

## VILLAGE OF BROOKLYN ORDINANCE CHAPTER 103

### AN ORDINANCE TO AMEND

#### SECTIONS 103-23 to 103-82 OF THE CODE OF THE VILLAGE OF BROOKLYN

THE BOARD OF TRUSTEES OF THE VILLAGE OF BROOKLYN DO ORDAIN AS FOLLOWS:

Sections 103-23 to 103-82: Chapter 103 Building Regulations; Article II Technical Codes and Article III Permits and Article IV Construction Standards and Policies; Sections 103-23 to 103-82 of the Village of Brooklyn Code are hereby amended to read as follows:

#### **Sec. 103-23. State building code.**

- (a) The following chapters of the Wisconsin Administrative Code, as well as all subsequent revisions, are adopted by the municipality and shall be enforced by the building inspector.
  - Ch. SPS 302.31 Plan Review Fee Schedule.
  - Ch. SPS 305 Credentials.
  - Ch. SPS 316 Electrical Code.
  - Ch. SPS 320-325 Uniform Dwelling Code.
  - Ch. SPS 327 Campgrounds.
  - Ch. SPS 361-366 Commercial Building Code.
  - Ch. SPS 375-379 Buildings Constructed Prior to 1914.
  - Ch. SPS 381-387 Uniform Plumbing Code.
- (b) Basement doors with locks are required in multiple-family dwelling units. In all multiple family dwelling units containing four or more dwelling units now existing or hereafter constructed, all entrances to basements shall be provided with self-closing doors with locks, which doors and locks shall be designed to prevent access to the basements without unlocking the doors. Any unit which does not comply with the requirements of this subsection shall be made to conform within six months of the date of adoption of the ordinance codified in this chapter.
- (c) Dead bolt keyed lock sets are required for individual apartment doors in multiple-family dwelling units.
  - (1) A standard door shall have such fastening or hardware that shall conform with state law except that the exit door from an individual apartment or sleeping room shall be equipped with a lock designed with a dead bolt keyed lock set.
  - (2) All buildings existing at the time of the adoption of this subsection and containing three or more living units shall comply with the requirements of this subsection within six months thereafter.

(Ord. of 11-10-1997, § 29.01; Ord. of 8-24-2020(1))

#### **Sec. 103-24. Wisconsin uniform dwelling code.**

- (a) *Title.* This section shall be known as the one- and two-family dwelling code of the village.
- (b) *Purpose.* The purpose and intent of this section is to:
  - (1) Exercise jurisdiction over the construction and inspection of new one- and two-family dwellings and additions to existing one- and two-family dwellings;

- (2) Provide plan review and on-site inspections of one- and two-family dwellings by inspectors certified by the department of safety and professional services;
  - (3) Establish and collect fees to defray administrative and enforcement costs;
  - (4) Establish remedies and penalties for violations; and
  - (5) Establish use of the state uniform building permit as prescribed by the department of safety and professional services. (DSPS)
- (c) *State uniform dwelling code adopted.* The administrative code provisions describing and defining regulations with respect to one- and two-family dwellings in Wis. Admin. Code SPS Ch. 320-325, are hereby adopted and by reference made a part of this section as if fully set forth herein. Any act required to be performed or prohibited by an administrative code provision incorporated herein by reference is required or prohibited by this section. Any future amendments, revisions or modifications of this administrative code provisions incorporated herein are intended to be made part of this section to secure uniform statewide regulation of one- and two-family dwellings in this village of the state. A copy of these administrative code provisions and any future amendments shall be kept on file in the village clerk's office.
- (d) *Definitions.*
- Addition* means new construction performed on a dwelling which increases the outside dimensions of the dwelling.
- Alteration* means a substantial change or modification other than an addition or minor repair to a dwelling or to systems involved within a dwelling.
- Department* means the department of safety and professional services pursuant to Wis. Admin. Code SPS 320.07(23).
- Dwelling* means:
- (1) Any building, the initial construction of which is commenced on or after the effective date of the ordinance codified in this chapter, which contains one or two dwelling units; or
  - (2) An existing structure, or that part of an existing structure, which is used as a one- or two-family dwelling.
- Minor repair* means repair performed for maintenance or replacement purposes on any existing one- or two-family dwelling which does not affect room arrangement, light and ventilation, access to or efficiency of any exit stairways or exits, fire protection, or exterior aesthetic appearance, and which does not increase a given occupancy and use. No building permit is required for work to be performed which is deemed minor repair.
- One- or two-family dwelling uniform dwelling code* means those administrative code provisions and any future amendments, revisions or modifications thereto, contained in the following chapters of the Wisconsin Administrative Code: Wisconsin Administrative Code SPS Chapter 320, Administration And Enforcement, Wisconsin Administrative Code SPS Chapter 321, Construction Standards, Wisconsin Administrative Code SPS Chapter 322, Energy Conservation Standards, Wisconsin Administrative Code SPS Chapter 323, Heating, Ventilating And Air Conditioning Standards, Wisconsin Administrative Code SPS Chapter 324, Electrical Standards, Wisconsin Administrative Code SPS Chapter 325, Plumbing.
- (e) *Method of enforcement.* For the purpose of the administering and enforcing the provisions of this section and the uniform dwelling code, the village shall establish the office of building inspector or an independent inspection agency.
- (f) *Enforcement contract.* The village shall contract with an individual who is certified by the department in each category specified under Wisconsin Administrative Code SPS Ch. 305, and by the department of health and family services in the category of plumbing. The village clerk shall forward all building permit applications and submitted plans to the certified inspector with whom the village has contracted.
- (g) *Building permits.*

- (1) *Building permits required.* No one- or two-family dwelling shall be built, enlarged, altered or repaired unless a building permit for that work shall first be obtained by the owner, or his agent, from the building inspector. Application for a building permit shall be made in writing upon that form, designated as the Wisconsin Uniform Dwelling Permit Application, furnished by the DSPS.
  - (2) *Repairs and additions requiring permit.* No addition, alteration or repair to an existing one- or two-family dwelling not deemed minor repair by the building inspector shall be undertaken unless a building permit for this work shall first be obtained by the owner, or his agent, from the inspector.
  - (3) *Submission of plans.* The applicant shall submit two sets of plans for all new or repairs to, or additions to existing one- and two-family dwellings at the time that the building permit application is filed.
  - (4) *Issuance of permit.* If the building inspector finds that the proposed building or repair of addition complies with all village ordinances and the uniform dwelling code, the inspector shall officially approve the application and a building permit shall be subsequently issued to the applicant. This issued building permit shall be posted in a conspicuous place at the building site. A copy of any issued building permit shall be kept on file with the village clerk.
  - (5) *Survey or site plan.* Upon placement of forms for construction of a foundation or footings of a new principal structure in which the location of said foundation or footings lies within two feet of the required setbacks or at the request of the building inspector, a registered land surveyor shall prepare a site plan or survey of the property to verify that the location of the structure on the property complies with all applicable setback requirements. Said survey or site plan shall be provided to the building inspector no later than the foundation inspection. Failure to provide said survey will result in suspension of building permit. Failure to comply with applicable setback requirements will result in an issuance of order of correction by building inspector.
- (h) *Fees for building permits and inspectors.*
1. At the time of building permit issuance, the applicant shall pay fees as established by resolution periodically by the Village.
  2. If work commences prior to permit issuance, the permit fee shall be double.
- (i) *Permit lapses.*
- a) A building permit, other than Wisconsin Uniform Building Permits shall lapse and be void unless building operations are commenced within six (6) months and if construction has not been completed within twelve (12) months from the date of issuance if the dwelling exterior has not been completed in accordance with Wis. Admin. Code SPS 320.09(9)(a)5.
- (Ord. of 11-10-1997, § 29.03; Ord. of 8-13-2007; Ord. of 10-10-2007, § 29.03; Ord. of 8-24-2020(1))

