

Chapter 18

Sewers and Sewage Disposal

Part 1

On-Lot Subsurface Disposal Systems

- §18-101. General
- §18-102. Definitions
- §18-103. Applicability
- §18-104. Permit Requirements
- §18-105. Inspections
- §18-106. Operation
- §18-107. Maintenance
- §18-108. System Rehabilitation
- §18-109. Liens
- §18-110. Disposal of Septage
- §18-111. Administration
- §18-112. Administrative Appeals
- §18-113. Enforcement

Part 2

Sewer Code

A. General Provisions

- §18-201. Definitions
- §18-202. Connection to Public Sewers Required
- §18-203. Use of Connection
- §18-204. Certain Discharges Prohibited
- §18-205. Unlawful Discharge of Sewage or Industrial Wastes Declared a Nuisance
- §18-206. Connections to Comply with Requirements
- §18-207. Failure to Connect
- §18-208. Powers and Authority of Inspectors and Right of Access
- §18-209. Adoption of Rules and Regulations
- §18-210. Violations and Penalties

B. Tapping Fees

- §18-221. Fees Established
- §18-222. Additional Fees
- §18-223. Certification of Use and Inspection
- §18-224. Application to Increase Usage Required
- §18-225. Decreased Usage
- §18-226. Fees Nontransferable
- §18-227. Time and Methods of Payment
- §18-228. Delinquent Payment, Penalties, and Municipal Liens

C. Sewer Rents

- §18-231. Imposition of Charges
- §18-232. Statements of Water Consumption
- §18-233. Non-metered Water Supply for Connections with Estimated Flows of less than 10,000 gpd
- §18-234. Allowances for Water Not Discharged into Sewers
- §18-235. Sewage Flow Meters for Connections with Estimated Average Daily Flows of 10,000 gpd or Greater
- §18-236. Change in Classification of Property
- §18-237. Time and Methods of Payment
- §18-238. Delinquent Payment, Penalties, and Municipal Liens
- §18-239. Revenue to Be Segregated from Other Borough Funds
- §18-240. Fees Changed by Resolution
- §18-241. Grinder and Ejection Pumps

D. Building Sewers

- §18-251. Permits, Regulations, and Fee Schedule
- §18-252. Permits; Procedures and Requirements for Obtaining Permits
- §18-253. Plumbers and Contractors to Be Certified
- §18-254. Building Sewer Connection Rules and Regulations
- §18-255. Building Sewer Construction Specifications
- §18-256. Abandonment of Existing on Lot System

E. Prohibited Wastes and Pollutant Limitations

- §18-261. Purpose
- §18-262. Prohibited Wastes and Pollutant Limitations
- §18-263. Adoption of Rules and Regulations
- §18-264. Penalties

F. General Procedures and Provisions for Approval of Engineering Submissions for Sanitary Sewer Extensions

- §18-271. Approval Procedures
- §18-272. Application Phase
- §18-273. Construction Phase
- §18-274. Warranty Phase
- §18-275. General Provisions
- §18-276. Connection of Private Sewage Systems

G. General Provisions for Construction of Sanitary Sewers and Appurtenances

- §18-281. Scope
- §18-282. Definitions
- §18-283. Shop Drawings and Specifications
- §18-284. Order of Completion
- §18-285. Contractor to Pay Taxes

- §18-286. Safety, Protection, and Emergencies
- §18-287. Observation of Work
- §18-288. Superintendence and Supervision
- §18-289. Indemnity
- §18-290. Rights of Various Interests
- §18-291. Subcontracts
- §18-292. Provisions of Law
- §18-293. Workmen's Compensation Act
- §18-294. Insurance
- §18-295. Contractor's Understanding
- §18-296. Surveys, Lines, and Grades
- §18-297. Existing Utilities and Pennsylvania One-Call
- §18-298. Working Conditions
- §18-299. Service of Notice by the Borough
- §18-300. Materials, Appliances, and Employees
- §18-301. Accidents
- §18-302. Preservation of Monuments
- §18-303. Private Property
- §18-304. Other Permits and Regulations
- §18-305. Temporary Provisions for Public Travel
- §18-306. Damage Due to High Water
- §18-307. Partially Completed Work
- §18-308. Completed Work
- §18-309. Condemned Work and Materials
- §18-310. Acceptance, Final Estimate, and Payment
- §18-311. Cleaning Up
- §18-312. Sanitary Facilities
- §18-313. "Or Equal" Clause
- §18-314. Special Requirements

H. Standard Specifications for Construction of Sanitary Sewers and Appurtenances

- §18-321. Standards
- §18-322. Traffic Control
- §18-323. Detours
- §18-324. Safeguards
- §18-325. Certification of Materials
- §18-326. Inspector's Duties
- §18-327. Erosion and Sediment Pollution Control Regulations
- §18-328. Sequence of Construction
- §18-329. Material Specifications
- §18-330. Excavation
- §18-331. Rock Excavation and Blasting
- §18-332. Boring and Tunneling
- §18-333. Sheet piling and Shoring
- §18-334. Trenching
- §18-335. Backfilling of Trenches
- §18-336. Watertight Installation of Pipe
- §18-337. Pipe Installation

- §18-338. Sewer Structures
- §18-339. Temporary Paving
- §18-340. Replacement over Trenches
- §18-341. Sidewalks
- §18-342. Curb Replacement
- §18-343. Driveway Replacement
- §18-344. Restoration of Grassed Areas
- §18-345. Supplemental Requirements

I. Pumping Stations

- §18-346. Pumping Station Specifications

Part 1**On-Lot Subsurface Disposal System****§18-101. General.**

1. Septic tanks, subsurface waste disposal systems, may be used as a means of sanitary waste disposal in areas of the Borough of New Morgan providing they comply with all provisions of 25 Pa.Code, Chapters 71, 72 and 73, of the rules and regulations promulgated by the Pennsylvania Department of Environmental Protection and subsequent amendments thereof, and the provisions of this Part. The official sewage facilities plan for the Borough of New Morgan indicates that it is necessary to formulate and implement a sewage management program to effectively prevent and abate water pollution and hazards to the public health caused by improper treatment and disposal of sewage.

2. This Part establishes the authority to regulate the installation, inspection, maintenance, operation, rehabilitation and replacement of existing and future (all) subsurface waste disposal systems.

(Ord. 2002-2, 9/11/2002, §I)

§18-102. Definitions.

Act 537—the Act of January 24, 1966, P.L. 1535, as amended, 35 P.S. §750.1 *et seq.*, known as the “Pennsylvania Sewage Facilities Act.”

Authorized agent—any person who is delegated by the Borough to function within specified limits as the agent of the Borough to carry out the provisions of this Part.

Board of Review—the panel to hear, review and issue decisions on appeal from determinations of a Borough representative under this Part.

Community sewage system—any system, whether publicly or privately owned, for the collection of sewage from two or more lots structures, and the treatment and/or disposal of the sewage one or more lots or at any other site.

Council—the Borough Council, New Morgan Borough, Berks County, Pennsylvania.

Department—the Department of Environmental Protection of the Commonwealth of Pennsylvania (DEP).

Individual sewage system—a system of piping, tanks or their facilities serving a single lot or structure and collecting and disposing of sewage in whole or in part into the soil or into any waters of this Commonwealth which is permitted exclusively by the Borough.

Malfunction—the condition which occurs when an on-lot sewage disposal system discharges sewage onto the surface of the into ground waters of this Commonwealth, into surface water of this Commonwealth, back up into the building connected to the system or otherwise causes a nuisance or hazard to the public health or pollution of ground or surface water or contamination of public or private drinking water wells. Systems shall be considered to be malfunctioning if any of the conditions noted above occur for any length of time during any period of the year.

Municipality—Borough of New Morgan, Berks County, Pennsylvania.

Official sewage facilities plan—a comprehensive plan for the provision of adequate sewage disposal system, adopted by the Borough and approved by the Pennsylvania Department of Environmental Protection, as described in and required by the Pennsylvania Sewage Facilities Act, 35 P.S. §750.1 *et seq.*

On-lot sewage disposal system—any system for disposal of sewage and subsequent disposal of the clarified sewage into the soil for final treatment and disposal, including both individual sewage systems and community sewage systems.

Person—any individual, association, public or private corporation for profit or not for profit, partnership, firm, trust, estate, department, board, bureau or agency of the Commonwealth, political subdivision, municipality, district, authority, or any other legal entity whatsoever which is recognized by law as the subject of rights and duties. Whenever used in any clause prescribing and imposing a fine or imprisonment, the term “person” shall include the members of an association, partnership or firm and the officers of any local agency or municipal, public or private corporation for profit or not for profit.

Pumper/hauler—any person, company, partnership or corporation which engages in cleaning community or individual towage systems and transports the septage cleaned from these.

Rehabilitation—the work done to modify, alter, repair, enlarge or replace an existing on-lot sewage disposal system.

Replacement area—a portion of a lot or a developed property, sized to allow the installation of a subsurface sewage disposal area, which is reserved to allow that installation in the event of the malfunction of the originally installed on-lot sewage disposal system.

Septage—the residual scum and sludge pumped from septic.

Sewage—any substance that contains any of the waste products or excrement or other discharge from the bodies of human beings or animals and any noxious or deleterious substances being harmful or inimical to the public health, or to animal or aquatic life, or to the use of water for domestic water supply or for recreation of which constitutes pollution under the Act of June 22, 1937, P.L. 1987, No. 394, known as the “Clean Streams Law,” 35 P.S. §695.1 *et seq.*, as amended.

Sewage Enforcement Officer (SEO)—the official of the Borough who issues and reviews permit applications and conducts such investigations and inspections as are necessary to implement Act 537 and the rules and regulations promulgated thereunder.

