

**TOWN OF WARREN ROAD ORDINANCE  
CONSTRUCTION, DESIGN, LAYOUT & FINANCIAL ASSURANCE STANDARDS**

**A. PURPOSE & COSTS**

**1. PURPOSE**

- a. Roads shall be designed to meet the following objectives: to permit the safe, efficient, and orderly movement of traffic; to meet the needs of the present and future population with a simple and logical pattern; to respect natural features and topography; minimize local road maintenance and replacement costs; minimize private roads and private residential driveway accesses to public roads; and to present an attractive appearance.

**2. COSTS**

- a. All costs incurred by the Town in administering this chapter, including, but not limited to, inspections, engineering services and attorney services, shall be paid by the developer of all plats and subdivisions. Any costs incurred by the Town on individual lots due to building construction, etc., shall be paid by the person(s) who hold the driveway, building, right-of-way and/or erosion permit or, if unpaid, the owner of the property for which the permit was issued. Costs that are not paid when billed shall be certified on the property tax roll as a special change under §66.0627, Wis. Stats. against the property for which costs were incurred. A deposit for such costs may be required as determined by the Town.

**B. ROAD DESIGN**

**1. DESIGN OBJECTIVES & JURISDICTION**

- a. In the course of a subdivision review, the Town Board shall designate roads as arterial, collector, subcollector, or access roads. This decision shall be based upon State, County or town comprehensive plans or official maps.
- b. The Town Board may require any road to be constructed to the boundary of the subdivision.
- c. The Town Board may require special setbacks, screening and other buffers within the road right of way and may limit access.
- d. All road rights-of-way that are included within the design of a subdivision and that serve three or more lots shall be offered for dedication and accepted by the town. Once dedicated, the town controls vegetation within the right-of-way.
- e. The town must agree to accept the responsibility for maintenance of the public road and road-related facilities before plat approval and construction.

**2. DESIGN & CONSTRUCTION STANDARDS**

- a. The minimum standards in this section shall apply to all roads, however, per Wisconsin Statute Ch. 82, the Town may modify these standards subject to Wis. Stat. §82.50 (2) and (3).
- b. Roads shall be designed and constructed in accordance with the minimum standards in the following tables or to standards set by the town:

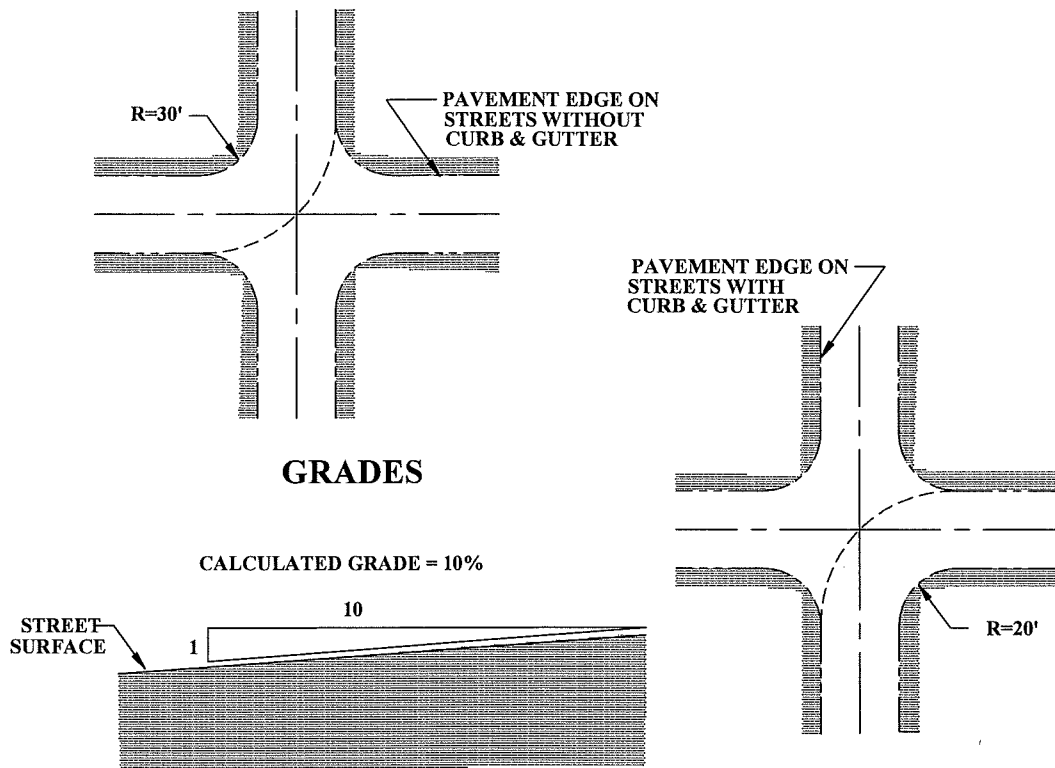
<b>ROAD TYPE</b>	<b>Arterial &amp; Collector Roads</b>	<b>Subcollector &amp; Access Roads</b>
Traffic Lanes	2	2
R.O.W.	80'	66'
Road Width Before Gravel or Base Course	34'	32.5'
Road Width after Gravel or Base Course	30'	29.5'
Road Surface, excluding shoulders	24'	22'
Shoulders, paved or gravel	3'	2'
Culverts	15" minimum <sup>1</sup>	15" minimum <sup>1</sup>
Compacted Sand Sub Base <sup>2</sup>	12"	12"
Compacted Base Aggregate <sup>2</sup>	6"	6"
Shoulder Slopes & Fill Slopes on fills to 3'	4:1 desirable, 3:1 maximum	4:1 desirable, 3:1 maximum
Shoulder Slopes & Fill Slopes below top 3'	2:1 maximum	2:1 maximum
Back Slopes	4:1 desirable, 3:1 average, 2:1 maximum	4:1 desirable, 3:1 average, 2:1 maximum
Minimum Radius of Curvature in ft. from Centerline for Deflections of 7° or More <sup>4</sup>	300	200
Maximum Grade <sup>3</sup>	8%	10%
Maximum Grade within 50' of the Center of an Intersection	2%	2%
Corner Radii <sup>4</sup>	30'	30'
Town Paving Standard (Min.)	3" Lift	3" Lift