## **Sec. 103-25. Electrical code.**

- (a) *State electrical code applies.*
- (1) Wisconsin Administrative Code SPS Ch. 316 is hereby adopted by reference and made part of this chapter and shall apply to the construction and inspection of new one- and two-family dwellings and additions or modifications to existing one- and two-family dwellings.
  - (2) This Code does hereby adopt and enforces, by reference, Rules of Electrical Code, Volume 2, of the Wisconsin Administrative Code and all subsequent amendments thereto.
- (b) *Permits.*
- (1) Before any electrical wires or electrical apparatus shall be installed for lighting or power purposes, or any electrical construction work done, except minor repair work, a permit shall be obtained from the electrical inspector except as noted in subsection (e)(2) of this section. The application shall describe the proposed installation or work and give the location of the premises where same is to be

performed. No permit shall be issued unless satisfactory proof is furnished to the electrical inspector upon his request that the applicant has been employed to perform the work or installation and will be responsible for the performance thereof in the manner required by this code and by law and proof be submitted that the applicant has paid the fees herein required.

- (2) Repair work shall be construed to mean the replacement of broken or defective sockets; snap, push or toggle switches; convenience outlets; and portable electrical appliances.
- (3) Changes in any electrical work or in any electrical equipment after the issuance of the permit hereunder shall be approved by the electrical inspector before any work thereon or installation thereof is commenced. If such alterations increase the permit fees, any such additional fees shall be paid before a final certificate of inspection is issued.
- (4) In cases of emergency, work may be started before a permit is issued provided the electrical inspector's office is notified the same day work is started, or the next business day if the emergency occurs outside of normal business hours.
- (5) A permit shall be required for the installation of any outlet and any electrical wiring for use on any circuit, including wiring for so-called low voltage wiring for control of heating, ventilating, cooling, lighting, signal, and communication equipment, excepting signal systems operated by and/or in conjunction with communication systems installed and maintained by a public utility.

(c) *Inspections.*

- (1) It shall be unlawful to connect the electrical wiring and equipment of any building to any electrical supply lines or to turn on the current unless a certificate of inspection has been issued by the electrical inspector, and it shall be the duty of the electrical utility supplying electrical service to any building to secure a copy of the certificate of inspection from the electrical inspector before supplying service to such building.
- (2) The building owner or their agent shall notify the inspection agency designated by the department to provide electrical inspections when the electrical wiring installation is ready for inspection. Electrical wiring shall remain accessible and exposed for inspection purposes and electrical wiring may not be energized. The concealment or energizing of electrical wiring, other than an electrical service, may proceed if inspection has not been completed with 2 business days after notification is received or as otherwise agreed between the wiring installer and the designated inspection agency providing the inspection. The notification that an electrical wiring installation is ready for final inspection shall be made to indicate when all electrical fixtures, outlets and face plates are in place and the installation or that portion of the installation is energized.
- (3) All notifications for inspections must be made at the office of the electrical inspector not later than 4:30 p.m. of the business day before the inspection is desired. For the purposes of this section, the hours for the electrical inspector are from 7:30am to 4:30pm and a "business day" means any day other than Saturday, Sunday, or a legal holiday.
- (4) No certificate of inspection shall be issued by the electrical inspector unless the electrical wiring and equipment for light, power, heat, or other similar purposes is safe both with respect to life and fire hazard, and is in strict conformity with the Village Code, the statutes of the state, and the general or specific orders of the industrial commission of the state adopted under authority of the statutes.
- (5) A copy of the final certificate of inspection, together with any inspection reports, shall be filed with the building inspector who shall report annually to the village board listing such inspections and the fees collected for this work.

(d) *Permit and inspection fees.* The fees to be charged for permits under this section shall be set from time to time by resolution of the village board.

(e) *Contractors to be licensed or certified.*

- (1) No person, either individually, as a member of a firm, or as an officer or employee of a corporation, shall conduct the business of electrical wiring, electrical construction (either inside or outside), or contracting, either as a master electrician, maintenance electrician, or neon installer unless such person shall have a certification or license issued by the state.
- (2) The electrical inspector may, however, issue a permit to the owner only for a single-family residence, which he and his immediate family solely occupy, if the person desiring such permit can prove that he is competent to do such work in conformity with all rules and regulations governing installation of electrical wiring in residences, and such person shall pay the same fee as required of electrical contractors.
- (3) This section, however, shall not apply to the servicing of electrical appliances by the manufacturer or its duly authorized service representative.

(Ord. of 11-10-1997, § 29.05; Ord. of 8-24-2020(1))

### **Sec. 103-26. Commercial building code.**

- (a) *Certified municipality.* The village has adopted the certified municipality status as described in SPS 361.60 of the Wisconsin Administrative Code.
  - (1) *Responsibilities.* The village shall assume the following responsibilities for the department of safety and professional services (department):
    - a. Provide inspection of commercial buildings with certified commercial building inspectors.
    - b. Provide plan examination of commercial buildings with certified commercial building inspectors.
  - (2) *Plan examination.* Drawings, specifications, and calculations for all the types of buildings and structures, except state-owned buildings and structures, to be constructed within the limits of the municipality shall be submitted, if the plans are for any of the following:
    - a. All size commercial buildings.
    - b. A certified municipality may waive its jurisdiction for the plan review of a specific project or types of projects, or components thereof, in which case plans and specifications shall be submitted to the department for review and approval.
    - c. The department may waive its jurisdiction for the plan review of a specific project, where agreed to by a certified municipality, in which case plans and specifications shall be submitted to the certified municipality for review and approval.
  - (3) *Plan submission procedures.* All commercial buildings, structures, and alterations, including new buildings and additions less than 25,000 cubic feet, require plan submission as follows:
    - a. Building permit application.
    - b. Application for review—SBD-118.
      1. Fees per Table SPS 302.31-2 and SPS 302.31.
      2. Fees apply to all commercial projects.
    - c. Four sets of plans.
      1. Signed and sealed per SPS 361.31.
      2. One set of specifications.
      3. Component and system plans.
      4. Calculations showing code compliance.

