a partial acceptance of a street in the plat be given for maintenance.

3.8 PROCEDURES WHEN STREET-IMPROVEMENTS ARE MADE AFTER APPROVAL OF THE FINAL PLAT

- A. Escrow Agreements. If the Proprietor has entered into a street construction agreement and/or a bituminous pavement agreement with escrow funds deposited to guarantee the

completion of all street improvements in accordance with the Council's specifications, the Council may approve the Final Plat upon execution of the agreements and the deposit of the funds.

- 1) Escrow agreements covering street construction and/or pavement shall be furnished by the Council. The agreements shall be for approximately a one year period or longer. (See Appendix to this Chapter, Examples G & H).
 - 2) Deposits shall be in the form of cash, certified checks, certificates of deposit or an irrevocable bank letter of credit. (See Appendix to this Chapter, Example I).
 - 3) The amount of the deposit required shall be equal to at least 100 percent of the Village Engineer's estimate of the cost of the street improvements.
 - 4) If the streets are not completed and in acceptable condition within the terms of the escrow agreement or one year after the approval of the Final Plat by the Council, the Proprietor will be held in default and procedures will be taken to have the streets completed.
 - 5) The deposit will be released upon receipt of the final certificate from the Proprietor's Engineer and copies of acceptable test results for construction materials and approval of the construction of the streets by the Village Engineer.
 - 6) The Council will rebate to the Proprietor, as work progresses, amounts of any deposits equal to the ratio of the work completed to the entire project. However, a minimum balance of \$5,000 shall be retained until all items of work in the agreement are complete and acceptable to the Village Engineer.
- B. Insurance Requirements. The Proprietor, prior to performing any work within any existing or proposed county road right-of-way and continuing through completion of the project, shall furnish to the Eaton County Road Commission, and maintain, the following:
- 1) Copy of Comprehensive General Liability Certificate, naming the Village of Vermontville and its Employees, as an Additional Named Insured under the contractors Comprehensive General Liability Certificate, with minimum policy limits of \$500,000 per occurrence. The Legal Committee and the Village President shall be authorized to perform a review process to determine whether higher limits of insurance coverage will be required according to risk exposure, size of plat or ultimate size of the plat, location, any unique characteristics, current stage of construction of the road right-of-way, and including any other criteria pertinent to the individual plat. The policy should protect against all risks of liability typically associated with the work performed, including but not limited to, coverage for products and completed operations, coverage for property of others in the contractors care, custody and control, coverage against the perils of explosion, collapse and underground hazards, XCU, and contractual.
 - 2) A Certificate of Insurance covering Workers' Compensation Insurance, as required under the Michigan Workers' Compensation Act.

- 3) In the alternative, rather than comply with Section 3.8, B, 1), the Proprietor shall provide an Owner's Protective policy naming the Proprietor and Village of Vermontville and its Employees, as a named insured covering the project as described in the proposal. Limits of the coverage under the Owners Protective policy shall be the amount of limits indicated in Section 3.8, B, 1).

3.9 FEES

- A. Street Construction Fee. A fee in the amount of 1% of the Village Engineer's estimate of the total cost of construction, not including drainage and pavement, of the street improvements shall be paid to the Village of Vermontville prior to construction and plat approval. This fee is to cover administrative costs and inspections made by the Village Engineer in relation to the plat and/or street construction agreement, (See Appendix to this Chapter, Example G) and shall be paid in cash.
- B. Bituminous Pavement Agreement. The pavement contractor's equipment and work force shall be adequate in terms of capability and scope to perform the work in a satisfactory manner as determined by the Village Council. The amount of the escrow funds required shall be estimated by the Village Engineer. The estimate shall include a fee, to be paid to the Council, to cover the Council's expenses for administrative costs, engineering, inspections and testing, based on the following schedules:
 - 1) Bids taken by Village of Vermontville:
 - a) A base fee of \$450 will be charged to the Proprietor of all plats.
 - b) When the actual cost for all pavement construction exceeds \$15,000, a charge of three percent (3%) of the actual cost of pavement construction of the surface of the streets in the plat will be made in lieu of the base fee.
 - 2) Bids taken by the Proprietor. When the Proprietor hires a pavement contractor, the Council's fee shall be the base fee in Section 3.9, B, 1),. above plus the actual cost incurred by the Village Council to provide the necessary engineering, inspection and testing.
- C. Sign Fee. The Proprietor shall pay to the Council, the amount necessary to furnish and erect street name signs and traffic control signs and devices as determined necessary at locations specified by the Vermontville Engineer. The payment shall be made to the Council prior to Final Plat approval.
- D. Permits.
 - 1) All work scheduled within existing and proposed right-of-way of roads and streets must have plans reviewed and approved by the Village Engineer or its representative.
 - 2) If the schedule work is within the proposed right-of-way of streets or within right of way of roads dedicated in the plat, and is included in the construction plans approved by the Village Engineer and the street has not been accepted by the Village of Vermontville for maintenance or repairs, a permit will not be required.

- 3) If the work is within the right of way of an existing road or street, a permit is required, including the applicable fee, from the Village of Vermontville.
- 4) If the work is not included in the construction plans approved by the Village Engineer or the street has been accepted by the Village of Vermontville for maintenance, a permit, including applicable fee, is required from the Village of Vermontville.
- 5) Where public utilities are installed under a permit issued by the Village of Vermontville to a township, city or public utility, fees will be charged for necessary road restoration only.
- 6) All driveways installed prior to acceptance of the street for maintenance will be inspected during final inspection. If not included on the construction plans, a driveway shall require a completed driveway permit, including applicable fee, processed through the Village of Vermontville.

ARTICLE ONE
CHAPTER 3 - PLATS AND STREETS

APPENDIX

EXAMPLES OF REQUIRED DOCUMENTS
AND
SKETCHES OF OTHER REQUIREMENTS