<sup>1</sup> Culverts shall be of a size and elevation to provide proper drainage under the driveway entrance and along the town road. Unless as otherwise specified, culverts shall be at least 24 feet in length and have a minimum cover of one foot to the top of the sand lift. All culverts shall be galvanized, corrugated steel pipe, reinforced concrete round or arch pipe or dual wall HDPE in conformity with American Association of State Highway Transportation Officials' (AASHTO) specifications.

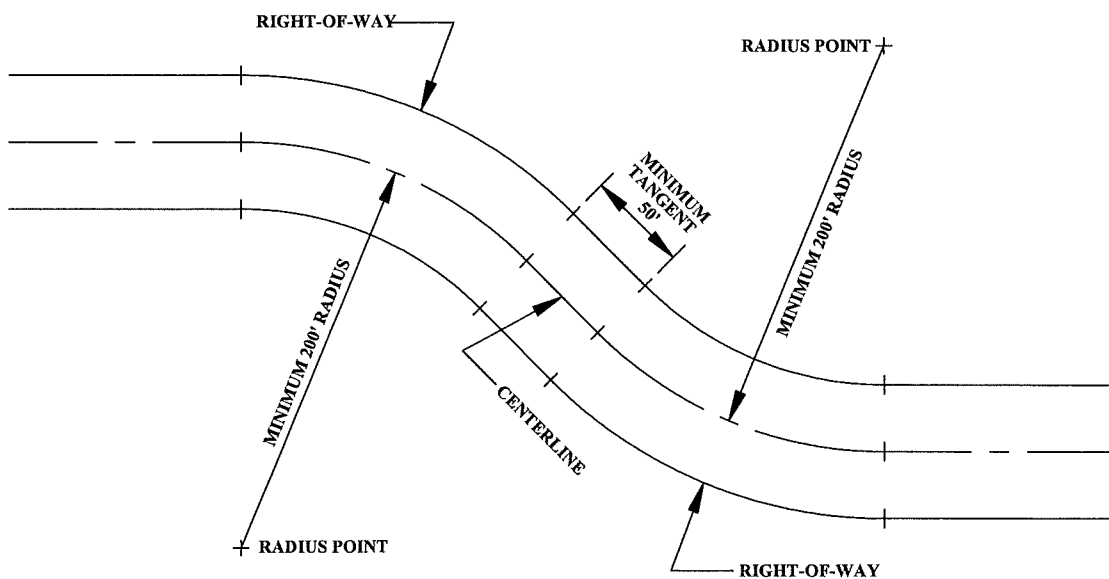
<sup>2</sup> Decomposable materials shall not be used in construction.