Sewage management district—any area or areas of a municipality for which a sewage management program is recommended by the municipality’s adopted Act 537 official sewage facilities plan. The Sewage Management District of the Borough of New Morgan encompasses the entire Borough.

Sewage management program—a comprehensive set of legal and administrative requirements encompassing the requirements of this Part and other administrative requirements adopted by the Borough to effectively enforce and administer the Part.

Sewage system certification form—a form provided by the Borough to be completed by the pumper/hauler which provides certification to the township of septic system pumping, cleaning and certain repairs.

Subdivision—the division or re-division of a lot, tract or parcel of land by any means

into two or more lots, tracts, parcels or other divisions of land including changes in existing lot lines for the purpose, whether immediate or future, of lease, partition by the court for distribution to heirs or devisees, transfer of ownership or building or lot development.

Zoning Officer—an individual employed by the Borough to administer and enforce the Borough Zoning Ordinance [Chapter 27].

(Ord. 2002-2, 9/11/2002, §II)

§18-103. Applicability.

From the effective date of this Part, its provisions shall apply throughout the Borough of New Morgan. The provisions of this Part shall apply only to persons owning any property or building serviced by an on-lot sewage disposal system.

(Ord. 2002-2, 9/11/2002, §III)

§18-104. Permit Requirements.

1. No person shall install, rehabilitate, construct or request bid proposals for construction or alteration of an individual sewage system or community sewage system or construct or request bid proposals for construction or installation or occupancy of any building or structure for which an individual sewage system or community sewage system is to be installed without first obtaining a permit indicating that the site and the plans and specifications of such systems are in compliance with the provisions of the Pennsylvania Sewage Facilities Act, 35 P.S. §750.1 *et seq.*, and the standards adopted pursuant to that Act.

2. No system or structure designed to provide individual or community sewage disposal shall be covered from view until approval to cover the same has been given by the Sewage Enforcement Officer.

3. The Borough requires applicants for sewage permits to notify the Sewage Enforcement Officer of the schedule for construction of the permitted on-lot sewage disposal system so the inspection(s) in addition to the final inspection required by Act 537 may be scheduled and performed by the Sewage Enforcement Officer.

4. No building or zoning permit shall be issued by the Borough or its Zoning Officer or building official for a new building which will contain sewage generating facilities until a valid sewage permit has been obtained from the Sewage Enforcement Officer.

5. No building or zoning permit shall be issued and no work shall begin on any addition, alteration or conversion of any existing structure, if said addition, alteration or conversion will result in the increase or potential increase of sewage flows from the structure, until the Borough's Zoning Officer and the structure's owner receive from the Borough's Sewage Enforcement Officer either a permit for alteration, rehabilitation or replacement of the existing sewage disposal system or written notification that such a permit will not be required. The Borough's authorized agent shall determine whether the proposed addition, alteration or conversion of the structure will result in increased sewage flows.

6. No occupancy permit shall be issued by the Borough, its Zoning Officer or building official for the occupancy of any new building, addition, alteration or the

change of use of any building, addition or alteration until the Sewage Enforcement Officer has informed the Borough or said official that the existing sewage system or newly constructed sewage system is complete, operating and has had final inspection or that no such certification is necessary.

7. Sewage permits may be issued only by the Borough's Sewage Enforcement Officer. Sewage permits shall comply with all provisions of 25 Pa.Code, Chapters 72 and 73, Standards for Sewage Disposal Facilities, of rules and regulations of the Pennsylvania Department of Environmental Protection and/or any supplements or revisions thereto.

8. No contractor may proceed to install, construct rehabilitate or alter a system without verifying that the property owner has complied with this Section of this Part. (*Ord. 2002-2, 9/11/2002, §IV*)

§18-105. Inspections.

1. Any on-lot sewage disposal within the Borough shall be inspected by the person owning the building served by the system, and/or his/her agent, on a regular basis.

2. The Borough's authorized agent shall have the right to enter upon land for the purposes of inspection described herein and any system may be inspected by such agent at any reasonable time as of the effective date of this Part.

3. The inspection may include a physical tour of the property, the taking of samples from surface water, wells, other ground water sources the sampling of the contents of the sewage disposal system itself and/or the introduction of a traceable substance into the interior plumbing of the structure served to ascertain the path and ultimate destination of wastewater generated in the structure.

4. An inspection may be conducted by the Borough's authorized agent after the effective date of this Part for the purpose of determining the type and functional status of each sewage disposal system in the Sewage Management District. A written report shall be furnished to the owner of each property inspected and a copy of said report shall be maintained in the Borough records.

5. A schedule of routine inspections may be established by the Borough if necessary to assure the proper function of the systems in the Sewage Management District.

6. The Borough's authorized agent shall inspect systems known to be, or alleged to be, malfunctioning. Should said inspections reveal that the system is indeed malfunctioning, the Borough and its authorized agent shall take action to require the correction of the malfunction. If total correction is not technically or financially feasible in the opinion of the authorized agent, then action by the property owner to mitigate the malfunction shall be required.

7. There may arise geographic areas within the municipality where numerous on-lot sewage disposal systems are malfunctioning. A resolution of these area wide problems may necessitate detailed planning and municipally sponsored revision to that area's Act 537 official sewage facilities plan. When the Department of Environmental Protection authorizes the Borough, mandatory repair or replacement of individual malfunctioning sewage disposal systems within the study area may be delayed, at the discretion of the Borough, pending the outcome of the plan revision process. However,

the Borough may compel immediate corrective action whenever a malfunction, as determined by Borough officials, represents a serious public health or environmental threat.

(Ord. 2002-2, 9/11/2002, §V)

§18-106. Operation.

1. Only normal domestic wastes shall be discharged into any on-lot sewage disposal system. The following shall not be discharged into the system.

A. Industrial waste.

B. Automobile oil and other nondomestic oil.

C. Toxic or hazardous substances or chemicals including, but not limited to, pesticides, disinfectants, acids, paints, pain thinners, herbicides, gasoline and other solvents.

D. Clean surface or ground water, including water from roof or cellar drains, springs, basement sump pumps and french drains.

2. The Borough's authorized agent may require installation of water conservation devices and other methods to improve system operations or become a requirement by adoption of an ordinance regarding such devices and methods.

(Ord. 2002-2, 9/11/2002, §VI)

§18-107. Maintenance.

1. Any person owning a building served by an on-lot sewage disposal system which contains a septic tank shall have the septic tank pumped by a licensed pumper/hauler. The initial pump out shall take place no later than 6 months of the effective date of this Part in all areas of New Morgan Borough unless such area is covered by §18-105.7. Following the initial pump out every person shall have the tank pumped at least once every 3 years. A sewage system certification form from the pumper/hauler shall be submitted to the Borough immediately after each pump out.

2. Any tank pumping shall include an inspection of the baffles within the tank. If the baffles are in deteriorated condition the property owner is responsible to ensure replacement of the baffles with sanitary tees. No permit shall be required to replace deteriorated baffles with sanitary tees.

3. The required pumping frequency may be increased at the discretion of the Borough's authorized agent if the septic tank is undersized, if solids buildup in the tank is above average, if the hydraulic load on the system increases significantly above average, if a garbage grinder is used in the building, if the system malfunctions or for other good cause shown. If any person can prove that their tank had been pumped within 3 years of the effective date of this Part, then the Borough may delay that person's initial required pumping to conform to the general 3-year frequency requirement.

4. Any person owning a building served by an on-lot sewage disposal system which contains an aerobic treatment tank shall follow the operation and maintenance recommendations of the equipment manufacturer. In no case may the pumping intervals for aerobic treatment tanks exceed those required for septic tanks. Such persons shall maintain the aerobic system as required by the manufacturer's operation

manual. A sewage system certification form from the pumper/hauler shall be submitted to the Borough consistent with the required pumping periods in §18-108.1 of this Part.

5. Any person owning a building served by a cesspool or dry well shall have that system pumped according to the scheduled prescribed for septic tanks. As an alternative to this scheduled pumping of the cesspool or dry well, the owner may secure a sewage permit from the Sewage Enforcement Officer for a septic tank to be installed preceding the cesspool or dry well. For a system consisting of a cesspool or dry well preceded by an approved septic tank, only the septic tank must be pumped at the prescribed interval.

6. Any system pumping shall include an inspection of the sidewalls of the cesspool or drywell. If the sides are in need of cleaning, the homeowner is responsible to ensure completion and documentation of cleaning.

7. The Borough's authorized agent may require additional maintenance activity as needed including, but not necessarily limited to, cleaning and unclogging of piping, servicing and the repair of mechanical equipment, leveling of distribution boxes, tanks and lines, removal of obstruction roots or trees, the diversion of surface water away from the disposal area, etc.

8. The Borough shall issue a written notice of violation to any person who is the owner of property in the Borough if the Borough has not received a sewage system certification form proving that they have had their septic tank, cesspool or drywell pumped within the time limits as specified in this Part.

9. Within 30 days of notification by the municipality that a septic tank, cesspool or drywell has not been pumped within the time limits set by this Part, the owner shall have said septic tank, cesspool or drywell pumped and pumper/hauler shall provide the Borough with a sewage system certification form showing that it has been pumped.

(Ord. 2002-2, 9/11/2002, §VII)

§18-108. System Rehabilitation.

1. No person owning property in the municipality shall operate and maintain an on-lot, sewage disposal system in such a manner that it malfunctions. All liquid wastes, including kitchen and laundry wastes and water softener, backwash, shall be discharged to an on-lot septic system. No sewage system shall discharge untreated or partially treated sewage to the surface of the ground or into the waters of the Commonwealth unless a permit to discharge has been obtained from the Pennsylvania Department of Environmental Protection.

