

ARTICLE IV

IMPROVEMENTS TO BE CONSTRUCTED

Section 40. **VILLAGE ENGINEER**

All required land improvements to be installed under the provisions of this ordinance shall be inspected during the course of construction by the Village Engineer or other Village employee duly appointed by the Village Board. The cost of such inspection shall be paid by the owner or subdivider to the Village Clerk.

Section 41. **MONUMENTS TO BE INSTALLED**

Monuments shall be placed at all block corners, angle points, points of curves in streets, and at intermediate points as shall be required by the Plat Officer or Village Engineer.

Positions of all lot corner, beginnings and ends of curves and all angle points shall be marked in the field. The material of which all markers are made shall be noted. The applicant shall conform to the following requirements concerning monuments;

41.01 All federal, state, county or official benchmarks, monuments, or triangulation stations or adjacent to the subdivision shall be preserved. When a proposed improvement is a subdivision makes necessary the moving of bench marks, monuments, or triangulation shall be notified and given sufficient time to take appropriate action;

41.02 Permanent monuments shall be set flush with the adjacent ground, shall have a suitable mark in the center of the top, shall be set in such manner that they will not be moved by frost; and shall be either:

- a. Iron pipe not less than three-fourths (3/4) inch in diameter and not less than twenty-two (22) inches in length;
- b. Solid square or round iron bars, five eighths (5/8) inch thick and not less than twenty-two (22) inches in length;

- c. Stone or reinforced concrete, not less than thirty (30) inches long by four (4) inches square or five(5) inches in diameter. The must also have a magnetic locator in them.
- 41.03 Permanent monuments shall be erected at all corners or changes in direction of the exterior boundary; at points of curvature or points of tangency; at road intersections and block corners; at all lot corners and angles in lot lines; and in all places and manner as otherwise prescribed by law.

Section 42. UTILITY AND STREET IMPROVEMENTS

Utilities and street improvements shall be provided in each new subdivision in accordance with the following schedules:

- 42.01 Industrial, Commercial, and Institutional Subdivisions. Utility and street improvements on industrial, commercial, and institutional subdivisions as required by the Village Board with advice of Planning Commission; providing, however, that in no case will the requirements be less than required for a residential subdivision.
- 42.02 Residential Subdivisions. Utility and street improvements for residential subdivisions in accordance with the following:
- a. Water Supply. Public water supply where possible, or private system as approved by the Health Department. Where individual lots are going to use wells, they shall conform with the specifications of the Illinois Water Well and Construction Code and the Putnam County Water Ordinance whichever is stricter.

Dead end mains shall be greater than 10' or greater in diameter and not longer than 1000 feet.

No mains shall be less than 8 inches in diameter.
 - b. Sewage Disposal. Connection to the public sanitary sewer system is required; when there is no public system, within the specified hookup distance, private sewage disposal as approved by the Health Department. On individual lots where private sewage disposal is to be used, soil classification or percolation test shall be made in accordance with the requirement of the *Illinois Private*

Sewage Disposal Act and Code. The design of the private sewage disposal systems, which results from this classification or test, shall be approved by the Health Department.

Where public sewers are constructed, stub-up lines shall be located at each lot and shall extend at least one foot inside the property line. The curb above such stub-up line shall be marked with the letter “S” or other suitable marker.

Pumping Stations required by virtue of the subdivision shall be installed by the developer as approved by the Village Engineer. Pumping Station, force main, equipment, site and easements will be dedicated to the Village prior to the issuance of building permits. If a greater capacity system is required by the Village, the subdivider shall be required to pay only that portion of the cost attributable to his subdivision. Future subdivisions desiring to utilize such Pumping Stations shall reimburse the Village on a pro-rated basis for the Village’s investment involved.

- c. Storm Drainage. Surface drainage including detention and retention shall be provided for in approved paved gutters, grass swales, or piped underground channels, construction, capacity and flow of which are approved by the Village Engineer.

Street grades shall meet the foregoing design requirements and shall be approved in profile and cross section by the Village Engineer.

- d. Street Right-of-Way, Pavement, Curb and Gutter. The subdivider shall be responsible for the provision of right-of-way, street improvements, and specifications of construction as indicated on the following schedules.
- e. Fire Hydrants - Hydrants shall be placed no farther than 500 ft apart and may be required at intersections if distance is less than 500 feet. All hydrants must have at least one 4.5-inch steamer port. A minimum of 6-inch pipe must be used to connect hydrants to the watermain.
- f. Sidewalks - Sidewalks, when constructed, shall be constructed of Portland Cement concrete to a thickness of four (4) inches. Concrete for such pavement shall have a

minimum fourteen (14) day compressive strength of three thousand five hundred (3,500) pounds per square inch, shall contain not less than five and one-half (5 ½) bags of cements per cubic yard of concrete and shall contain not less than three (3) percent nor more than six (6) percent entrained air. Slump shall be not less than two (2) inches nor more than four (4) inches. Sidewalks in residential areas shall be a minimum of 4 feet wide and 6 feet wide in commercial areas.