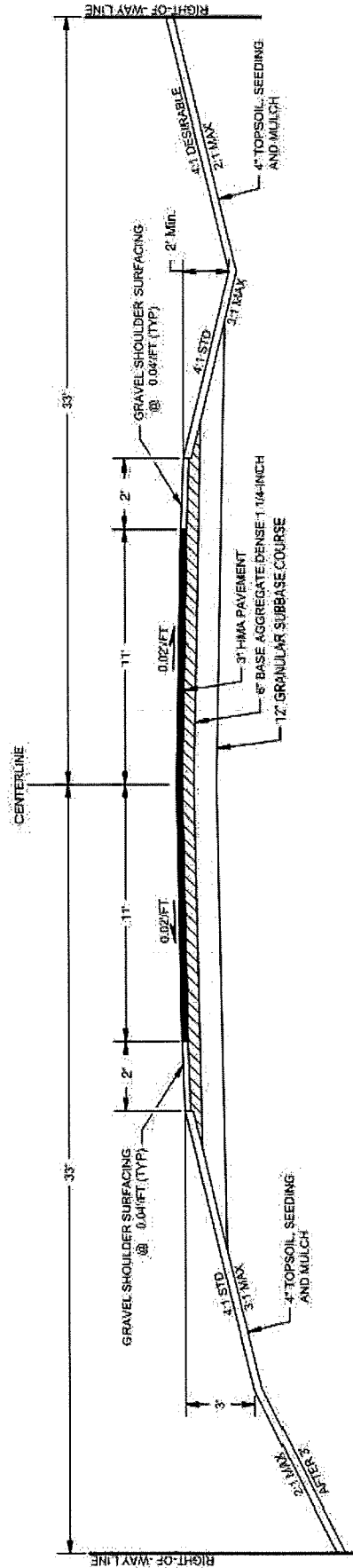
<sup>3</sup> See diagrams below.

### CORNER RADII



### MINIMUM ROAD ALIGNMENT STANDARDS FOR CURVES AND TANGENTS





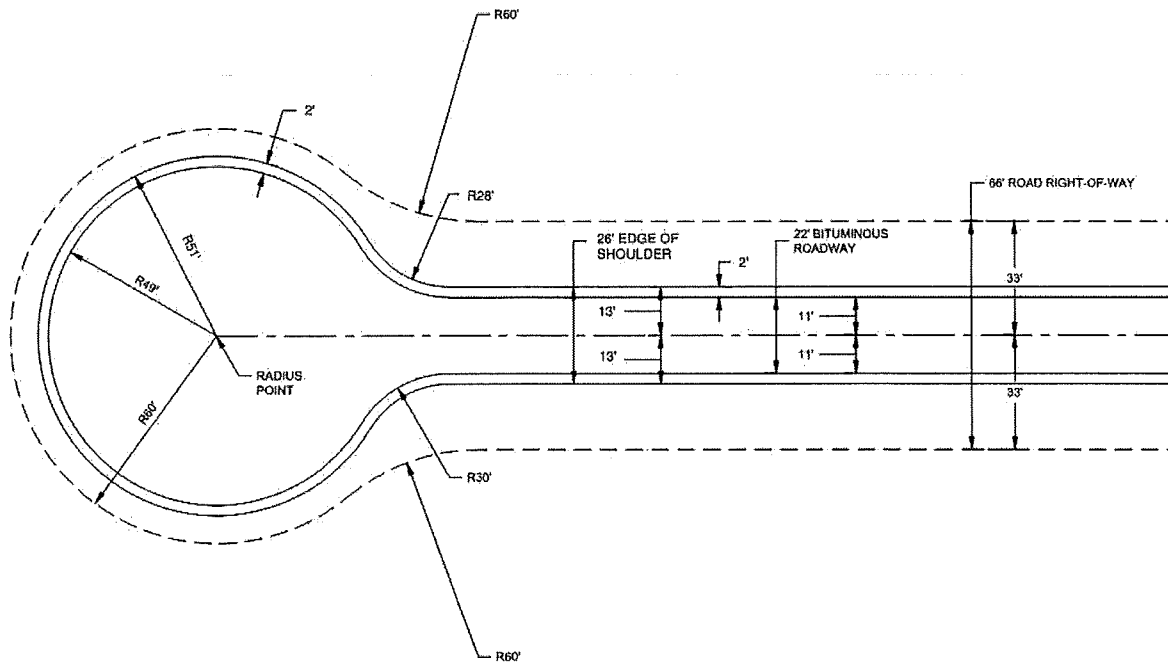
TYPICAL FINISHED SECTION  
STANDARD SUBCOLLECTOR AND ACCESS ROADWAY

RURAL CUL-DE-SAC BULB STANDARDS	
<b>ROAD TYPE</b>	<b>Cul-de-sac</b>
<b>R.O.W.</b>	60' radius
<b>Outside Pavement Radius, edge of pavement or face of curb</b>	49'
<b>Road Width –Radius- Before Gravel or Base Aggregate Course</b>	55.5'
<b>Road Width –Radius- After Gravel or Base Aggregate Course</b>	52.75'
<b>Road Surface, no curb excluding shoulders</b>	98'
<b>Shoulders paved or gravel</b>	3'
<b>Culverts</b>	15" minimum <sup>1</sup>
<b>Shoulder Slopes &amp; Fill Slopes on fills to 3'</b>	4:1 desirable 3:1 maximum
<b>Shoulder Slopes &amp; Fill Slopes below top 3'</b>	2:1 maximum
<b>Back Slopes</b>	4:1 desirable 3:1 average 2:1 maximum
<b>Minimum Radius of Curvature in feet from Centerline for Deflections of 7° or More<sup>2</sup></b>	NA
<b>Maximum Grade<sup>2</sup></b>	6%
<b>Corner Radii<sup>2</sup></b>	30'
<b>Town Paving Standard (Min.)</b>	3" Lift