2. The Borough shall issue a written notice of violation to any person who is the owner of a property in the Borough which is found to be served by a malfunctioning on-lot sewage disposal system or which is discharging raw or partially treated sewage without a permit.

3. Within 30 days of notification by the Borough that a malfunction has been identified, the property owner shall make application to the Sewage Enforcement Officer for a permit to repair or replace the malfunctioning system. Within 60 days of initial notification by the Borough, the construction shall be completed unless seasonal or unique conditions approved by the Borough mandate a longer period, in which case the Borough shall set an extended completion date.

4. The Borough's authorized agent shall have the authority to require of any malfunction by the following methods: cleaning, repair or replacement of components of the existing system, additional capacity or otherwise altering or replacing the system's treatment tank, expanding the existing disposal area, replacing the existing disposal area, replacing a gravity distribution system with a pressurized system, replacing the system with a holding tank, connection to central collection system, other alternatives as appropriate for the specific site.

5. In lieu of, or in combination with, the remedies described in subsection .4 above, the Borough's authorized agent may require the installation of water conservation equipment and the institution of water conservation practices in structures served. Wastewater generation in the structure may also be reduced by requiring changes in water usage patterns in the structure served. The use of laundry facilities may be limited to one load per day or discontinued altogether, etc.

6. In the event that the rehabilitation measures in subsections .1 through .5 are not feasible or do not prove effective, the Borough may require the owner to apply to the Pennsylvania Department of Environmental Protection for a permit to install an individual spray irrigation treatment system or a single residence treatment and discharge system. Upon receipt of said permit, the owner shall complete construction of the system within 60 days, unless seasonal or unique conditions mandate a longer period. The Borough shall determine the construction period in this case.

7. Should none of the remedies described above prove totally effective in eliminating the malfunction of an existing on-lot sewage disposal system, the property owner is not absolved of responsibility for that malfunction. The Borough may require whatever action is necessary to lessen or mitigate the malfunction to the extent that it feels necessary. This may include requirement to connect to a community system regardless of distance to such system.

8. In areas that have been designated by the Borough for future service by sanitary sewer lines, the Borough's authorized agent may design a program of interim remedial actions to be implemented until sanitary sewer is available to the effected property.

(Ord. 2002-2, 9/11/2002, §VIII)

§18-109. Liens.

The Borough, upon written notice from the Borough's authorized agent that an imminent health hazard exists due to failure of a property owner to maintain, repair or replace an on-lot sewage disposal system as provided under the terms of this Part, shall have the authority to perform, or contract to have performed, the work required by the Borough's authorized agent. The owner shall be charged for the work performed and, if necessary, a lien shall be entered therefore in accordance with the law.

(Ord. 2002-2, 9/11/2002, §IX)

§18-110. Disposal of Septage.

1. All septage originating within the Borough Sewage Management District shall be disposed of at sites or facilities approved by the Pennsylvania Department of Environmental Protection. Approved sites or facilities shall include the following: septage treatment facilities, wastewater treatment plants, composting sites, and

approved farm lands.

2. Septage pumper/haulers operating within the Borough Sewage Management District shall operate in a manner consistent with the provisions of the Pennsylvania Solid Waste Management Act, Act of July 7 1980, P.L. 380, No. 97, as amended, 35 P.S. §6018.101 *et seq.*

(*Ord. 2002-2, 9/11/2002, §X*)

§18-111. Administration.

1. The Borough shall fully utilize those powers it possesses through enabling statutes and ordinances to effect the purposes of this Part.

2. The Borough may employ qualified individuals to carry out the provisions of this Part. Those employees may include a certified Sewage Enforcement Officer and may include a Codes Enforcement Officer, Secretary, Administrator or other persons as required. The Borough may also contract with private qualified persons or firms as necessary to carry out the provisions of this Part.

3. All permits, records, reports, files and other written material relating to the installation, operation and maintenance and malfunction of on-lot sewage disposal system in the Borough shall become the property of the Borough. Existing and future records shall be available for public inspection. All records pertaining to sewage permits, building permits, occupancy permits and all other aspects of the Borough's sewage management program shall be made available, upon request, for inspection by representatives of the Pennsylvania Department of Environmental Protection.

4. The Borough Council shall establish a fee schedule by resolution and subsequently collect fees by any appropriate method including the use of municipal liens to cover the cost to the Borough of administering this program.

(*Ord. 2002-2, 9/11/2002, §XI*)

§18-112. Administrative Appeals.

1. Appeals from the authorized agents, under determination of the Borough or this Part, shall be made to the Borough Council. Such appeals shall be in writing, addressed to Borough Council at the Borough's business office and shall be filed within 30 days of the date of determination appealed from.

2. *Hearings.* The Borough Council shall conduct hearings and make decisions in accordance with the following requirements:

A. Written notice shall be given to the appellant, the Zoning Officer, such other persons as the Borough shall designate by ordinance, to any person who has made timely request for the same and to any other persons as the Board of Review shall determine. Written notices shall be given at such time and in such manner as shall be prescribed by the Borough Council, but shall not give less than 15 days notice of the said hearing.

B. The Borough may prescribe reasonable fees with respect to hearings before the Borough Council. Fees for such hearings may include compensation for the Secretary and notice and advertising costs and necessary administrative overhead connected with the hearing. The cost, however, shall not include legal expenses of the Borough Council, expenses for engineering, architectural or other technical

consultants or expert witness costs.

C. The hearing shall be held within sixty (30) days from the date of the appellant's request, unless the appellant has agreed, in writing, to the extension of time.

D. The hearing shall be conducted by the Borough Council, which may include an alternate.

E. The decision of the Borough Council shall be made in writing within 30 days of the termination of the hearing and shall be communicated by first class mail to the appellant and any other parties who have appeared at the addresses set forth by them.

F. The parties to the hearing shall be the Borough, the appellant, any person affected by the appeal who has made timely appearance of record before the Borough Council and any other person including civic, community or State organizations permitted to appear by the Borough Council. The Borough Council shall have the power to require that all persons who wish to be considered parties enter appearance in writing.

G. The President or acting President of the Borough Council or presiding shall have the power to administer oath and issue subpoenas to compel the attendance of the witnesses and the production of relevant document and papers, including witnesses and documents requested by the parties.

H. The parties shall have the right to be represented by counsel and shall be afforded the opportunity to respond and present evidence and argument and cross-examine adverse witnesses on all relevant issues.

I. Formal rules of evidence shall not apply, but immaterial or unduly repetitious evidence may be excluded.

J. It is not necessary for the Borough Council to keep a stenographic record of the proceedings, however, any party desiring to keep a stenographic record will be allowed to do so at their expense. Said stenographic record to be compiled by a property recognized stenographer. Any parties ordering stenographic records shall pay their own costs.

K. The Borough Council shall not communicate directly or indirectly with any party or his representatives in connection with any issue involved except upon notice and opportunity for all parties to participate, shall not take notice of any communication, reports, staff memorandum, or other materials, except advice from their Solicitor, unless the parties are afforded an opportunity to contest the material so noticed and shall not inspect the site or its surroundings after the commencement of hearings with any party or his representative unless all parties are given an opportunity to be present.

L. Where legal counsel is desired an attorney, other than the Solicitor of the Borough, may be appointed by the Borough Council.

(Ord. 2002-2, 9/11/2002, §XII)

§18-113. Enforcement.

1. *Enforcement Notice.* If it appears to the Borough that a violation of this Part has occurred, Borough shall initiate enforcement proceedings by sending an enforce-

ment notice as provided in this Section.

2. The enforcement notice shall be sent to the owner of record of the parcel on which the violation has occurred, to any person who has filed a written request to receive enforcement notices regarding that parcel, or to any person requested in writing by the owner of record.

3. The enforcement notice shall state at least the following:

A. The name of the owner of record or any other person against whom the Borough intends to take action.

B. The location of the property in violation.

C. The specific violation with the description of the requirements which have not been met, citing in each instance the applicable provisions of this Part.

D. The date before which the steps for compliance must be commenced and the date before which the steps must be completed.

E. The recipient of the notice has the right to appeal to the Borough Council within a prescribed period of time in accordance with the procedures set forth in this Part.

F. Failure to comply within that time specified, unless extended by appeal to the Borough Council, constitutes a violation with possible sanctions clearly described.

4. *Jurisdiction.* Magisterial district judges shall have initial jurisdiction over proceedings brought under this Part. [Ord. 2015-4]

5. *Enforcement Remedies.*

A. Any person, firm or corporation who shall violate any provision of this Part, upon conviction thereof in an action brought before a magisterial district judge in the manner provided for the enforcement of summary offenses under the Pennsylvania Rules of Criminal Procedure, shall be sentenced to pay a fine of not more than \$1,000 plus costs together with reasonable attorney fees and, in default of payment of said fine and costs, to a term of imprisonment not to exceed 90 days. Each day that a violation of this Part continues or each Section of this Part which shall be found to have been violated shall constitute a separate offense. [Ord. 2015-4]

(Ord. 2002-2, 9/11/2002, §XIII; as amended by Ord. 2015-4, 9/8/2015)

Part 2**Sewer Code****A. General Provisions****§18-201. Definitions.**

Unless the context specifically indicates otherwise, the meaning of terms used in this Part shall be as follows:

Borough—the Borough of New Morgan, Berks County, Pennsylvania, or any municipal authority or entity created by the Borough of New Morgan for the purpose of carrying out the provisions of this Part.

Building sewer—the same as service line or house connection. The extension from the building side of an existing on site drainage system, of any structure, to the lateral of the sewer system. Also, in new construction or renovation, the line from the building to the sewer system lateral.