(Ord. of 10-10-2007, § 29.08; Ord. of 8-24-2020(1))

### **Sec. 103-28. Violations and penalties.**

- (a) No person shall erect, use, occupy or maintain any building in violation of any provision of this chapter or the uniform dwelling code or cause to permit any such violation to be committed. Any person violating any of the provisions of the ordinance shall, upon conviction, be subject the general penalties described in section 1-10.
- (b) If an inspection reveals a noncompliance with this chapter or the uniform dwelling code, the building inspector shall notify the applicant and the owner, in writing, of the violation(s) to be corrected. All cited violations shall be corrected within 30 days after written notification unless an extension of time is granted pursuant to Wisconsin Administrative Code SPS Ch. 320.
- (c) If an inspection reveals a noncompliance with this chapter or the uniform dwelling code, the building inspector shall notify the applicant and the owner, in writing, of the violation(s) to be corrected. All cited violations shall be corrected within 30 days after written notification unless an extension of time is granted pursuant to Wisconsin Administrative Code SPS Ch. 320.
- (d) If after written notification, the violation is not corrected within 30 days, a stop work order may be served on the owner or his representative and a copy thereof shall be posted at the construction site. Such stop work order shall not be removed except by written notice of the building inspector after satisfactory evidence has been supplied that the cited violation has been corrected.
- (e) Each day each violation continues after the 30 day written notice period has run shall constitute a separate offense. Nothing in this section shall preclude the village from maintaining any appropriate action to prevent or remove a violation of any provision of this chapter or the uniform dwelling code.
- (f) *Records.* The building inspector shall keep a monthly record of all permits, fees and inspections and the village clerk shall make an annual report thereon.
- (g) *Penalties.* The village board shall provide for the enforcement of the ordinance and all other laws and ordinances relating to buildings by means of the village withholding of building permits, imposition of forfeitures and injunction action (as according to Sec. 62.39(9), Wis. Stats.).

(Ord. of 8-24-2020(1))

## **ARTICLE III. PERMITS**

### **Sec. 103-58. Building permits.**

- (a) *Building permits required.* No building or structure or any part thereof shall hereafter be built, enlarged, altered or demolished within the village or permanent building equipment be installed, except as herein provided, unless a permit therefore shall first be obtained by the owner, or his agent, from the building inspector. The term "building" as used in this section shall include any building or structure and the village permanent building equipment thereof and any enlargement, alteration, or demolishing of any building or structure or of permanent building equipment therein; also any material in any old building and the installation and equipment of underground tanks, vaults, and similar structure. "Permanent building equipment" shall include any provisions in buildings for water, light, heat, power or ventilation service therein.
- (b) *Application for permit.*
  - (1) Application for a non-commercial building permit shall be made in writing upon a blank form furnished by the building inspector and shall state the name and address of the owner of the building and the

owner of the land upon which it is to be erected, and the name and address of the builder, and shall describe the location of the building and the purpose for which it is to be used, and shall contain such other information as the building inspector may require. With such application there shall be submitted to the building inspector a complete set of plans and specifications, covering the proposed building, alterations, or improvements, including a dimensioned plan of the tract showing the location of any proposed building with respect to the adjoining streets, alleys, lot lines and buildings. If approval of plans submitted is required under the Wis. Admin. Code, one set of such plans shall bear the seal of inspection and approval of the state department of workforce development and all pertinent correspondence at the time of approval. All plans and specifications shall be signed by the designer.

- (2) If the application for a building permit is for the enlargement or construction of a commercial structure or a multifamily dwelling of three or more units, the application shall also be submitted to the building committee for approval, conditional approval, or rejection.
- (3) If the application is for a commercial building structure, refer to section 103-26.
- (c) *Building inspector may waive the filing of plans.* If, in the opinion of the building inspector, the character of the structure and work is sufficiently described in the application, he may waive the filing of plans, and provided approval is not required by the state department of workforce development as required under the Wis. Admin. Code, but the location plan must be filed in any case.
- (d) *Issuance of permit.* If the building inspector finds that the proposed building will comply in every respect with all ordinances of the village and all laws and lawful orders of the state, he shall officially approve the same and shall issue a building permit therefore which shall be kept at the site of the proposed building. If adequate plans are presented to the building inspector, he may, at his discretion, issue a permit for part of the building before receiving the plans and specifications for the entire building, but work on any building shall not be commenced unless a permit or waiver of plans has been issued. After being approved, the plans shall not be altered in any respect which involves any of the above-mentioned ordinances, laws and regulations, or which involves the safety of the buildings or occupants, except with the written consent of the village board.
- (e) *Issuing and posting of building permit card.* With every permit issued, the building inspector shall issue to the applicant a card, properly filled out. The applicant shall place such card in a conspicuous place on the premises where the building is to be erected, the card to be unobstructed from the public view and not more than 15 feet above grade of the building.
- (f) *Minor repairs.* The building inspector may authorize minor repairs or alteration, as deemed necessary by the building inspector, which do not change the occupancy, area or fire protection of the building without issuing a building permit.
- (g) *Razing buildings.* Whenever the building inspector finds any building or part thereof within the village to be in his judgment so dilapidated or so out of repair as to be dangerous, unsafe, unsanitary or otherwise unfit for human habitation or use, and so that it could be unreasonable to repair the same, it shall order the owner to raze and remove the building or part thereof, or if it can be made safe by repairs, to repair and make safe and sanitary or to raze and remove at the owner's option. Such order and proceedings shall be as provided in Sec. 66.0413, Wis. Stats.
- (h) *Permit lapses.* A building permit, other than Wisconsin Building Permits, shall lapse and be void unless building operations are commenced within six (6) months and if construction has not been completed within twelve (12) months from date of issuance. Wisconsin Uniform Building Permits shall expire 24 months after issuance if the dwelling exterior has not been completed in accordance with Wis. Admin. Code SPS 320.09(9)(a)5. A one three (3) month renewal may be granted for a fee of 25 percent of the original fee with a minimum of \$10.00.
- (i) *Revocation.* If the building inspector shall find at any time that the above-mentioned ordinances, law, regulations, plans and specifications are not being complied with, and that the holder of the permit refuses to conform after a written warning or instruction has been issued to him, the building inspector shall revoke

the building permit by written notice posted at the site of the work. When any permit is revoked, it shall be unlawful to do any further work thereunder until the permit is reissued, excepting such work as the building inspector may order to be done as a condition precedent to the reissuance of the permit, or as they may require for the preservation of human life and safety of property.

- (j) *Report of violations.* It shall be the duty of the building inspector to stop any remodeling work which is being carried on without a permit as required by this section, and report same to the village board if legal action is required.
- (k) *Fees for building permits, moving of buildings and inspections.* Except for one- or two-family dwellings, before receiving any building permit, the owner or his agent shall pay to the building inspector the proper fees as stated in the approved fee schedule. The fee schedule, and any individual fees appearing therein, shall be established by the village board, from time to time, and made available for public examination in the office of the village clerk.