<sup>1</sup> Culverts shall be of a size and elevation to provide proper drainage under the driveway entrance and along the town road. Unless as otherwise specified, culverts shall be at least 24 feet in length and have a minimum cover of one foot to the top of the sand lift. All culverts shall be galvanized, corrugated steel pipe, reinforced concrete round or arch pipe or dual wall HDPE in conformity with American Association of State Highway Transportation Officials' (AASHTO) specifications.

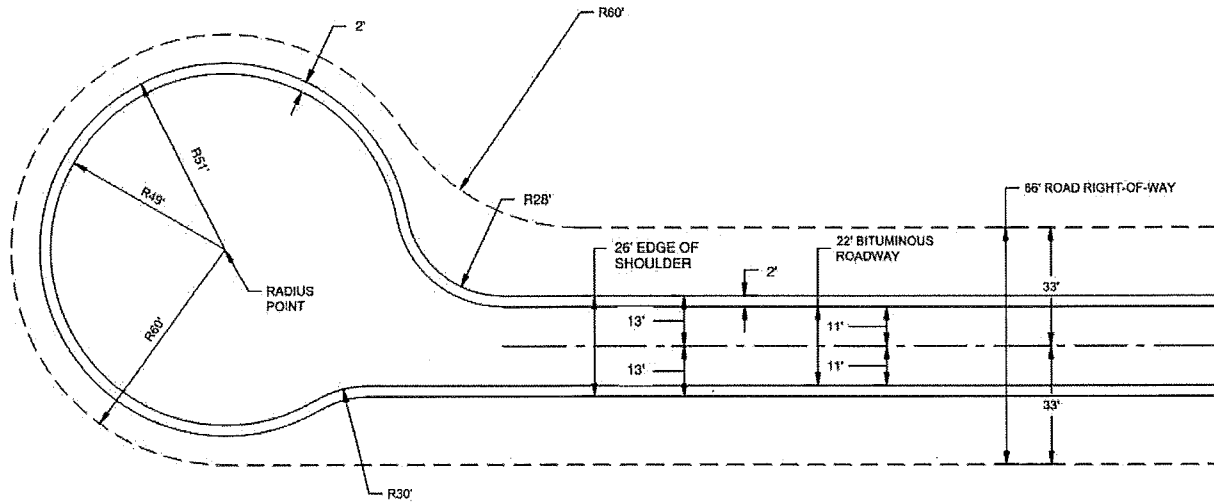
<sup>2</sup> See diagrams above.

**CONVENTIONAL DEVELOPMENT TYPICAL CUL-DE-SAC**



CONVENTIONAL DEVELOPMENT  
TYPICAL NON-ISLAND CUL-DE-SAC

**CONVENTIONAL DEVELOPMENT OFFSET CUL-DE-SAC**



**CONVENTIONAL DEVELOPMENT  
OFFSET NON-ISLAND CUL-DE-SAC**

**3. ROAD LAYOUT STANDARDS**

- a. The Town Board shall examine the design of roads and driveway accesses to assure that lots are laid out in a way that will produce intersections, grades and other features satisfying the following standards:
  - 1) The number of intersections along arterial, collector and subcollector roads shall be held to a minimum. Wherever practicable, the distance between such intersections shall not be less than 1,000 feet along these roads.
  - 2) Road intersection jogs with centerline offsets of less than 150 feet on existing or proposed roads are not allowed.
  - 3) Not more than two roads shall intersect at one point.
  - 4) The intersection angle of a driveway access to a road, and a road to a road, shall not be less than 75 degrees measured from the centerline of the road or driveway access to the right-of-way of the intersecting road or driveway access.
  - 5) In each quadrant of every public road intersection, there shall be a visual clearance triangle in accordance with WisDOT FDM and AASHTO, A Policy on Geometric Design of Highways and Streets, current editions.
- b. Subdivision roads shall provide connection to existing or planned road extensions and adjacent unplatted property.
- c. All road layout design shall be consistent with any applicable policies adopted in the Town's comprehensive plan or official map adopted under Wisconsin Statute §66.1001 or §60.61 (2)(e).
- d. Proposed roads shall extend to the boundary lines of the lot, parcel, or site being subdivided or developed unless prevented by topography or other physical conditions or unless, in the opinion of the Town Board, such extension is not necessary or desirable for the coordination of the layout of the land division.
- e. All arterial and collector roads shall be built to the boundary of the subdivision.