Building trap or trap—a device, fitting, or assembly of fittings installed on the building sewer line to prevent circulation of air between the drainage system of the building and the building sewer.

Commercial establishment—any structure intended to be used wholly or in part for the purposes of carrying on a trade, business, or profession or for social, amusement, religious, educational, charitable or public uses. Exclusive of a home occupation as defined by the Borough Zoning Ordinance [Chapter 27] provided non-industrial wastes are discharged.

DEP—the Pennsylvania Department of Environmental Protection.

EDU (equivalent dwelling unit)—the unit of measure based on the estimated average daily flow of sewage, measured in gallons per day, from a typical living unit. Also, the unit used to assess tapping fees. At the time of adoption of this Part an EDU was equal to 350 gallons of sewage per day.

Engineer—a professional currently registered and certified in the State of Pennsylvania as a professional engineer. Unless specifically identified or inferred otherwise, “Engineer” shall mean the Borough Engineer.

First class bedding—a cradle of AASHTO #57 stone with a minimum depth extending 6 inches below the invert of the pipe and 12 inches above the crown of the pipe as shown in the standard detail provided. Form a cradle in the bedding material by means of a template conforming to the curvature of the outside surface of the bottom of the pipe, or another approved method, to provide uniform contact under, around, and above the pipe.

Fresh air vent—a vertical direct connection leading from a trap placed in the sewage drain piping of a building or placed along the alignment of the building sewer pipe connecting the piping to the outside atmosphere.

Grease trap—a device(s) (tank, compartment, or chamber) used to capture animal fat when melted or soft, any oily substance present in raw wool, or any oil or viscous lubricant or similar materials which prevents same from entering the sanitary sewer

conveyance and/or collection system. Also, referred to as an “interceptor.”

Industrial establishment—any structure or use intended to be used wholly or in part for the manufacturing; fabricating, processing, cleaning, laundering, or assembly of any product, commodity, or article.

Institutional establishment—any structure or use intended to be used by four or more unrelated occupants for a common, lawful purpose (e.g., educational, recreational, religious, therapeutic; rehabilitation, correction) including, where necessary to serve such purpose, continually staffed professional supervision.

Industrial waste—any solid, liquid, gaseous substance, water home wastes, or a form of energy rejected or escaping, other than human fecal wastes and wastes directly associated therewith, from any industrial, manufacturing, trade, or business process or from the development, recovery, or processing of natural resources, as distinct from sanitary sewage. Industrial sewage is to be treated by the owner on site to domestic waste strength and composition.

Lateral—that part of the sewer system extending from the sewer main to the curb line, or if there is no curb line, to the property line or the limits of the easement. If no such lateral is provided, then lateral shall mean that place in the sewer system main provided for connection of the building sewer.

Living unit—any structure, or portion thereof, utilized for separate purposes, having a separate or common kitchen anchor separate or common sanitary facilities, including, but not limited to, a living apartment, dwelling, or any other one family living unit.

Multiple unit building—any house, apartment building, or any other structure having more than one living unit.

Owner—any person vested with legal, equitable, sole, or partial ownership of any property served directly, or indirectly, by the sewer system.

PennDOT—the Pennsylvania Department of Transportation.

Plumbing Inspector/Inspector—the person, persons, or agents of said persons appointed by the Borough to enforce the terms of this Part.

Property—any property located within the Borough upon which there is erected a structure intended for continuous or periodic habitation for a living unit, occupancy, or use by human beings or animals and from which structure sanitary sewage and/or industrial wastes shall be or may be discharged. As sewer service will not be provided to empty lots, property is assumed to be improved property.

Quarter—a time period for billing sewer charges consisting of a 3-month period.

Sanitary sewage—the normal water conveying household and toilet wastes from residences, institutions, commercial, and industrial establishments.

Sewer clean-out—a cleanout on the service line located just inside or outside the building wall through which the building sewer or lateral may be cleaned.

Sewer system—all facilities operated by the Borough for the collection, transportation, treatment, or disposal of sanitary sewage.

Tapping fee—the fee paid by each EDU, or portion thereof, to tap into the Borough sewer system.

(Ord. 2000-2, 9/27/2000, §101-1)

§18-202. Connection to Public Sewers Required.

1. The owner of any property benefitted, improved or accommodated by the sewer system, shall connect the property therewith, in the manner the Borough sets forth in this Part, as amended, within 60 days after notice to such owner from the Borough.

2. The notice by the Borough to make a connection to the sewer, shall be consistent with the provisions of this Part and shall consist of a written or printed document requiring the connection. The notice will specify that the connection shall be made within 60 days from the date such notice is given. Such notice may be given at any time after the sewer is in place and is operational. Such notice shall be served upon the owner by personal service, registered mail, or by such methods as may be required by law.

3. *Exception.* Any existing residential living unit, as of the date of enactment of this Part, which such living unit can not make a connection without the assistance of a sewage pump, is exempt from the mandatory section of this chapter. However, this applies only to residential living units with functioning on site systems that have not been the subject of any Borough Sewage Enforcement Officer or DEP violations or complaints. Any violations or complaints received from the foregoing agencies will automatically require the owner to purchase, install a pump, and make the connection to the sewer system. Living units with holding tanks are not exempt and will be required to make the connection. The installation and the pump purchased require approval and inspection by the Borough Engineer.

4. All commercial, institutional and/or industrial establishments within the Borough of New Morgan shall be required to connect to the public sewer system.

(Ord. 2000-2, 9/27/2000, §101-2)

§18-203. Use of Connection.

1. Use of the new connection to the sanitary sewer system will not be permitted until the installation has been inspected, tested, and approved in accordance with procedures herein set forth.

2. No use of the sanitary sewer system will be permitted until the collection system, pumping facilities, and treatment plant have been made ready to accept sewage for disposal.

3. Maintenance, repair, or replacement of the building sewer between the sewer main and the building served by the building sewer shall be the responsibility of the property owner. However, if the Borough originally installed the lateral, and the repair, replacement, or maintenance of the lateral, or that portion of the lateral constructed by the Borough, is necessitated by a defect in the lateral or any portion of the lateral, which said defect was not caused by the property owner, the Borough shall be responsible for the maintenance, repair, or replacement of the lateral or that portion of the lateral, if said defect in the lateral or that portion of the lateral so affected was caused by improper construction and/or installation by the Borough, or in the event the defect in the pipe is the result of a manufacturing defect.

4. No sump pumps for the discharge of groundwater or stormwater of any kind shall be permitted to be connected and/or discharged into the sanitary sewer system.

5. The discharge of stormwater or groundwater to the sanitary sewer system shall

be prohibited.

(Ord. 2000-2, 9/27/2000, §101-3)

§18-204. Certain Discharges Prohibited.

1. *Disposal of Certain Materials.*

A. From and after the passage of this Part, it shall be unlawful for any person, firm, or corporation to use any sanitary and/or storm sewer within the Borough for the disposition of any residue, whether liquid or solids, removed from any cesspool, septic tank, leeching well, or any other container or reservoir used for the on-site disposal of sewage, located within or without the boundaries of the Borough.

B. *Cleaning Solvents, Grease, and Grease Traps.* It shall be unlawful for any person, firm or corporation to dispose any cleaning solvent from any dry-cleaning establishment, or any residue from any grease trap, or any similar solid or liquid other than human sewage, into any municipal sanitary sewer line. Provided, however, that if such other waste, materials or refuse can be separated from such sewage or drainage by the use and installation of a grease trap, then such grease trap may be installed. Provided that such installation shall be first approved in writing by the Borough and installed under its supervision, and the refuse or contents of such grease trap shall not be disposed of, drained, or poured into the municipal sanitary or stormwater sewer lines, mains or systems. All such installations shall and must be in accordance with the provisions of §18-254.2.

C. Any industrial or commercial entity discharging into the sewer system shall comply with the provisions of Part 2F and the rules and regulations of New Morgan Borough.

(Ord. 2000-2, 9/27/2000, §101-4)

§18-205. Unlawful Discharge of Sewage or Industrial Wastes Declared a Nuisance.

Any person who erects, constructs, uses or maintains a privy, cesspool, sinkhole, septic tank or on lot individual sewage system on any property accessible to the sewer system, or otherwise erects, constructs, uses or maintains any pipe, conduit, drain or other facility for the discharge of sanitary sewage or industrial wastes in violation of this Part, shall be deemed and shall be declared to erecting, constructing and maintaining a nuisance, which nuisance the Borough is hereby authorized and directed to abate in the manner provided by law.

(Ord. 2000-2, 9/27/2000, §101-5)

§18-206. Connections to Comply with Requirements.

No connection shall be made to the sewer system, except in compliance with the ordinances and resolutions, as well as such rules and regulations as may from time to time be enacted, adopted, approved or promulgated by the Borough, and until all connection and tapping fees are paid.

(Ord. 2000-2, 9/27/2000, §101-6)

§18-207. Failure to Connect.

After the expiration of the particular periods specified in §18-202 of this Part, if any owner of an occupied building on property, accessible to the sewer system, shall have failed to connect such property with the sewer system as required by said §18-202, the Borough shall cause to be served on the owner of such property so failing to connect to said sewer system, and also upon the occupants of the building in question, a copy of this Part and a written notice requiring such connection to be made, and such notice shall further state the requirements shall be complied with within 30 days from the date thereof. Upon the failure of such owner to make such connection, the Borough may make the same, and collect the cost thereof from the owner by a municipal claim or in an action of assumpsit.

(Ord. 2000-2, 9/27/2000, §101-7)

§18-208. Powers and Authority of Inspectors and Right of Access.