(Ord. of 11-10-1997, § 29.02; Ord. of 10-10-2007, § 29.02; Ord. of 3-25-2019(1); Ord. of 8-24-2020(1))

### **Sec. 103-59. Moving of buildings.**

- (a) *Moving building over public streets in the village.*
  - (1) No person or party shall move, or cause to be moved, any building or other structure over or upon any public street or highway in the village, unless and until permission therefore is given by the village board.
  - (2) Application for such permit shall be presented to the building inspector at least 30 days prior to the date of moving. The application shall be presented promptly to the village board for their action thereon.
  - (3) In the event that such application is approved by the village board, the building inspector shall issue a permit to that person, making the application to move the building or structure or public highways or streets in the village. The permit shall designate the route to be taken, the limit of time for moving within the village and all other conditions to be complied with.
  - (4) Before any permit to move any building or structure is issued by the building inspector or the village, the person or party applying therefor shall give a bond to the village in the sum of \$1,500.00 with good and sufficient sureties to be approved by the village board, said bond being conditioned among other things, that the person or party will save and indemnify the village against any judgments, costs or expenses which may accrue in any way to any third party or to the village because of the moving of the building or structure pursuant to the permit and being further conditioned that the person or party will pay to the village any damages or expenses incurred by the village because of the moving of the building or structure under the permit.
  - (5) The moving of a building on any public street or highway in the village shall be continuous during all hours of the day, and day by day, and at night if the building inspector or police officer shall so order until completed, with the least possible obstruction to the streets. Lighted lanterns, flares or comparable devices shall be kept in conspicuous places at each end of the building or structure during the night.
  - (6) Every person receiving a permit to move a building or structure over the public streets or highways in the village shall within one day after reaching his destination report the same to the building inspector who shall report the same to the village clerk. The village clerk shall thereupon have the streets and highways over which the building was moved inspected and their condition ascertained. If the removal of the building or structure has caused any damage to the streets or highways over which the building was moved, the person to whom the permit was issued shall upon notice from the village clerk forthwith place them in as good a repair as they were before the permit was granted. Upon failure of the person or party to make the repairs, after due notice and with ten days after notice, to the



satisfaction of the village clerk, the clerk shall order the repair of the damage to be done to the street and highway as shall be necessary to put them in as good a condition as they were before the permit was granted, and the village shall hold the sureties on the bond given as hereinafter provided responsible, for payment of the damage.

(b) *Moving of building to sites within the village.*

- (1) No existing building or other structure shall be moved to any site within the village either from a site outside of the village or from another site within the village unless permission therefore shall be first granted by the village board.
- (2) Application for permission to move any building or structure to a site in the village shall be made to the building inspector no less than 30 days before the proposed date of moving. The building inspector shall promptly refer the application to the village board, together with his written recommendations as to the advisability of the approval of the application. Applicant shall furnish bond as provided in subsection (a)(4) of this section before such moving.
- (3) The village board shall not grant permission to move any building or structure on to a site within the village if the proposed move will reduce the use or value of the property adjacent to or in the neighborhood of the proposed site or if the architectural design of the building or structure to be moved to the proposed site is not compatible with the buildings and structures in the immediate neighborhood or if the proposed move may reduce the use or the value of the property adjacent to or in the neighborhood to the proposed site. The burden of proof shall be upon the applicant seeking to move the building or structure to the proposed site to show that the proposed move will meet the provisions of this subsection.
- (4) The village board may revoke the permit after the same has been issued if in the opinion of the majority of the village board any reason which would have made the denial of the permit mandatory has developed and become apparent after permit has been granted.

(c) *Penalty.* Any person, party, firm or corporation violating the provisions of this section shall upon conviction be subject to the general penalties described in section 1-10.

(Ord. of 11-10-1997, § 29.06)

**Secs. 103-60—103-76. Reserved.**

## **ARTICLE IV. CONSTRUCTION STANDARDS AND POLICIES**

**Sec. 103-77. Reference specifications.**

- (a) "State specifications" refers to "Standard Specifications for Road and Bridge Construction," published by the State of Wisconsin Department of Transportation, 1996 Edition, and subsequent supplemental specifications thereto, 2002 Edition.
- (b) "Standard Specifications" refers to "Standard Specifications for Sewer and Water Construction in Wisconsin," Fifth Edition, March 1, 1988, with addendum No. 1, January 2, 1992 and addendum #2, March 1, 1999.

(Ord. of 8-10-1998, § 41.01)

**Sec. 103-78. Sanitary system.**

- (a) *Pipe material.*
  - (1) *Sanitary sewer.*

- a. Polyvinyl chloride pipe (PVC), not less than eight inches in diameter, conforming to ASTM D3034 SDR-35, with single elastomeric gasket joint conforming to ASTM F477 and ASTM D3212.
- (2) *Sanitary laterals.*
  - a. Polyvinyl chloride pipe (PVC): ASTM D3034, SDR- 35, with elastomeric gasket joint conforming to ASTM F477.
  - b. Cast iron service weight soil pipe: ASTM A74.
  - c. Laterals not less than four inches in diameter.
- (b) *Sanitary manholes.*
  - (1) Provide in accordance with requirements of Chapter 3.5.0 of "Standard Specifications," except as modified below.
    - a. Conform to ASTM C478.
    - b. Provide precast concrete eccentric cone type tops for manholes six feet deep or greater.
      - 1. Cones: Conforms to ASTM C478.
    - c. Provide precast concrete flat tops for manholes less than six feet deep from invert to finish rim elevation.
      - 1. Precast concrete flat tops shall be capable of supporting a directly applied AASHTO H-20 highway type loading.
    - d. Reinforced integral floors minimum thickness of eight inches.
    - e. Wall thickness.
      - 1. Manhole diameter: Four feet (minimum).
      - 2. Wall thickness: Five inch (minimum).
    - f. Joints.
      - 1. Precast sections of sanitary sewer manholes: Resilient rubber gaskets or extrudible plastic gaskets.
      - 2. Precast concrete adjustment rings of manhole chimney section: Between manhole cone or flat top slab and adjustment rings, between rings, and between rings and metal castings, extrudible preformed plastic gasket with approximate cross perimeter
      - 3. Cover outside of chimney from frame to cone with trowel grade butyl based sealant. Overlap cone section a minimum of four inches.
    - g. Gasket material.
      - 1. Resilient rubber gaskets: ASTM C443.
      - 2. Extrudible preformed plastic gaskets: Ramnek, manufactured by K.T. Snyder Company, Inc., Kent, OH; E-Z Stik by Concrete Products Supply Company, Fort Wayne, IN; or equal.
- (c) *Manhole lids and castings.*
  - (1) Acceptable manufacturers: Neenah Foundry, or equal.
  - (2) Sanitary Manhole:
    - a. Provide in all locations frame with machined bearing surfaces, with non-rocking Type B lid with concealed pick holes, and self-sealing gaskets.
    - b. Neenah Catalog No. R-1550.