- f. All road extensions shall be constructed at the time of the development's initial road construction.
- g. Narrow strips of land between the road and the subdivision boundary (spite strips) shall not be permitted unless conditions under which the adjacent parcel can be connected to the road are established.
- h. The vertical alignment of the centerline shall be based on the minimum safe stopping sight distance in accordance with the design standards of AASHTO.
- i. A permanent, platted dead-end road shall end in a cul-de-sac.
- j. Temporary termination of roads intended to be extended at a later date shall be accomplished with a paved cul-de-sac contained within the road right-of-way.
- k. The planning, location and designations of roads in an area shall not allow the continuation of traffic from residential developments directly into commercial or industrial developments or vice versa. The Town Board may grant a waiver if no other option is available and appropriate buffering is provided.
- l. All lots in major subdivisions shall be served by new, interior public roads.
- m. Each lot shall have access to a public road either by frontage on a public road or by easement access approved by the Town Board.
- n. All accesses serving three or more lots or parcels shall be dedicated public roads and constructed to Town Road standards.
- o. Any private road existing prior to the effective date of this ordinance that had served two or more lots or parcels shall be improved to Town Road standards and dedicated in its entirety if any additional lots or parcels will take access from the private road. Improvements shall be reviewed and approved by the Town Board prior to the Town accepting the dedication.
- p. Curb and gutter will only be considered if necessary. Town Board shall review and approve if this is an acceptable deviation from the Town standards.

#### **4. DRIVEWAY ACCESS STANDARDS WITHIN THE RIGHT-OF-WAY**

- a. All driveway accesses that abut a proposed road shall be constructed through the right-of-way concurrent with the road construction.
- b. The maximum centerline slope of a road at a driveway location shall not exceed 6%, per the American Association of State Highway and Transportation Officials (AASHTO) intersection requirements for safety.
- c. The maximum slope of a driveway within the right-of-way shall be +/- 2%.
- d. All driveways shall be designed and maintained by the owner(s) to prevent surface water drainage from the driveway area flowing onto the roadway.

### **C. EROSION CONTROL & STORMWATER DESIGN FOR ROAD CONSTRUCTION**

#### **1. STANDARDS & SPECIFICATIONS**

- a. Stormwater Management and Erosion and Sediment Control plans for road construction shall meet or exceed the design criteria, standards and specifications and Best Management Practices identified in b. below and in the following documents or their subsequent revisions:
  - 1) NR 151 Subchapters I, III and V.

- 2) The Wisconsin DNR Stormwater Construction and Post Construction Technical Standards.
  - 3) The Wisconsin Department of Transportation Erosion Control Product Acceptability List.
  - 4) The Wisconsin Department of Transportation Standard Specifications for Highway and Structure Construction Manual.
  - 5) Wisconsin Department of Transportation Facilities Development Manual, Chapter 10.
  - 6) The United States Department of Agriculture Technical Guide 4.
- b. Stormwater management and erosion and sediment control plans shall be certified by a registered professional engineer.

#### **D. SUPPLEMENTAL ROAD STANDARDS FOR COMMERCIAL OR INDUSTRIAL USE**

##### **1. STANDARDS**

- a. Minimum road rights-of-way shall be 80 feet unless the right-of-way pre-exists adoption of this ordinance. In this case, the Town Board may authorize a reduced minimum right-of-way based on the criteria listed in i) below.
- b. Minimum pavement width shall be 24 feet.
- c. Minimum turn radii shall be sufficient to handle the size of vehicles likely to use the site.
- d. Where the subdivision and/or development of the area will likely involve multiple parcels and/or buildings, the design shall include frontage roads, shared driveway accesses or other means of reducing direct access to arterial roads.
- e. The subdivision review process shall include specification of the internal road network and internal driveway access arrangements to assure that spacing of access points, queuing distances, turn radii, and the like are appropriate to the volumes of traffic and types of vehicles and vehicular movement likely to be associated with the development.
- f. The Town Board shall designate a professional engineer to review road plans and submit comments.
- g. Roads shall be constructed and paved to meet designs approved by a professional engineer designated by the Town Board.
- h. The Town Board may require cross easements where commercial lots are side-by-side to allow linking of parking areas.
- i. Road standards for commercial or industrial developments may be increased by the Town Board. An increase of these standards will be based on relevant information such as town comprehensive plan or official map, driveway access widths, speed limit, number and types of vehicles using the road, parking availability, sound engineering judgment, and any other pertinent information.