1. The Borough inspector shall have access to all parts of a premises during the construction of the sewer system, sewer laterals, and building sewers to ensure there are no illegal connections.

2. The Borough inspector shall have access to all parts of a premises to inspect for illegal connections to the public sewer systems upon obtaining evidence of an illegal connection through the use of meters, videos, or any other means available.

3. The property owner, of a premises where an illegal connection is found, shall give permission to the Borough to enter into the premises to verify said illegal connection, and shall assume all associated costs incurred by the Borough.

(Ord. 2000-2, 9/27/2000, §101-8)

§18-209. Adoption of Rules and Regulations.

The Borough reserves the right to and may, from time to time, adopt, revise, amend, and re-adopt such rules and regulations as it deems necessary and proper for the use and operation of the sewer system, and all such rules and regulations shall be and become a part of this Part.

(Ord. 2000-2, 9/27/2000, §101-9)

§18-210. Violations and Penalties.

The provisions of this Part are declared to be for the: prevention, abatement, and regulation of water pollution; preservation and enhancement of public and private water supplies; and health, safety and welfare of the citizens of the Borough. Any person violating any provisions of this Part, upon conviction thereof, upon conviction thereof in an action brought before a magisterial district judge in the manner provided for the enforcement of summary offenses under the Pennsylvania Rules of Criminal Procedure, shall be sentenced to pay a fine of not more than \$1,000 plus costs together with reasonable attorney fees and, in default of payment of said fine and costs, to a term of imprisonment not to exceed 90 days. Each day that a violation of this Part continues or each Section of this Part which shall be found to have been violated shall constitute a separate offense. In cases where the violation is with respect to an occupied building or property required to make connection to the sewer system, which said property or building is or would be subject to a tapping fee, an annual sewer rental, or

charge of more than one equivalent dwelling unit, the fine for violation of any provision of this Part shall not be more than \$1,000 for each such unit or fraction thereof and costs. Or in default of payment thereof, by imprisonment for a term as provided by law for summary offenses. Each 30-day period during which such violation of such provisions shall continue shall be deemed to be a separate offense. Each occupied building, or each living unit in a multiple unit building, whether or not the owners thereof shall be permitted to connect two or more buildings or units by a single common connection to a lateral of the sewer system or shall be required to make separate connection for each occupied building or unit, shall constitute a separate and distinct unit under the provisions of this Chapter, and the persons owning occupied buildings, consisting of multiple units contained in the same structure, who violate any of the provisions of this Part shall be subject to the above fines for each and every one of such occupied buildings or units which are in violation of the provisions of this Part.

(Ord. 2000-2, 9/27/2000, §101-10; as amended by Ord. 2015-4, 9/8/2015)

B. Tapping Fees**§18-221. Fees Established.**

1. There is hereby fixed and imposed upon the owner of each property making any connection to the sewer system on or after the date hereof, directly or indirectly, including those changing the type of use of property previously connected or connecting one or more new uses through an existing connection, regardless of whether such property is connected separately or through one or more existing or new lateral sewers or sewer connections or collection lines owned by any owner other than the Borough, a minimum tapping fee of \$3,728 per EDU, or portion thereof, of capacity required per use for connection. The minimum tapping fee components are:

A. A capacity part of \$3,397 per EDU.

B. A distribution or collection part of \$331 per EDU.

2. The tapping fees represent initial tapping fees. The Borough, from time to time following the completion of construction of a sewer extension, shall charge such supplemental tapping fee as prescribed in this Part.

3. The minimum tapping fee for any property or use shall be at a rate of one EDU. The tapping fee shall be determined by the Borough's estimate of sewer usage for the relevant type of property use (or most similar type of sewer use) as determined by the Engineer, in consultation with 25 Pa.Code, Chapter 73, of the DEP regulations, where applicable. Any building, structure, or use that contains more than one use or activity shall be charged a separate tapping fee for each use or activity based upon the above classifications.

(*Ord. 2000-2, 9/27/2000, §101-13; as added by Ord. 2001-2, 2/14/2001, §1*)

§18-222. Additional Fees.

1. Where any building connected to the sewer system shall be converted, enlarged or remodeled, or additional buildings shall be constructed on a property and connected indirectly to the sewer system through an existing lateral, so as to create or establish additional uses as classified in this Part 2B, an additional tapping fee in accordance with this Part 2B for each such additional use shall be payable by the owner of the property so improved to the Borough.

2. The tapping fees imposed hereunder with respect to property connected shall be in addition to any connection fee or inspection charge imposed by the Borough, and any rental or other charges fixed, charged or imposed by the Borough by reason of the use, or availability for use, of the sewer system by such property.

(*Ord. 2000-2, 9/27/2000, §101-14; as added by Ord. 2001-2, 2/14/2001, §1*)

§18-223. Certification of Use and Inspection.

Each person applying for a connection to the sewer system shall certify to the Borough its proposed use(s) and the reasonably anticipated sewer usage for the property to be connected, on a form prescribed by the Borough. The Borough shall have the right at any time to investigate the actual sewer usage of any property so connected in order to verify the actual sewer usage conforms to the applicant's certification and to impose additional sewer tapping fees per additional EDU's or multiples or fractions

thereof, in accordance with the above tapping fee schedule in conjunction with the additional capacity requirements of such property.

(*Ord. 2000-2, 9/27/2000, §101-15; as added by Ord. 2001-2, 2/14/2001, §1*)

§18-224. Application to Increase Usage Required.

No residential, commercial, institutional, or industrial user shall increase its sewer usage beyond that set forth in its original application for connection, or as determined by the Borough at the time of connection, or beyond its existing usage on the effective date of this Part, without first making application to the Borough for such increased usage on a form prescribed by the Borough and obtaining the written approval of the Borough. All applicants shall pay to the Borough such additional tapping fees per additional EDU's or multiple or fraction thereof, in accordance with the above tapping fee schedule in conjunction with the additional capacity requirements of such customer.

(*Ord. 2000-2, 9/27/2000, §101-16; as added by Ord. 2001-2, 2/14/2001, §1*)

§18-225. Decreased Usage.

No refund, rebate, or credit of tapping fees shall be made in the event of a decrease in sewer usage.

(*Ord. 2000-2, 9/27/2000, §101-17; as added by Ord. 2001-2, 2/14/2001, §1*)

§18-226. Fees Nontransferable.

No tapping fees paid under this Part for any distinct lot, parcel, or property shall be transferable to any other lot, parcel, or property.

(*Ord. 2000-2, 9/27/2000, §101-18; as added by Ord. 2001-2, 2/14/2001, §1*)

§18-227. Time and Methods of Payment.

Tapping fees shall be due and payable upon the Borough's issuance of a permit for connection. No sewage conveyance or treatment capacity shall be reserved for any person unless the applicable tapping fees have been paid in full. For increased sewer use or a change in use, the additional tapping fees shall be due and payable at the time application is made or when imposed by the Borough, as the case may be.

(*Ord. 2000-2, 9/27/2000, §101-19; as added by Ord. 2001-2, 2/14/2001, §1*)

§18-228. Delinquent Payment, Penalties, and Municipal Liens.

1. Sewer tapping fees shall be subject to a penalty of 10 percent if not paid within 30 days of the billing date. If not paid within 60 days after becoming due, the bill plus the penalty, if unpaid, shall bear interest from the due date at the rate of 5 percent or fraction thereof until paid. These penalties shall be concurrent with all other remedies, legal and equitable, available to the Borough for collection of said fees, including but not limited to municipal lien and assumpsit remedies.

2. All sewer tapping fees, together with all penalties and interest thereon, not paid on or before the end of 60 days from the date of each bill shall be deemed to be delinquent. It shall be the duty of the Borough to proceed to collect such delinquent fees, together with penalties and costs accrued thereon, including attorneys fees, either by an action of law or filing a lien(s) for the same in the Office of the Prothonotary of the

Court of Common Pleas of Berks County, Pennsylvania. Such liens, together with penalty and costs accrued thereon, including attorneys' fees, shall be filed and collected in accordance with law.

(*Ord. 2000-2, 9/27/2000, §101-20; as added by Ord. 2001-2, 2/14/2001, §1*)

C. Sewer Rents

§18-231. Imposition of Charges.

There is hereby imposed a monthly rental fee or charge, upon the owners of the property served, for the use of the Borough sewer system and the cost of sewage treatment. [Ord. 2002-1]

A. *Expenses to Be Met by Charges.* The monthly rental or charge shall be sufficient to meet the following classes of expenses: [Ord. 2002-1]

(1) The amount expended monthly by the Borough in the operation, administration, maintenance, repair, alteration, inspection, depreciation, or other expense in relation to such sewer system, pumping stations, and sewage treatment. [Ord. 2002-1]

(2) Such monthly amount as may be necessary to provide for the amortization of the indebtedness incurred by the Borough in the construction or acquisition of such sewerage system, interest thereon, and such further sums as may be sufficient to pay the amount agreed to under the terms of any contract with any authority or municipality furnishing sewage disposal or treatment services to the Borough. Therefore, said improvements will become self liquidating. [Ord. 2002-1]

(3) Sufficient funds as needed to establish a margin of safety of 10 percent.

B. *Method of Determining Charges.* The charges to each connection will be based on the quantity of sewage discharged to the public sewer system from each connection. The charge will be on a per 1,000 gallon basis. The cost per 1,000 gallons will be based on the total costs as described in paragraph A from the preceding month divided by the total flow to the wastewater treatment plant from the preceding month. In addition, a annual rental fee per connection will be charged. The annual rental charge for each connection will be \$60 per year paid at a rate of \$5 per month. The rental charge shall start at the time of connection and include the month during which time the connection is made. [Ord. 2002-1]

C. *Method of Determining Flows from Connection.* The flow from each connection will be estimated by one of the following methods.