(d) *Sewer construction.*

- (1) Use appropriate adapter of neoprene coupling to connect new sewer to existing stub, if new sewer is different material or existing stub is plain end pipe. Neoprene coupling shall be Fernco Joint Sealer Company or equal with stainless steel clamps and clamp screws.
- (2) To maintain seal flexibility of flexible pipe connection to manhole, plug portion of annular space between pipe and manhole that falls within area of poured invert with flexible plastic conforming to the requirements of Type B gasket in AASHTO designation M-190 or Federal Specifications SS-S-00210, prior to pouring manhole invert.
- (3) Sanitary sewer service laterals shall be installed with a factory "T" or "Y" connection, in accordance with Section 5.3.0 of the "Standard Specifications." The lateral shall extend ten feet past the property line. A removable water-tight stopper, of the same material as the sewer pipe and with similar type of joint, shall be installed at the end of each lateral connection and on the wye branch where no lateral connection is installed. The Contractor shall furnish and place a four-inch by four-inch treated timber at the end of each lateral. The timber marker shall be placed so that its top is three feet above the finished ground surface, and the bottom is placed at the capped end of the sewer lateral. Laterals connected directly to manholes shall only be allowed on end-of line manholes where a "T" or "Y" connection is not feasible and shall be set such that the flow line of the lateral extended is even with the spring line of the outgoing sewer main. The bench shall be poured to form a channel from the spring line of the sewer main to the flow line of the lateral ending at the manhole wall.

(e) *Field quality control.*

(1) *General.*

- a. Commence test procedures only when the following conditions have been met:
  1. Pipe section to be tested is clean and free of dirt, sand, water, or other foreign material.
  2. Pipe section to be tested has had backfill placed and consolidated.
- b. Test plugs or mandrels shall be either solid sleeve type or cage type as shown on File 30 of "Standard Specifications."
  1. Device should be identified as to size and type of pipe for intended use and outside diameter of device.
  2. Identification shall be stamped on device or on metal plate permanently attached thereto.
  3. Worn, damaged or deformed test plugs will not be acceptable.

(2) *Deflection testing.*

- a. Provide cable at either end of test plug/mandrel to allow withdrawal if plug/mandrel becomes stuck.
- b. Test in accordance with Sections 3.2.6(i)4 and 3.2.6(j)4 of "Standard Specifications," except as modified below:
  1. Deflection test PVC pipe immediately upon completion of sewer construction.
    - (i) Test to determine contractor's means, methods, materials, and workmanship to produce pipeline within specified deflection tolerance.
    - (ii) Sections which do not pass test shall be repaired and retested.
  2. Mandrel shall be per Chapter NR 110, Section NR 110.13(2)(k)2. of the Wisconsin Administrative Code.

(3) *Leakage testing (new sewers).*

- a. General.
  - 1. Plug pipe ends with test plugs. Brace each plug securely to prevent blowouts during air test.
  - 2. Pressurizing equipment shall include regulator set to avoid over-pressurizing and damaging line.
  - 3. Safety pressure test in accordance with OSHA requirements.
- b. Test in accordance with Chapter 3.7.0 of "Standard Specifications," except as modified below:
  - 1. Air test sanitary sewers and laterals four inches through 36 inches in diameter.
    - (i) Test times to be in accordance with Table 6 included in "Standard Specifications."
    - (ii) Length of laterals to be included in determining minimum test line.
  - 2. Provide calibrated and certified test gauge at remote test plug. Gauge shall indicate air pressure within test section and attach to test plug by sufficient length of hose to place gauge at ground surface. In case of test frames for individual joint testing, gauge to be remote from air supply.
  - 3. Air test sanitary sewers 36 inches. in diameter and smaller immediately upon completion of sanitary sewer construction.
    - (i) Tests to determine contractor's means, methods, workmanship, and materials produce pipe line within specified air test time limits.
    - (ii) Repair and retest sections which do not pass test.
    - (iii) Conduct air test after laterals have been installed.
  - 4. Sewer televising.
    - (i) *General.*
      - A. All new sanitary sewers shall be televised.
      - B. Sanitary sewers shall be cleaned with suitable jet cleaning equipment that is hydraulically or mechanically propelled.
    - (ii) *Equipment.*
      - A. Televising camera shall be color and capable of swivelling 360 degrees to allow visibility of lateral connection.
      - B. Camera shall be motorized, and capable of forward and reverse motion.
      - C. The meter reading shall be displayed on the video output at all times.
    - (iii) *Testing.*
      - A. Testing shall be downstream and at a uniformly slow rate.
      - B. Lateral locations shall be recorded and clearly shown at exact location in relation to adjacent manholes.
      - C. Each pipe defect, sag, and point of infiltration shall be recorded and referenced in a clockwise orientation.
      - D. VHS tapes with written reports summarizing work shall be turned over to the village.

(Ord. of 8-10-1998, § 41.02)

## **Sec. 103-79. Water main.**

### **(a) *Pipe materials.***

#### **(1) *Ductile iron pipe.***

- a. Ductile iron pipe shall not be less than ten inches in diameter, Class 52 or pressure Class 350 conforming to AWWA C151/A21.51.
- b. In compliance with "Standard Specifications," Chapter 6.18.0.
- c. Cement lined in accordance with AWWA C104.
- d. Bituminous outside coating.

#### **(2) *Fittings.***

- a. In conformance with "Standard Specifications," Section 6.22.0.
- b. Ductile iron in accordance with AWWA C110.
- c. Supply push-on or mechanical joint, except mechanical joint is required where tie rods are required.

#### **(3) *Pipe joints.***

- a. Push-on or mechanical in accordance with AWWA C111.
  1. Push-on joint shall have plain rubber gasket with cable bond or copper bar conductors capable of providing an electrical conductivity of 350 to 400 amps at 25 to 30 volts without appreciable variance.
  2. Mechanical joints shall have conductive armor tipped rubber gaskets, or a field welded conductive bar or cable.
  3. Lead tipped gaskets are prohibitive.

### **(b) *Gate valves.***

- (1) Acceptable Manufacturers: Mueller A-2300-20, or equal.
- (2) Conform to provisions of "Standard Specifications," Chapter 6.29.0.
- (3) Provide gate valves which conform or exceed AWWA C500 and C509 with mechanical joints, armor tipped rubber gaskets, cast iron body, bronze mounted with bronze non-rising stems, and O-ring seals.
- (4) Provide resilient rubber seat ring disc type valves with inside screw, which has been tested to 200 psi working pressure and which opens left (counter clockwise).