#### **E. ROAD CONSTRUCTION**

##### **1. TIMEFRAME**

- a. The installation of the required improvements or removal of existing features and temporary management structures will be identified in the construction plans.



- b. All required improvements shall be installed and completed in substantial conformance with the approved plans and as specified in the construction plans within one year following the effective date of the initial financial assurance.
  - c. Grading and earthmoving operations shall be scheduled to minimize site disturbance during the period from November 1 to April 1, when revegetation of exposed ground is difficult.
  - d. The placement of gravel base of roadway, including driveways, site grading, erosion control and restoration shall be installed in a timely manner in accordance with the developer's agreement. Generally speaking, these items shall be installed within six months of the signed developer's agreement.
  - e. The base course of bituminous shall be placed in a timely manner in accordance with the developer's agreement. Generally speaking, bituminous base course shall be installed during the same construction season as the gravel base.
  - f. Upon completion and approval of the base course of bituminous, the developer/builder has the right to obtain building permits for properties that connect to the approved roadway.
  - g. The placement of the wear course bituminous may be installed when the following criteria are met:
    - 1) A minimum of 90 days has elapsed from the completion and approval of the base course bituminous.
    - 2) The construction of the wear and base course of the roadway shall not be completed between October 15 and May 15 without prior approval of the Town Board or Town Engineer.
  - h. The Town may set provisions to address the failure to install required improvements within one year, such as penalties and the use of financial assurances to pay those penalties.
  - i. If the required improvements are not installed within one year, then the Town Board may subject the subdivider to forfeitures and use the financial assurance to stabilize and complete the site.
  - j. Upon petition by the developer/builder to the Town Board, the Town Board may, if it finds that undue hardship exists, approve an extension of the timeframes required in this Ordinance. A formal amendment to the development agreement must be made as part of any approved extensions. For purposes of this Section E.1., undue hardship exists when application of the timeframe requirements, set for in Section E.1. of the Ordinance, to a developer/builder would be unnecessarily burdensome in view of the Ordinance's purposes.
- 2. INSPECTIONS, DEDICATION AND CERTIFICATIONS, RIGHTS OF TOWN**
- a. Roads must be inspected by a representative designated by the Town Board during the following designated phases of construction:
    - 1) At start.
    - 2) During subgrade construction.
    - 3) During subbase construction and after subbase phase.
    - 4) During base construction and after final base phase.
    - 5) During asphalt and shouldering.
    - 6) Final inspection prior to Town Board approval for acceptance.
    - 7) The Town's inspection expenses shall be paid by the subdivider or construction authority.
  - b. Dedication, certification and acceptance:

- 1) The Town will only accept roads that comply with all requirements of this chapter. Dedications shall be accomplished pursuant to the provisions of §§236.10(3) and 236.29, Wis. Stats.
  - 2) The representative designated by the Town Board to inspect the roadway construction shall report that all work has been completed in accordance with this chapter so that the Town Board can formally accept the roadway.
  - 3) A 14-month maintenance guarantee agreement (upon substantial completion of the roadway) including providing to the Town a financial security, in a form and amount satisfactory to the Town based on the Town Engineer's estimate of potential repair costs, shall be in effect for all roadways constructed within the Town and will be required to assure the Town that the entire roadway, shoulder area and backslopes will not fail in any manner.
  - 4) The engineer under whose direction the approved plans were submitted shall supply the Town with a stamped and signed certification that the roadway has been constructed in substantial compliance with the approved plans and this chapter. The Town reserves the right to hire a separate engineering inspector for any phase of the roadway construction, with the expense to be borne by the developer or construction authority.
- c. Rights of the Town:
- 1) No construction shall begin until preliminary plat approval for subdivisions or until Town Board approval of road plans on other projects.
  - 2) The Town Board maintains the rights to have the developer or construction firm redo any work that does not meet the specifications of this chapter.
  - 3) The Town Board will not accept any work that has not complied with the inspection schedule as stated above.
  - 4) If work has been completed without the necessary inspections, the Town Board maintains the right to hire an engineer, at the developer's expense, to ensure the work completed thus far is satisfactory.
  - 5) If any work is not completed in the time frame or within the specifications of this chapter, the Town reserves the right to finish the construction at the expense of the developer, using the financial guaranty. Any work not covered by the financial guaranty will be paid by the developer.

## **F. FINANCIAL ASSURANCE**

### **1. PURPOSE**

- a. A financial assurance shall be provided to ensure the proper construction, installation and maintenance of the public road improvement.