(1) The estimated sanitary sewage flow from connections serving residential uses will be based on 350 gallons per day (gpd) per dwelling unit.

(2) The estimated flow from connections serving uses other than residential and having an estimated average daily flow of less than 10,000 gpd will be based on water meter readings as stipulated in §§18-232, 18-233 and 18-234.

(3) The estimated flow from connections serving uses other than residential and having an estimated flow of 10,000 gpd or greater will be based on sewerage meter readings. The sewerage meters shall be installed prior to connection to the public sewer system, shall be in accordance with Part 2G, and shall be approved by the Borough. The sewage meters will be read on a monthly basis. [Ord. 2002-1]

D. *Multiple Use.* If it is allowed by special exception and approved by the

Engineer, each case of a combination one or more residential, commercial, industrial, or institutional establishments on one property, all having the use of the sewer system through one sewer connection, then each such establishment shall be separately charged the above mentioned monthly rental and meter rate as though each were separately connected to the sewer system, and if there is only one meter for any such combination, the Borough may estimate the amount of sewage flow discharged by each individual establishment if necessary. [*Ord. 2002-1*]

(*Ord. 2000-2, 9/27/2000, §101-21; as amended by Ord. 2002-1, 9/11/2002, §§1-7*)

§18-232. Statements of Water Consumption.

The Borough Secretary shall secure, from Morgantown Properties, monthly statements of the total number of gallons of water used by each individual customer or property connected to the sewerage system. Fees shall be paid to Morgantown Properties for the cost and expense incurred by their supplying the Borough with this information. Such fees paid to Morgantown Properties shall be included as part of the monthly sewer rental. If in any case Morgantown Properties records disclose the number of gallons of water used are for less than a full period of 1 month, the Borough is authorized to compute the water consumption of said property for a full period, based on the use for the partial period. The costs of the Borough in reading the meters of the properties not customers of Morgantown Properties shall be billed per Section §18-233.

(*Ord. 2000-2, 9/27/2000, §101-22; as amended by Ord. 2002-1, 9/11/2002, §8*)

§18-233. Non-metered Water Supply for Connections with Estimated Flows of less than 10,000 gpd.

1. When a property uses water from a source other than the Morgantown Properties supply system, the owner of such property shall purchase and install, without cost to the Borough, an approved meter(s) to measure the quantity of water received from the other source. The only meter allowed for use is the one approved by the Borough. The sewer rental based upon water received from other than the Morgantown Properties supply system will be billed the same amount per gallon as a Morgantown Properties customer, with the addition of the costs required for the Borough to obtain the meter reading. If the owner of said property fails to install an approved meter(s) the Borough shall make and furnish an estimate of the amount of water from sources other than the water supply system. Any dispute as to the estimated amount shall be submitted to the Borough, whose decision on the matter shall be final for the current month. [*Ord. 2002-1*]

2. Such water meter shall be installed on the owner's private well(s) discharge pipe. The owner shall install said meter within 30 days of receipt of said meter and written notice from the Borough to install said meter. In the event that a property owner or user shall fail to install said meter within the said 30-day time period, the Borough reserves the right to install such meter and bill the property owner or user for such installation.

3. The owner of the property upon which such meter is installed shall be responsible for its installation, maintenance and safekeeping. All repairs thereto shall be authorized by the Borough or other public water purveyor, at the property owner's expense. Such repairs are to be performed whether necessary by ordinary wear and tear

or other causes. Said charges for such installation and repairs, shall be billed to the property owner or user and said bill shall be due and payable at the same time and in the same manner as are the bills for sewer service. Such bills from and after their due date, including penalties, interest, costs and attorney fees, shall constitute a lien upon the property upon which such measuring device is installed. This shall not constitute a waiver of but shall be in addition to and concurrent with all other remedies available to the Borough to collect such charges. In all cases, the property owner or user shall permit the Borough to enter upon the premises to inspect and approve the property owner or user's installation of said meter or measuring device, or, if necessary, for the Borough to make the installation, and shall cooperate fully with the Borough or other public water purveyor in making the premises involved available for such inspection, approval or installation by the Borough or other public water purveyor at reasonable times.

(*Ord. 2000-2, 9/27/2000, §101-23; as amended by Ord. 2002-1, 9/11/2002, §9*)

§18-234. Allowances for Water Not Discharged into Sewers.

There may exist a property, upon which a .sewer rental is hereby imposed, that has a significant portion of water not discharged into the sewer system of the Borough. In such a case, the quantity of water, so used, may be separately measured by an auxiliary meter approved by the Borough. Said meter must be purchased, installed, and maintained without cost to the Borough.

(*Ord. 2000-2, 9/27/2000, §101-24*)

§18-235. Sewage Flow Meters for Connections with Estimated Average Daily Flows of 10,000 gpd or Greater.

1. When the estimated sewage flow from a connection is 10,000 gpd or greater, the owner of the property in which the connection serves shall purchase and install, without cost to the Borough, an approved meter(s) to measure the quantity of sewage discharged to the public sewer system. The only meter allowed for use is the one approved by the Borough. The sewer rental based upon the metered sewage flow will be billed the same amount per gallon as a Morgantown Properties customer, with the addition of the costs required for the Borough to obtain the meter reading. If the owner of said property fails to install an approved meter(s) the Borough shall make and furnish an estimate of the amount of sewage flow discharged to the public sewer system. Any dispute as to the estimated amount shall be submitted to the Borough, whose decision on the matter shall be final for the current month. [*Ord. 2002-1*]

2. Such sewage meter shall be installed on the owner's building sewer or lateral. The owner shall install said meter prior to connection to the public sewer system. In the event that a property owner or user shall fail to install said meter, the Borough reserves the right to install such meter and bill the property owner or user for such installation.

3. The owner of the property upon which such meter is installed shall be responsible for its installation, maintenance and safekeeping. All repairs thereto shall be authorized by the Borough, at the property owner's expense. Such repairs are to be performed whether necessary by ordinary wear and tear or other causes. Said charges for such installation and repairs, shall be billed to the property owner or user and said bill shall be due and payable at the same time and in the same manner as are the bills

for sewer service. Such bills from and after their due date, including penalties, interest, costs and attorney fees, shall constitute a lien upon the property upon which such measuring device is installed. This shall not constitute a waiver of but shall be in addition to and concurrent with all other remedies available to the Borough to collect such charges. In all cases, the property owner or user shall permit the Borough to enter upon the premises to inspect and approve the property owner or user's installation of said meter or measuring device, or, if necessary, for the Borough to make the installation, and shall cooperate fully with the Borough in making the premises involved available for such inspection, approval or installation by the Borough at reasonable times.

(*Ord. 2000-2, 9/27/2000, §101-25; as amended by Ord. 2002-1, 9/11/2002, §10*)

§18-236. Change in Classification of Property.

If the use or classification of any property should change within any quarterly period, the difference in the sewer rental, prorated on a monthly basis to the nearest calendar month, will be charged or credited, as the case may be, on the bill for the succeeding quarterly period. Additional classifications and sewer rentals may be established by the Borough from time to time.

(*Ord. 2000-2, 9/27/2000, §101-26*)

§18-237. Time and Methods of Payment.

Sewer rentals or charges shall be paid monthly. Billing for sewer rentals shall be sent each month of each year, for the 1 month period immediately preceding the date of the bill. The bills for sewer rentals for the monthly period during which a property is connected will be prorated on the basis of the applicable rate. All bills shall be due and payable in full within 30 days of their respective dates.

(*Ord. 2000-2, 9/27/2000, §101-27; as amended by Ord. 2002-1, 9/11/2002, §11*)

§18-238. Delinquent Payment, Penalties, and Municipal Liens.

1. The charges for sewer service shall be subject to a 10 percent penalty if not paid within 30 days after the date of the bill. If not paid within 60 days after the date of the bill, the bill plus the penalty shall bear interest from the due date at the rate of 5 percent per month, or fraction thereof, until paid.

2. All persons connected to the sewer system must give the Borough their correct address. Failure to receive bills will not be considered an excuse for nonpayment nor permit an extension of the period during which bills are payable at face.

3. Payments made, as evidenced by the United States Post Office mark, on or previous to the end of the period during which the bills are payable at face, will be deemed to be a payment within such period.

4. All sewer rentals, together with all penalties thereon, not paid on or before the end of 60 days from the date of each bill shall be deemed to be delinquent. All delinquent sewer rentals, all penalties and interest thereon, and all attorney fees and costs shall be a lien on the property served and shall be entered as a lien against such property in the office of the Prothonotary of Berks County and shall be collected in the manner provided by law for the filing and collection of such liens.

5. The Borough shall have the right to terminate water or sewer service from the delinquent premises as allowed by law. The delinquent owner will be charged for all costs associated with such termination and the corresponding charges for the re-establishment of water service.

(Ord. 2000-2, 9/27/2000, §101-28)

§18-239. Revenue to Be Segregated from Other Borough Funds.

The funds received by the Borough from the collection of the sewer rentals, charges, and all penalties and interest thereon, as herein provided for, shall be segregated and kept separate and apart, except for purposes of investment, from all other funds of the Borough and shall be used only for the purpose of defraying the expenses of the Borough in the operation, maintenance, repair, alteration, inspection, depreciation, or other expenses in relation to such sewer system and for such payments as the Borough may be required to make under any agreement it may enter into in connection with the financing of the sewer system. Such funds, however, may be invested in common with other Borough funds pending the use thereof for the purposes above specified, provided that the amounts of such funds and the income therefrom can at all times be traced and determined.