### **(c) *Valve box.***

#### **(1) Acceptable manufacturers.**

- a. Mueller H-10357, three piece, screw type, cast iron, 5¼-inch shaft, Size F, or equal.
- b. Provide with no-tilt drop cover marked "Water."
- c. Provide with gate valve adaptor, as manufactured by Adaptor Inc., or equal.

### **(d) *Hydrants and hydrant lead.***

#### **(1) Hydrants: (see Detail "E," attached to the ordinance codified in this chapter).**

- a. Acceptable manufacturers: Waterous "Pacer," Model WB-67.
  1. Provide traffic type hydrant with break-off coupling on both standpipe and rod.

2. Equip hydrants with six-inch inlet and 5¼-inch valve opening, one 4½-inch pumper nozzle, and two 2½-inch hose nozzles with National Standard threads and one-inch pentagonal operating nut opening counter-clockwise.
  3. Provide O-ring packing.
  4. Paint hydrant red.
  5. Provide hydrant for 7.0 foot depth of bury from bottom of inlet pipe to hydrant ground flange.
  6. Provide hydrant with bronze seat ring.
- (2) Hydrant leads shall consist of six-inch diameter ductile iron pipe, Class 52. The hydrant, valve and lead shall be secured by means of meg-a-lug in accordance with Chapter 4.10.0 of the "Standard Specifications," with the hydrant supported on precast concrete blocking. Hydrant must be restrained from hydrant to "T" in main.
- (e) *Water services.*
- (1) Provide minimum one-inch copper, Type K, water tubing, in accordance with Chapter 6.26.0 of "Standard Specifications."
  - (2) Corporation stops as required: Mueller H-15008, or equal with compression type copper service thread connection.
  - (3) Curb stops: Mueller H-15155 or equal with compression type copper service thread connection.
  - (4) Curb boxes: Mueller H-10332 base, or equal, Minneapolis pattern 2½-inch shaft size, with Mueller H-10352 upper section with lid, or equal, extended length of 84 inches.
- (f) *Water main construction.*
- (1) The corporation tap and service pipe shall be installed per section 34-21. at a right angle to the water main. Tap shall be made on the upper half of the main at a 45 degree angle from the vertical plane, on the side of the main to which service is to be extended. Dry taps are prohibited.
  - (2) Water main shall be tapped and the corporation stop shall be installed with a tapping machine specifically designed to tap the water main under pressure. No other method of tapping the water main will be allowed.
  - (3) The service shall extend to ten feet past the property line. The curb stop and curb box shall be installed in the terrace between the curb and sidewalk, and marked with a four-inch by four-inch treated timber painted blue and extending 24 inches above ground, and minimum of 48 inches below ground.
  - (4) The end of the service shall be capped or flattened with a small opening for bleeding the service, and shall be located within 12 inches horizontally from the end of the sewer service.
  - (5) The contractor installing the curb box shall make a final height adjustment after the curb is installed or after final grade is established.
- (g) *Field quality.*
- (1) *General.* Commence test procedures only when the following conditions have been met:
    - a. Pipe section to be tested is clean and free of dirt, sand, water, or other foreign material.
    - b. Pipe section to be tested has had backfill placed and consolidated.
    - c. Obtain permission from village water department before operating any valves or hydrants.
  - (2) *Pressure and leakage testing.* Conform to Section 4.15.0 of the "Standard Specifications."

- (3) *Electrical continuity test.* Test ductile iron pipe water main including fillings, hydrants, and valves for electrical continuity in accordance with the following:
- a. Make electrical test after hydrostatic pressure test, and while main is at normal operating pressure.
  - b. Test system for electrical continuity. Provide continuity through use of trademarked method. Do not use brass or lead wedges.
  - c. Furnish, at no additional cost to village, equipment including power source with integral volt meter and ammeter, necessary cables, labor, and miscellaneous items necessary to perform electrical conductivity test on water main installed under this contract. Perform tests in presence of village engineer or his representative.
  - d. Before applying voltage to any main to which service laterals are connected, disconnect all user electrical grounds from service laterals, disconnect all water service laterals from water meter, and disconnect all user electrical services from electrical main within limits of section of main to be tested.
  - e. Test sections as directed by engineer. Section consists of continuous run between two fire hydrants.
  - f. Acceptable power sources of DC current may be equipment such as generators, arc welding machines or batteries. Cables from power source to section of system under test shall be sufficient size to carry test current without overheating or causing excessive voltage drop. Verify resistance of cables by determining resistance before test commences.
  - g. Make connections for test at fire hydrants. Fire hydrants shall be in open position with caps on during test. Fill hydrant with water to protect rubber seals from heat damage. In areas where there are no fire hydrants available, any convenient connection may be made, subject to approval of engineer.
  - h. When arc welding machines are used, current control shall be at lowest setting before starting. After starting machine, increase current until ammeter is at desired value.
  - i. Impress direct current (DC) on main between fire hydrants and increase voltage until current of 250 amps is reached. Maintain current for period of five minutes. Record voltage and amperage for tests.
  - j. Measure current flow through pipe continuously on ammeter and current shall remain steady without interruption or excessive fluctuation for test periods. Insufficient current, intermittent current or arcing, as indicated by large fluctuations of ammeter needle, shall be evidence of defective electrical connections in main. Isolate and correct cause. Retest section of main in which defective test occurred.
  - k. Electrically test water main only before connection of water services or after water and electrical service have been disconnected as stated above.
- (4) *Bacteriological test.* Contractor shall provide sampling equipment and obtain sample and submit for testing. village and engineer shall receive copy of results within ten days of sampling.

(Ord. of 8-10-1998, § 41.03; Ord. of 9-14-1999)

## **Sec. 103-80. Storm sewer.**

- (a) *Pipe material.*
- (1) Reinforced concrete pipe.
    - a. Reinforced concrete pipe conforming to ASTM C76.

1. Fifteen-inch and larger: Minimum Class III.
2. Twelve-inch storm lead: Class V.

(b) *Storm manholes.*

- (1) Provide in accordance with requirements of Chapter 3.5.0 of "Standard Specifications," except as modified below:
  - a. Precast concrete sections conforming to ASTM C478.
  - b. Provide precast concrete eccentric cone type tops for manholes six feet deep or greater, and flat tops for manholes less than six feet deep.
  - c. Reinforced integral floor minimum thickness of eight inches.

(c) *Standard storm inlets.*

- (1) Provide in accordance with applicable requirements of Section 3.6.0 of "Standard Specifications."
- (2) Constructed of precast reinforced concrete or cast in place.
  - a. Precast: Conform to ASTM C478.
- (3) Neenah R-3067 - curb casting, R-3290A - driveway casting, and directional grate type DR or DL on slopes less than three percent and Type V (vane grate) on slopes three percent or greater.
- (4) Provide one inch bleeder pipe into inlet at top of sub grade cover end with filter fabric.

(d) *Manhole lids and casting.*

- (1) Acceptable manufacturers: Neenah Foundry.
- (2) Storm manhole:
  - a. Same as sanitary manhole frame.
  - b. Neenah R-2050, with Type "D" grate.