### **2. ASSURANCE**

- a. The owner or the subdivider shall be responsible for providing the assurance.
- b. The nature and duration of the assurance shall be structured to achieve installation and maintenance without adding unnecessary costs to the responsible party.
- c. The Town Board may extend the time allowed for installation of an improvement for which the assurance has been provided.
- d. The financial assurances shall be required before the construction of required improvements and as a condition of the preliminary subdivision approval.

- 1) The assurance shall be 120 percent of the estimated cost of installing an improvement.
- 2) The assurance of 120 percent shall be valid until substantial completion of all required improvements.
- 3) Upon substantial completion of the public improvements, the amount of the assurance may be reduced to no more than an amount equal to the total cost to complete any uncompleted public improvements plus 10 percent of the total cost of the completed public improvements for maintenance purposes.
  - a) The retained assurance shall be for a period of 14 months after substantial completion of an improvement.
  - b) In the event that other governmental agencies or public utilities obtain title to the improvement, or the improvement is covered by a maintenance agreement or other assurance to another governmental agency, no assurance shall be retained.

### **3. FORM**

- a. The assurance shall be secured.
- b. The Town Board may accept a variety of secure means including, but not limited to, the following:
  - 1) An irrevocable letter of credit from a reputable bank or lending institution acceptable to the Town.
  - 2) Cash or an instrument readily convertible into cash.
  - 3) Payment and Performance Bond.

## **G. RELEASE OF ASSURANCE**

### **1. DECISION PROCESS**

- a. Upon substantial completion of all required improvements, the responsible party shall notify the Town Board of the completion of and cost of the improvements in writing, by certified mail.
- b. The Town Board, in consultation with appropriate persons, shall inspect the improvements and shall authorize approval, partial approval, or rejection of such improvements.
- c. A statement of reasons for rejection and corrective action shall be provided in writing.
- d. The responsible party shall correct the condition specified by the stated corrective action within the time stated.
- e. If the corrective action is not completed within the specified time, the Town Board may utilize the assurance to complete the corrective action.
- f. If the Town Board takes no action to approve, partially approve, or reject the improvements within 45 days of receipt of the notice of substantial completion, the improvements shall be deemed to have been approved, and the responsible party and/or surety, if any, shall be released from the assurance for such improvements, less any amount retained under § E.3.b.3. above

### **2. PARTIAL APPROVAL OR DENIAL**

- a. Where partial approval of the improvement is granted, the responsible party shall be released from liability under the assurance to the extent of the approval.
- b. At the Town Board's discretion and based on road inspections completed by a licensed engineer, the assurance may be released for construction but retained for paving for 14 month to allow for paving observation after a freeze/thaw cycle.

- c. If approval of the improvement is denied, the Town Board may utilize the assurance to see that improvements are properly completed.

## H. DEFINITIONS

### 1. INTERPRETATION

- a. For the purpose of administering and enforcing this ordinance, the terms or words used herein shall be interpreted as follows:
  - 1) Words used in the present tense include the future; in the singular include the plural and in the plural include the singular.
  - 2) The word “shall” is mandatory, not permissive.
  - 3) All distances, unless otherwise specified shall be measured horizontally.
  - 4) All definitions that refer to Wisconsin Statutes shall incorporate any revisions or amendments to statutory language.
  - 5) All definitions other than those referenced below shall be as the normal definition found in a standard dictionary.