(Ord. 2000-2, 9/27/2000, §101-29)

§18-240. Fees Changed by Resolution.

All fees, excluding the tapping fee and sewer rental, in this Part may, from time to time, be changed by resolution of the New Morgan Borough Council.

(Ord. 2000-2, 9/27/2000, §101-30)

§18-241. Grinder and Ejection Pumps.

1. No privately owned grinder or ejection pump may be connected to the sewer system until the applicant or property owner has:

A. Fully complied with this Part and other rules and regulations of the Borough and DEP.

B. Received prior written approval of the Borough through the issuance of a sewer connection permit.

2. All privately owned grinder and ejection pumps, and the installation, operation, maintenance and service thereof, shall comply with the technical specifications of the Borough as set forth in rules and regulations in effect from time to time. All privately owned grinder and ejection pumps shall be connected to the sewer system in full compliance with the rules and regulations of the Borough in effect from time to time.

3. The owner of the property served by a privately owned grinder or ejection pump shall have the responsibility for maintaining, operating, repairing, and replacing the pump.

4. The Borough shall have no responsibility for the purchase, operation, repair, or replacement of any privately owned grinder or ejection pump.

(Ord. 2000-2, 9/27/2000, §101-31)

D. Building Sewers

§18-251. Permits, Regulations, and Fee Schedule.

For each and every building or property, a separate permit to connect to the sewer system will be required. A separate building sewer for each building will be required. A single building sewer shall be provided for a school, apartment building, commercial use, or other multi-unit structure where the entire building is held in single ownership. If the Borough determines it to be impractical to provide separate connections, a single or joint connection may be authorized for more than one property. This must be approved by the Engineer.

A. *Permit Requirements and Regulations.*

(1) No person shall uncover, connect with, make any opening into or use, alter, or disturb, in any manner, any sewer or the sewer system without first making application for and securing a permit, in writing, from the Borough.

(2) Application for a permit shall be made by the owner, or by his authorized agent of the property to be served.

(3) Permits for work to be performed within the right-of-way of any Federal or State highway shall be secured from the agency with jurisdiction thereover. For work to be performed in the right of way of any Borough road, a permit shall be secured from the Borough.

If a sewer lateral terminates on any property beyond the existing macadam surface or improved but unpaved cartway of any Borough road, but such terminus is still within the Borough's right-of-way and, further, if the construction of the building sewer will not disturb any existing curb or curbing, the necessity for securing a permit otherwise required by this Section may be waived. This requires the owner to submit a written application to the Borough. After review by the Engineer such waiver may be granted.

B. *Inspection Fees and Regulations.*

(1) Any contractor who has scheduled an inspection, and upon arrival of the inspector fails to be prepared for said inspection, shall receive a failed inspection and be responsible to pay a fee in an amount as established, from time to time, by resolution of Borough Council. [Ord. 2015-4]

(2) Any contractor who fails an inspection shall be responsible to pay a fee in an amount as established, from time to time, by resolution of Borough Council, for said failed inspection. All subsequent inspections, whether passing or failing, will be in an amount as established, from time to time, by resolution of Borough Council. [Ord. 2015-4]

(3) All inspections will be done during regular business hours of 8 a.m. to 4:30 p.m., Monday through Friday; excluding holidays. Any contractor who requires the Borough agent to remain on the job site after 4:30 p.m., to perform an inspection or any other work, will be required to advise the homeowner as to why the request must be made. The contractor must further assume the associated costs for said inspections, with a minimum of 2 hours of time to be paid in an amount as established, from time to time, by resolution of Borough Council, per hour. For hours more than two, the rate will be at time and a half

or in an amount as established, from time to time, by resolution of Borough Council, per hour. Absolutely no inspections will be scheduled on weekends or holidays unless agreed to, in advance, by the inspector. [Ord. 2015-4]

(4) All associated fees with regard to failed inspections of a contractor shall be paid prior to the construction of another sewer lateral by said contractor.

(Ord. 2000-2, 9/27/2000, §101-32; as amended by Ord. 2015-4, 9/8/2015)

§18-252. Permits; Procedures and Requirements for Obtaining Permits.

No person shall make or cause to be made a connection of any property to the sewer system until such person has fulfilled each of the following conditions:

A. Notified the Borough of the desire and intention to connect their property to the sewer system.

B. Made application for and obtained a permit from the Borough. The permit application shall include a sketch of the existing and proposed building sewer.

C. Notified the Borough at least 48 hours before the time such connection will be made, in order that the Borough may inspect the work of connection and witness necessary testing.

D. Has paid to the Borough any connection and/or tapping fee imposed by the Borough.

E. Such person shall certify to the Borough that any contractor hired to construct the facilities to be connected to the sewer system shall possess or have purchased the instruments or insurance required by subparagraphs (1) through (7) below:

(1) Performance and payment bonds as security for the faithful performance of the work and payment of all obligations incurred for construction and connection of the facilities to the sewer system.

(2) Insurance as required by workmen's compensation laws and supplied the certificate to the Borough.

(3) Liability insurance for not less than \$300,000 for personal injury or wrongful death to any one person and in an amount of not less than \$500,000 per any one occurrence.

(4) Property damage liability insurance in an amount not less than \$100,000 for damages per any one occurrence and in an amount not less than \$300,000 for damages for all occurrences to one property.

(5) Automobile bodily injury liability-insurance in an amount no less than \$300,000 for injuries, including wrongful death to any one person, and subject to the same limit for each person, in an amount not less than \$300,000 per one occurrence.

(6) Automobile property damage liability insurance in an amount not less than \$100,000 for damage per any one occurrence and in an amount not less than \$200,000 for damages per all occurrences.

(7) Builder's risk insurance in complete value form for 100 percent of the insurable value of the work, including fire and extended coverage, and also

covering vandalism and malicious mischief on structures, equipment, and materials.

F. Has received approval of all plans, specifications, contracts, or agreements and the issuance of any permits or approvals pursuant to the provisions of this Part. Any regulations issued or adopted pursuant thereto shall not constitute a representation, guarantee, or warranty of any kind by the Borough or by any official, employee, agent, or advisor of the Borough as to the practicability, adequacy, functioning, or safety of any use, improvement, facility, or system installed or maintained pursuant to the aforementioned approved plans, specifications, contracts, agreements, permits, and regulations and shall not create any liability upon the Borough, its officials, employees, agents, and advisors.

(Ord. 2000-2, 9/27/2000, §101-33)

§18-253. Plumbers and Contractors to Be Certified.

Persons performing work on facilities to be connected to the sewer system shall be certified plumbers.

(Ord. 2000-2, 9/27/2000, §101-34)

§18-254. Building Sewer Connection Rules and Regulations.

1. *General.*

A. *Existing Properties, with On-lot Septic Systems.* The existing building sewer line will be exposed and inspected by the Engineer. If the line is of sufficient structural integrity to allow continued use the property owner will be allowed to break said building sewer line on the building side of the sewage disposal system and continue from that point to the sewer lateral. Attachment shall be made with proper fittings to extend the sewer line to the public sewer. No cap, stopper, or plug shall be removed or punctured until permission has been granted by the Engineer. No portion of an existing building sewer that is constructed of bituminous fiber (Orangeburg) pipe or asbestos cement pipe shall be used as part of the new building sewer.

B. The contractor shall determine the difference in grade between the points of connection. If a minimum grade of $\frac{1}{4}$ inch, or a maximum grade of 1 inch, per foot is obtained, permission will be granted to proceed. Permission to use a minimum gradient of $\frac{1}{8}$ inch per foot may be granted by the Borough in special circumstances. An appropriate notation shall be made on the permit form if $\frac{1}{8}$ inch per foot is used. Under no circumstances is the trench to be dug before it is determined that the minimum fall can be obtained.

C. No portion of any sanitary sewer lateral or building sewer shall be used until air tested and approved in accordance with these rules and regulations.

D. All costs and expenses of construction and connection of a building sewer to the sewer system shall be borne by the owner of the property to be connected. The owner shall indemnify and save harmless the Borough from all loss or damage that may be occasioned, directly or indirectly, as a result of said construction.

E. The building sewer shall be connected to the sewer system at the lateral location determined by the Borough.

F. The invert of a building sewer, at the point of connection, shall be at a higher elevation than the invert of the sewer system. A smooth, neat joint shall be made and the connection of a building sewer to the lateral shall be made secure and watertight. If elevations prevent gravity flow, the owner shall furnish, install, and maintain a pump at their expense. The pump must be one approved by the Borough. Refer to §18-102.3 for exceptions.

G. No building sewer shall be covered until it has been inspected and approved by the Engineer. If any part of a building sewer is covered before being inspected and approved, it will be uncovered for inspection at the cost and expense of the owner of the property.

H. Every building sewer is to be maintained in a sanitary and safe operating condition by the owner of the property. If any person shall fail or refuse, upon receipt of a written notice from the Engineer, to remedy any unsatisfactory condition with respect to a building sewer, within 60 days of receipt of such notice, the Borough has the right to not permit such person or entity to discharge into the sewer system. The unsatisfactory condition(s) must be remedied to the satisfaction of the Borough or, at its option, it may make such repairs at the expense of the property owner and file a lien.

I. Every excavation for a building sewer must comply with OSHA requirements including sheeting, shoring, and confined space entry where applicable and shall be guarded adequately with barricades and lights to protect all persons from damage and injury. Streets, sidewalks, and other public property disturbed in the course of installing the building sewer shall be restored, at the cost and expense of the owner of the property being connected, in a manner satisfactory to the Borough.