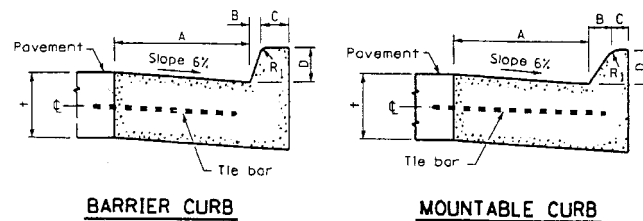
Sidewalks may be constructed within ninety (90) days of the date of the occupancy permit for any lot in the subdivision. However, all sidewalks must be constructed with eighteen (18) months of the date of approval of the Final Plat.

- g. Building Setbacks from Proposed Edge of Right-of-way of Major Streets or Highways Planned for Future Construction shall be not less than the appropriate rear or side yard of that particular zoning district.
- h. Building Setbacks on Existing Streets or Roads on which the right-of-way width is indicated to be below the minimum standard for such road shall be measured from the edge of the proposed width. (In effect, the setback will be increased by one-half the distance the right-of-way is below standard.)
- i. Planting Strips in roadways shall be approved as to gradient, drainage, and surface treatment.
- j. Street Name Signs conforming to the standard for the Village shall be provided at all intersections.
- k. Street Numbering system will be provided subject to approval of the Village Board.

Section 43 STANDARDS AND SPECIFICATIONS OF DESIGN FOR REQUIRED LAND IMPROVEMENTS

Designs, dimensions, materials, and methods of construction of improvements shall conform to the following general requirements:

- 43.01 For storm drainage, subgrade preparation of streets, base course of streets, surface course of streets, curbs and gutters, and for sidewalks and crosswalks; the "Standard Specifications for Road and Bridge Construction" adopted by the State of Illinois, Division of Highways, latest edition thereof.
- 43.02 For public water supply and sanitary sewer system and/or sewage treatment works, "Standard Specifications for Water and Sewer Main Construction in Illinois", the latest edition thereof, as prepared by the Illinois Society of Professional Engineers, the Consulting Engineers Council of Illinois, the Illinois Chapter of the American Public Works Association, the Illinois Municipal League, and the Associated General Contractors of Illinois.
- 43.03 Connection to community water and sanitary sewer is required in all developments west of Illinois Route 26, south of I-180 and north of Coffee Creek.
- 43.04 Curb, gutter and hot mix will be required in all Business/Commercial Districts and in all developments west of Illinois Route 26, south of I-180 and north of Coffee Creek.



TYPE	A	B	C	D	R ₁
B-15.30 (B-6.12)	300 (12)	25 (1)	150 (6)	150 (6)	25 (1)
B-15.45 (B-6.18)	450 (18)	25 (1)	150 (6)	150 (6)	25 (1)
B-15.60 (B-6.24)	600 (24)	25 (1)	150 (6)	150 (6)	25 (1)
B-22.30 (B-9.12)	300 (12)	50 (2)	125 (5)	225 (9)	25 (1)
B-22.45 (B-9.18)	450 (18)	50 (2)	125 (5)	225 (9)	25 (1)
B-22.60 (B-9.24)	600 (24)	50 (2)	125 (5)	225 (9)	25 (1)

TYPE	A	B	C	D	R ₁	R ₂
M-5.15 (M-2.06)	150 (6)	50 (2)	100 (4)	50 (2)	75 (3)	50 (2)
M-5.30 (M-2.12)	300 (12)	50 (2)	100 (4)	50 (2)	75 (3)	50 (2)
M-10.15 (M-4.06)	150 (6)	100 (4)	75 (3)	100 (4)	75 (3)	NA
M-10.30 (M-4.12)	300 (12)	100 (4)	75 (3)	100 (4)	75 (3)	NA
M-10.45 (M-4.18)	450 (18)	100 (4)	75 (3)	100 (4)	75 (3)	NA
M-10.60 (M-4.24)	600 (24)	100 (4)	75 (3)	100 (4)	75 (3)	NA
M-15.15 (M-6.06)	150 (6)	150 (6)	50 (2)	150 (6)	50 (2)	NA
M-15.30 (M-6.12)	300 (12)	150 (6)	50 (2)	150 (6)	50 (2)	NA
M-15.45 (M-6.18)	450 (18)	150 (6)	50 (2)	150 (6)	50 (2)	NA
M-15.60 (M-6.24)	600 (24)	150 (6)	50 (2)	150 (6)	50 (2)	NA

IDOT Curb standards of B6.12 and M6.12

- 43.05 The minimum dimensions of curb and gutter on residential streets shall meet IDOT standards for M6.12 (See below). The width of the combined curb and gutter shall be nineteen (19) inches. The

width of curb from gutter line to back of curb shall be eight (8) inches. The gutter shall be three-fourths (3/4) inch below the edge of the gutter flag. The thickness of the gutter flag shall be a minimum of Portland cement concrete pavement thickness for Portland cement concrete pavements and eight (8) inch for bituminous pavements.