(Ord. of 8-10-1998, § 41.04; Ord. of 9-14-1999)

## **Sec. 103-81. General utility trenches.**

(a) *Backfill material.*

(1) *Granular backfill.*

- a. Granular backfill conforming to requirements of Sections 6.43.4 or 6.43.2(c) of "Standard Specifications" shall be required in all trenches one foot back of opposite curb.
- b. Use of native excavated material for backfill in all trenches located in the street will be permitted provided the material substantially conforms to Section 6.43.4 or 6.43.2(c) of the "Standard Specifications," and is capable of achieving the minimum requirements of density for granular backfill material.
- c. Use of native excavated material for backfill of trenches outside of the street, in terrace, open fields, etc., will be permitted provided the minimum density requirements for granular or cohesive material is achieved.

(b) *Unstable trench bottom and crushed stone stabilization.*

- (1) Crushed stone for unstable trench bottom shall conform to requirements of Section 6.43.6 of "Standard Specifications" and following gradation:



| Sieve Size | Percentage Passing by Weight |
|------------|------------------------------|
| 2½-inch    | 100                          |
| 2-inch     | 90—100                       |
| 1½-inch    | 35—80                        |
| 1-inch     | 20—65                        |
| ¾-inch     | 10—45                        |
| ⅝-inch     | 0—15                         |
| No. 8      | 0—2                          |

- (2) At least 85 percent, by count, of the number of particles of aggregate retained on the three-eighths-inch sieve shall have at least one machine fractured face.

(c) *Bedding and cover.*

- (1) Immediately prior to placing the pipe, the trench bottom shall be shaped by hand to fit the entire bottom quadrant of the pipe. If pipe is of the bell and spigot type, bell holes shall be provided to prevent the bell from supporting the backfill load. Bell holes shall be large enough to permit proper making of the joint but not larger than necessary to make the joint. All adjustments to line and grade must be done by scraping away or filling in bedding material under the body of the pipe. Any fill used must be bedding material. If necessary to obtain uniform contact of the pipe with the sub-grade, a template shall be used to shape the bedding material. All pipe shall be bedded in bedding material at least four inches thick. Contractor shall perform all necessary excavation and shall furnish all necessary material to provide this bedding.
- (2) Bedding material shall be made by crushing sound limestone or dolomite ledge rock, or crushed gravel aggregate. The material shall be hard and durable and shall meet the following gradation specifications:

**BEDDING STONE GRADATION**

| Percentage by Weight Passing |                 |                 |                 |
|------------------------------|-----------------|-----------------|-----------------|
| Sieve Size                   | Gradation No. 1 | Gradation No. 2 | Gradation No. 3 |
| 1-inch                       | 100             | —               | —               |
| ¾-inch                       | 90 to 100       | —               | —               |
| ½-inch                       | —               | 100             | 100             |
| ⅜-inch                       | 25 to 55        | 90 to 100       | —               |
| No. 4                        | 0 to 10         | —               | 75 to 100       |
| No. 8                        | 0 to 5          | 0 to 15         | —               |
| No. 30                       | —               | 0 to 3          | —               |
| No. 100                      | —               | —               | 10 to 25        |

- (3) No material native to the trench shall be used for bedding material.
- (4) Contractor shall provide engineer with a sieve analysis of the bedding material for review prior to starting construction.
- (5) Material which is to be placed from the bedding material to one foot above the top of the pipe shall be termed cover material. All trenches shall be backfilled by hand to one foot above the top of the pipe with cover material. Cover material shall be deposited in the trench for its full width on each side of the

pipe, fittings and appurtenances simultaneously in one-inch layers and shall be compacted using hand tamping bars and/or mechanical tampers. Contractors shall use special care in placing cover material so as to avoid injury to the pipe. Cover material shall consist of durable granular particles ranging in size from fine to a maximum size of three-fourths inch. Unwashed bank run sand and crushed bank run gravel will be considered generally acceptable cover material. Cover material shall conform to the following gradation specifications:

#### COVER MATERIAL GRADATION

| Sieve Size | Percentage by Weight Passing |
|------------|------------------------------|
| 1-inch     | 100                          |
| ¾-inch     | 85 to 100                    |
| ⅝-inch     | 50 to 80                     |
| No. 4      | 35 to 65                     |
| No. 40     | 15 to 30                     |
| No. 200    | 5 to 15                      |

- (6) Native trench materials may be used for cover material if they substantially conform to the above gradation specifications.
- (7) Bedding material may be substituted for cover material when requested by contractor except where polyethylene encasement is used.
- (8) All sanitary sewer pipe and related appurtenances shall be bedded using Class "B" bedding as shown on the Standard Drawings for Sewer Appurtenances conforming to Gradation No. 1.
- (9) Concrete, cast, or ductile iron pipe and other rigid pipe may be bedded using Class "C" bedding as shown on the Standard Drawing for sewer appurtenances for non-sanitary sewer installations.
- (10) Bedding material for all other installations except copper water services shall conform to Gradation No. 1 or No. 2 bedding material for copper water services shall conform to Gradation No. 3.

#### (d) *Quality assurance.*

##### (1) *Compaction tests.*

- a. Provide independent, qualified soil testing company to test backfill compaction.
- b. Provide minimum to two tests per day during sanitary sewer, water main, service laterals, and storm sewer construction, or one test for every 300 linear feet of utility construction, whichever is greater.
- c. Compact cohesive material backfill to 90 percent maximum density and granular material backfill to 95 percent maximum density as determined by ASTM D1557, Method D (Modified Proctor Test) and achieve minimum density requirements on full depth of trench from top of cover material to sub-grade on finished elevation. All trenches under paved area compacted to 95 percent density.
- d. Initial compaction testing shall be done no later than the second day of utility construction, on each street, to determine the appropriate lift size and compaction effort to achieve the above specified results.
- e. Re-compact and retest areas of backfill tested which do not meet minimum requirements.
- f. Backfilling shall be in accordance with requirements of Chapter 2.6.0. Consolidation shall be accomplished by mechanical compaction of excavated material or granular backfill in conformance with "Standard Specifications," Section 2.6.14(b).

##### (2) *Reference standards.*

- a. American Society for Testing and Materials (ASTM):
  - 1. ASTM D1557-78 - Test methods for moisture density relations of soils and soils aggregate mixtures using ten-pound (4.54 kg) rammer and 18-inch (457 mm) drop.

(Ord. of 8-10-1998, § 41.05)

## **Sec. 103-82. Street construction.**

(a) Typical section (see Details "1," attached to the ordinance codified in this chapter).

(b) Materials.