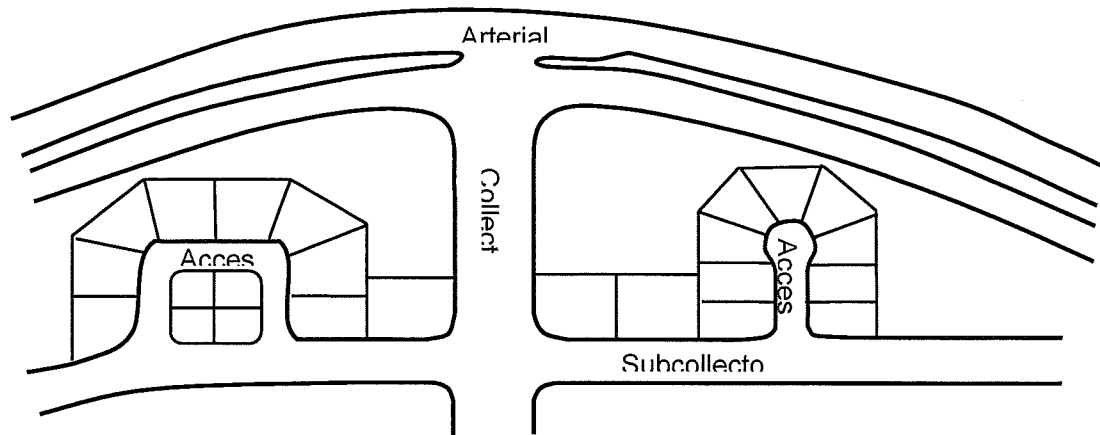
### 2. DEFINITIONS

- a. **Bulb of Cul-de-sac:** The arc of the terminating radius, not including the reverse curves onto the tangents of the uniform road width.
- b. **Driveway:** A private way, road, or other avenue of travel that runs through any part of a private parcel of land or that connects or will connect with any public roadway and will provide vehicular access from the public roadway to a residence, business, recreation site or other appropriate use.
- c. **Field Driveway:** A type of driveway used solely to access land for agricultural use.
- d. **Plat:** A map of a major subdivision prepared in accordance with Wisconsin Statutes Chapter 236 and this ordinance.
- e. **Road:** A public way for vehicular traffic, this term includes highways.
- f. **Road Classification System:** Roads are classified based on many factors, including speed and volume of traffic. Road classifications fall into a four-category hierarchy. The classifications, in descending order are arterial, collector, subcollector and access roads (see diagram below). The Wisconsin Department of Transportation (WisDOT) and the St. Croix County Highway Department determine arterial and major and minor collector road status on their respective systems and the current functional classification will be used. The appropriate municipal jurisdiction determines subcollector and access roads. Classifications are shown on the St. Croix County Official Functional Classification Road Map. Residential roads may fall into any of these classifications except arterial. The functional descriptions of each of these classifications follow:
  - 1) **Arterials:** Provide for rapid speed and movement of high volumes of traffic between areas. An arterial road should have no private accesses on it. Its function is to conduct traffic between communities and activity centers and to connect communities to major state and interstate highways. There are two types of arterials, principal arterials and minor arterials. Principal arterials are those highway corridors that have trip length and travel density characteristics of an interstate or interregional nature. Principal arterials, in general, serve all urban areas greater than 5,000 population and may include: interstate highways, freeways, expressways, four-lane divided highways and two-lane highways.

Minor arterials are those highways, which in combination with principal arterials, serve cities, communities and other major traffic generators providing intra-regional and inter-area travels. Minor arterials may include four-lane divided highways, two-lane highways and county trunk highways.

- 2) **Collectors:** Provide for moderate speed and movement of medium volumes of traffic and distribute traffic from arterial roads. There are two types of collector roads, major collectors and minor collectors. As the principal road within residential or commercial areas, these collectors carry relatively high traffic volumes and convey traffic from arterial roads to lower-order roads. A collector's function is to promote the free flow of traffic; as such, the roads should not have parking or private residential access. A collector's secondary function is to serve abutting land uses. Major collectors provide service to moderate sized communities and other intra-area traffic generators and link those generators to larger population centers and higher function highways. Minor collectors provide service to all remaining smaller communities and tie local traffic generators with the rural surrounding area. Minor collectors are spaced consistent with population density so as to collect traffic and bring all developed areas within a reasonable distance of a higher-order road.
- 3) **Subcollectors:** Connect with access roads and convey traffic to major and minor collectors. Like an access road, a subcollector provides frontage and access to residential lots but also carries some through traffic to access roads. A subcollector is a relatively low-speed, low-volume road. Subcollectors include all roads not identified as major or minor arterials, major or minor collectors or access roads. Generally, subcollectors are all town roads in the original town road grid system and town roads identified as through roads or subcollectors on a town comprehensive plan or official map. Some roads in a subdivision may be subcollectors instead of access roads if the two ends of the road extend beyond the boundary of the subdivision and one end of the road eventually connects to another subcollector or higher order road.
- 4) **Access Roads:** Roads designed to conduct traffic between individual parcels or lots and higher order roads. Access roads provide for low-speeds and low volumes of traffic and convey traffic to subcollector, collector and arterial roads. As the lowest-order road in the hierarchy, the access road usually carries little through traffic and includes short roads, cul-de-sacs, and courts. Access roads include local roads within conventional subdivisions and cul-de-sacs.
- 5) **Cul-de-sac:** Roads closed at one end with turnarounds, not platted for extension.
- 6) **Temporary Cul-de-sac:** Roads that terminate in a cul-de-sac and are platted for future extension.

### Functional Classification System Diagram



**EFFECTIVE DATE:** This Ordinance shall become effective upon adoption and publication or posting as provided by law, pursuant to Sec 60.80 of the Wisconsin Statutes.

Signed: Eugene Hanson  
Eugene Hanson, Town of Warren Chairman

12/27/22  
Date

Attest: Deina Shirmer  
Deina Shirmer, Town Clerk

12/27/22  
Date

Voted for: 5

Voted against 0

Abstained 0

Date of passage 12/19/22

Date of posting 1/4/23

Effective date 1/5/23