43.06 Dimensions of curb and gutter on commercial or industrial streets shall be in conformance with the following specifications of the State of Illinois Standard Design. Combination Concrete Curb and Gutter Type B - 6.12 (See diagram on previous page); the curb shall be a vertical face type six (6) inches in height above the gutter line. The width of the combined curb and gutter shall be nineteen (19) inches. The width of curb from gutter line back of curb shall be six (6) inches. The gutter shall be three-fourths (3/4) inch below the edge of the gutter flag. The thickness of the gutter flag shall be equal to the thickness of the adjacent street pavement.

43.07 The "Illinois Urban Manual" a Technical Manual Designed for Urban Ecosystem Protection and Enhancement by the United States Department of Agriculture, Natural Resources Conservation Service ("The Blue Book") should be used as a guide when designing for soil erosion and sediment control; stormwater management; and special area protection. Copies are available for purchase from the Soil and Water Conservation District. A copy is also available for viewing at the Village Hall.

43.08 The surface lift shall not be put in place until after the base has sat through one winter.

Section 44 MAINTENANCE OF IMPROVEMENTS

The applicant shall be responsible for the maintenance to all improvements until the release of the construction guarantee. Where a subdivision has been improved in phases, the applicant shall be responsible for the proper functioning of drainage improvement for the entire subdivision site. The applicant shall also be responsible for the following;

44.01 Snow Removal: The subdivider shall be required to provide for snow removal on all roads and sidewalks until the final acceptance of said improvements.

44.02 Erosion Control: All the exposed earth surfaces resulting from the required improvements shall be properly protected by riprap, sod or be seeded and mulched with rapid growing grass or vegetation

as soon as feasible to prevent erosion. Erosion control structures shall be maintained until the exposed earth is stabilized. At such time, the temporary structures shall be removed and the area graded and stabilized prior to final acceptance.

- 44.03 Debris removal: The subdivider shall clean and maintain or cause to be cleaned and maintained, all improvements until the final acceptance of said improvements. The improvements shall be kept free from debris, sediment deposits, trash and other extraneous material prior to acceptance and at such other times during construction as the Village may deem necessary to prevent the creation of a public nuisance.

Section 45 TREE PROTECTION GUIDELINES

When developing a subdivision within an area of trees and woodlands, appropriate measures should be undertaken to reasonably preserve existing trees.

- 45.01 Tree Protection Zone - A highly visible physical barrier (e.g. snow fencing) should be constructed around each tree designated for protection. Single-strand wires and plastic flagging is not considered acceptable. Entry within the “non-violation” zone
- 45.02 Utility Auguring - Since most tree roots are located near the surface, trenching for the installation of utilities can cause significant root loss, often resulting in tree death 4-6 years later. Trees designated for protection that are in the path of proposed underground utilities should be protected by auguring beneath the root system.
- 45.03 Tree Watering - Trees designated for protection should be watered during periods of drought (when there is less than one(1) inch of rainfall during any 30 -day period). The amount of water per tree should be based upon 50 gallons per inch diameter. Application should be made so that the water slowly soaks into rings to temporarily dam around the tree root zone while watering is highly encouraged.
- 45.04 Topsoil Backfilling and Grading - Most construction projects use existing excavated material for fill. Often this material is subsoil with a high percentage of clay. Subsoil is generally unsuitable for root growth. Where trees are growing or to be planted topsoil should be a minimum of 12 inches deep on top of the surface.

- 45.05 Mulch Restoration - Tree roots do not grow well in competition with turf (sod). When a developer is making additional expenditures to protect trees from construction injury, homeowners should not install sod or expect to have sod installed around these trees. Optimum root growth is obtained in organic mulch (four (4) inches maximum). However, the homeowner must be willing to commit time and effort into maintaining the mulch (mostly weed removal). A barrier to contain the mulch is recommended. Homeowners not willing to maintain mulch and its containment should have sod installed.
- 45.06 Post-Construction Pruning - Some trees may be inadvertently damaged during construction. The post-construction pruning is to remove any damaged branches. Also, trees which lost more than 25% of their roots system may be selectively pruned to remove a portion of the top (not to exceed 15%) to compensate for the root loss.
- 45.07 Tree Planting Program - A tree planting program utilizing species native to the Hennepin area is highly encouraged. This is not a tree replacement program. This is a program to select the proper species for each available planting site and to develop a plan for such planting of trees.