(1) Crushed aggregate base course:

- a. Crushed stone: Subsection 304.2 of the "State Specifications."
  - 1. Moisture content not to exceed seven percent.
- b. Gradation number:
  - 1. Three inch breaker-run with fines for bottom layer and No. 2 for top layer of base course.
  - 2. No. 1 or No. 2 for beneath curb and gutter.
  - 3. No. 3 for beneath sidewalk. Sand bedding material conforming substantially to Section 6.43.2(c) of the "Standard Specifications" will be allowed for sidewalk base course material provided the work is backfilled within seven days after poured.
  - 4. Village engineer reserves the right to disapprove and reject breaker-run material which, in the judgment of the engineer, contains an excessive amount of material passing the No. 10 sieve.

(2) Concrete: Conform to requirements of Grade A concrete as specified in Subsections 501.4 and 501.5 of "State Specifications."

- a. Concrete curb and gutter: Type L, 30-inch, as specified in Section 601 of the "State Specifications" (see Detail "B," attached to the ordinance codified in this chapter).
- b. Concrete sidewalk: Minimum sidewalk width of five feet, five-inches thick concrete as specified in Section 602 of the "State Specifications."
  - 1. Six-inch thick concrete for the sidewalk through the drive opening. If sidewalk is poured prior to curb cuts being placed, six inch thick sidewalk shall be required.
  - 2. Sidewalk handicap ramps should be provided at street intersections (see Detail "C," attached to the ordinance codified in this chapter).
- c. Concrete driveway approaches: six-inch thick concrete, as specified in Section 409 "Concrete Pavement," of the "State Specifications" (see Detail "D," attached to the ordinance codified in this chapter).
  - 1. If a curb back needs to be removed for a driveway opening one of the two following options is acceptable:
    - (i) Replace the entire section with saw cuts at each end of the proposed opening;  
or
    - (ii) Perform a horizontal saw cut along the curb head to conform to the profile of the concrete entrance. Curb and gutter detail 2/4 on page 4 of Typical Municipal Street Details at end of chapter.
    - (iii) Vertical cut along the flow line of the curb shall not be acceptable.

- (3) Steel bar reinforcement for curb: Conform to requirements of Subsection 505.2 of "State Specifications."
  - a. When required by village engineer, 2-No. 4 steel reinforcing rods 12 foot minimum length will be placed in curb and gutter sections located directly over service lateral trenches.
- (4) Expansion joint filler: Conform to requirements of Subsection 409.2.4 of "State Specifications" and shall be three-quarters-inch wide for curb.
  - a. Expansion joints in concrete curb and gutter shall be placed as follows:
    - 1. Three feet on both sides of each curb inlet.
    - 2. At all radius points.
    - 3. At all tangent points on curves.
    - 4. At 300 foot spacing on long tangent sections.
    - 5. At mid-point in cul-de-sacs.
- (5) Concrete curing agent: Comply with Subsections 409.2.7.1 of "State Specifications."
- (6) Crushed stone for sub-grade stabilization.
  - a. Crushed stone for sub-grade stabilization shall consist of three-inch breaker-run with fines meeting the approval of the village engineer.
- (7) Asphaltic concrete pavement.
  - a. General: Conform to requirements of Sections 401 and 405 of "State Specifications," for Type E-1 asphaltic concrete pavement, except as modified following.
  - b. Aggregates:
    - 1. Maximum weight loss for soundness: 12 percent.
    - 2. Binder course: El, 19.0 mm.
    - 3. Surface course: El 12.5 mm
- (8) Asphaltic concrete mix: Composition of mixtures shall conform to requirements of Sections 405 and 407 of "State Specifications," and supplemental specifications.
- (9) Tack coat.
  - a. Meet requirement of Subsection 402.2 of "State Specifications."
  - b. Grade:
    - 1. MS-2 Asphalt Emulsion.
    - 2. Other asphalt material approved by engineer.
  - c. Dilute asphalt emulsion to meet requirements of Subsection 401.3.6 of "State Specifications."
- (c) Field quality.
  - (1) Compaction:
    - a. Compact streets in accordance with requirements for standard compaction to depth of six inches below sub-grade for cut sections and compact in accordance with special compaction for embankment sections as specified in Subsection 207.3.6, compaction, of "State Specifications."
    - b. Provide independent soil testing company to test compaction.
    - c. Provide minimum of four tests per day during street grading.

- d. Test roll finished earth sub-grade.
  - 1. The test roller shall be operated at the approximate wheel load, within the range of 10,000 to 25,000 pounds, designated by the engineer as appropriate for the character and stability of sub-grade material being tested.
  - 2. Test rolling on a section of roadbed shall be performed parallel to centerline, with the roller not exceeding approximately five miles per hour and under the direct observation of the engineer or his authorized inspector. Each traverse of the roller shall be adjacent to the preceding one until the entire required width of the roadbed has been covered, constituting one pass for the area or section. At least two and not more than four complete passes shall be made on each area or section, as directed by the engineer. On the second pass, the wheels of the roller shall ride between the wheel marks of the preceding pass.
  - 3. Any soft or yielding areas or depressions evidenced under the action of the test roller shall be satisfactorily repaired and consolidated to withstand retesting.

(2) Concrete testing:

- a. Sampling and testing will be done by independent testing laboratory paid for by the contractor. Copies of test results will be forwarded to engineer and contractor.
- b. Testing of concrete will be done in accordance with Section 501 of "State Specifications."
- c. Permit testing laboratory full access to operations, and cooperate fully with testing laboratory, so testing laboratory can function properly as specified and required.
- d. Prepare cylinders for compressive strength testing of concrete in accordance with Subsection 501.13 of "State Specifications," except as modified.
  - 1. Two representative concrete samples, taken in accordance with ASTM C-31, for seven-day and 28-day compressive testing in accordance with ASTM C-39, for every 100 cubic yard, or fraction thereof, concrete placed and at locations specified by the engineer.
  - 2. Field cure, care for and ship test cylinders to testing laboratory.

(3) Aggregate base course testing: Provide one sample and gradation report for each source of material. Perform density testing:

- a. With nuclear density meter or other test method approved by engineer.
- b. At 400 foot. intervals and all areas that deflect visibly under a 9,000 pound dual wheel load and areas specified by the engineer.

(4) Bituminous concrete pavement testing:

- a. Submit proposed mix design and supporting mix design graph for each separate mix to be used, a minimum of ten days prior to paving.
- b. Sampling and testing will be done by an independent testing laboratory paid for by the contractor. Copies of the test results will be forwarded to the engineer and contractor.
- c. Samples shall be taken from the first truckload delivered and at a rate of one sample per each 250 tons of bituminous concrete paved or one per each day of paving, whichever is more frequent.
- d. Compaction test will be performed at a rate of 20 tests per day or one per each 100 tons paved, whichever is more frequent.

(Ord. of 8-10-1998, § 41.06)

Adopted by the Board of Trustees of the Village of Brooklyn, Wisconsin, this  
26th day of December, 2023.

APPROVED:

  
Mark Bruner, Village President

Ayes: 7  
Nays: 0

ATTEST:

  
Vicki Olson, Deputy Clerk-Treasurer