J. Whenever unique physical conditions are encountered during the construction of a building sewer, and such unique conditions require additional safeguards or the observation of specifications more stringent than those in this Part, the building sewer shall be constructed in accordance with such additional safeguards or specifications. Provided, however, that the unique special physical conditions and any additional specifications necessary to ensure the integrity of the building sewer shall be listed and set forth in the rules and/or regulations adopted by the Borough pursuant to this Section of the Part.

K. The Borough reserves the right to adopt, from time to time, additional rules and regulations as it deems necessary and proper relating to connection to the sewer system, which additional rules and regulations, to the extent appropriate, shall be construed as part of this Part.

2. *Grease Interceptors.*

A. *General Requirements.* Grease or any other insoluble material capable of obstructing, damaging or overloading the building drainage or sewer system, or capable of interfering with the normal operation of the sewage treatment processes, shall not be deposited, by any means into such systems.

B. *Interceptors Required.* Interceptors for grease and other soluble material shall be provided as required in this section. An interceptor shall not be required for individual living units, or for any private living quarters not used for commercial purposes.

C. *Approval by the Borough Engineer.*

(1) Users requiring interceptors shall provide the Engineer with sufficient information describing the discharge, including drainage volumes and grease concentrations from the proposed fixtures and equipment which will be producing grease-laden discharges or drainage, and showing the materials and features of the interceptor.

(2) The Engineer shall make the final decision concerning which fixtures and equipment shall require drainage or discharge through grease interceptors. Such decision will be based on a review of the above-stated information as well as an actual inspection of the proposed fixtures and equipment on the site.

(3) No interceptor shall be installed until the interceptor design and location have been approved by the Borough Engineer.

D. *Design and Use.*

(1) Interceptors shall be sized to have a grease retention capacity of not less than 2 pounds for each gallon per minute of discharge or drainage flow. The size of each interceptor shall be approved by the Engineer. The rated capacity of each interceptor shall be identified by a permanent plate attached to the interceptor cover confirming the official Plumbing Drainage Institute (PDI) rating in gallons per minute. The design of the grease interceptor shall conform to the specifications as shown in the included appendix or an equal approved by the Engineer.

(2) Interceptors shall be equipped with devices to control the rate of discharge or drainage flows through the interceptor so that its rated flow is not exceeded.

(3) Wastewater and drainage flows, other than those requiring grease separation, shall not be discharged into any interceptor. Food waste grinders shall not discharge into any interceptor.

E. *Construction.* In general, interceptors shall conform to PDI-G101. The Engineer shall give approval for each interceptor type, including the material composition and configuration thereof, on an individual case basis. Drawings and specifications of approved grease interceptors shall be available for inspection at the Borough office. The following interceptor types shall apply:

(1) *Cast Iron Type.* Composed of a cast iron body and cover with the manufacturer's applied acid-resisting coating inside and outside. The unit interior design shall incorporate removable flow baffles, threaded inlet and outlet, and internal air relief, a double wall trap with internal cleanout, and scoriated cover with neoprene sealing gasket.

(2) *Fabricated Steel Type.* Composed of a welded steel body and cover with the manufacturer's applied, acid-resisting, rust-inhibitive, coating inside and outside. The unit interior design shall incorporate removable flow baffle through arrangement, threaded inlet and outlet, and internal air relief, double wall internal trap or deep seal external trap, floor level cleanout provisions, and an anti-skid cover with a neoprene sealing gasket.

(3) *Special Types.* Special type interceptors shall include those units

which are not of the types stated previously, and are usually of greater capacity. Special interceptors may be of precast concrete construction for reasons of economy due to the larger size of such units.

F. *Location.* Interceptors shall be located outside for all installations. Each unit shall be serviceable on grade with the cover completely removable. The cover shall be surrounded by a house keeping pad of concrete construction. The interceptor shall be accessible at all times to the Engineer. Each proposed interceptor location shall be approved by the Engineer prior to installation.

G. *Maintenance.* The Engineer shall initially require a written report indicating biweekly interceptor grease draw off quantities over a 3-month time period. Such report shall be submitted in a letter form and shall clearly indicate the owner's name and address as well as the information requested herein. The Engineer shall review the submitted report and shall make the determination as to the frequency of interceptor grease draw-off. This schedule of grease draw-off shall be strictly followed on a continual basis until such time as the grease-laden discharge or drainage is discontinued by the owner's operations, or unless subsequent experience demonstrates the need for more frequent draw-off. The Engineer reserves the right to change the schedule of grease draw-off by increasing or decreasing the frequency of draw off times, based on site inspections and observations of operations.

(Ord. 2000-2, 9/27/2000, §101-35)

§18-255. Building Sewer Construction Specifications.

1. *General.* The materials and construction of building sewers and appurtances shall be in accordance New Morgan Borough's Building Code [Chapter 5]. If the following is in conflict with the Borough's Building Code, then the more strengent shall apply.

A. *Pipe Requirements.* Piping installations from the sanitary sewer lateral to the building drain shall be constructed of any one, or approved combination of, the following materials:

(1) Extra heavy cast iron soil pipe conforming to American Standard Association and ASTM Standards, latest revision, together with neoprene gaskets. The gaskets must be made to conform with the particular brand of pipe being used and conform to ASTM C564, latest revision. All joints shall be made in accordance with the pipe manufacturer's instructions.

(2) Wherever the use of cast iron pipe is mandated in this Part for cleanouts, cleanout risers, screw-type plugs for cleanout risers, fresh air vents and/or fresh air vent risers, PVC may be substituted as herein provided:

(a) The PVC is SDR 35 which meets the requirements of ASTM D-3034 or Schedule 40 which meets the requirements of ASTM D-1785.

(b) When required, the top elevation of all vent risers shall be 3 feet above ground level.

(c) All cleanout caps and vent riser rain caps are made of cast iron.

(d) PVC ring-tite pipe conforming to ASTM D3034-74, SDR 35 Type PSM, together with necessary fittings conforming to ASTM D1784. All

pipe and fittings shall utilize rubber gasketed joints shall comply with ASTM-D-1 8-19 C-361 or C-433.

(3) If it is determined that an existing or proposed building plumbing system provides inadequate venting, such building sewer connections shall be installed with a vent and trap assembly located outside of the building and constructed in accordance with the standard drawing. Although the Engineer recommends and prefers the use of cast iron for vent and trap because their forces, where the use of cast iron is mandated in this Part for vent and trap assemblies, PVC fittings may be substituted therefor, provided:

(a) Such fittings conform to the requirements of ASTM F477 for use with SDR 35 gravity sewer pipe, latest revision.

(b) All such fittings utilize rubber gasket joints and rubber gaskets which comply with the requirements specified in ASTM D-1869, C-361 or C-443, latest revision.

(c) Vent and trap assemblies shall be encased with a minimum of 6 inches or more of concrete.

(4) Cleanouts shall be provided for all building sewers and service connections where length of line exceeds 75 feet for 4-inch diameter pipe and 100 feet for pipe 6-inch diameter or larger.

(5) Building sewers passing under any stream or creek shall be constructed of ductile iron water main pipe ANSI A21.51 and AWWA C151, Class 51, with mechanical joints, and shall be encased in concrete. Building sewers passing under streams shall be constructed in accordance with the Pennsylvania Department of Environmental Protection's *Domestic Wastewater Facilities Manual*.

(6) No building sewer pipe shall be reduced in size between the house and the lateral. All pipe shall be a minimum inside diameter of 4 inches. Pipe sizes for establishments where larger flow volumes are anticipated such as apartments and commercial buildings will be reviewed on a case-by-case basis and approved by the Borough. Joints shall be permanently watertight and shall prevent the admission of ground water.

(7) A minimum cover of 3 feet of earth shall be provided over the pipe to protect pipe from frost action and surface loading. The maximum effort of the property owner or developer shall be made to ensure that the pipe is provided with at least 3 feet of cover. Specific consideration must be given to providing adequate cover over all piping when designing the sewer mains, laterals and building sewers. Concrete encasement shall be provided where cover is less than 3 feet. All changes in grade and alignment (direction) shall be made with pipe fittings. No fittings exceeding 45 degrees will be permitted.

(8) No transformation from one pipe size to another, or from one pipe material to another, will be made without the use of watertight adapters specifically designed and manufactured for such operation.

(9) In the specific case of PVC piping, no transformations from one pipe size to another, or from one pipe material to another will be made without the use of Fernco joint or equivalent flexible joint adapters manufactured and

designed for that purpose. When flexible joint adapters are used, they must be provided with stainless steel outer shear rings to minimize the risk of lateral displacement of the pipes at the joint. Substitute adapters must be approved by the Engineer. No cement joints will be permitted.

(10) All connections to the sewer system must be made into the lateral stub, tee, or wye left for the purpose, if one exists. Where no lateral stub, tee, or wye has been provided, the sewer main shall be tapped with an opening to fit a 45-degree cast iron or PVC wye saddle or 90-degree cast iron or PVC tee saddle. Tapped connections must be undertaken using approved devices designed to produce a clean, cored hole into the existing main pipe. Break-in methods are not acceptable. The saddle shall be provided with a gasketed skirt and branch and be securely fastened by stainless steel straps provided with suitable bolts to tighten securely. The pipe and saddle shall be completely encased with 6 inches of 2,500 psi test concrete. When the opening in the pipe has been cut too large to fit the saddle, the Borough's sanitary sewer main pipe must be replaced by a manufactured pipe section with a tee or wye branch of the proper size. The construction must be inspected and approved before the remainder of the connection may be made.

(11) Whenever a tee or wye branch has become broken in removing its cap in preparation to make a sewer connection, the protruding branch must be removed and a cast iron tee or wye saddle installed as described above.

(12) Whenever an existing Borough lateral or stub is broken, the broken end must be cut square and fitted with a duplex coupling, or that section of pipe must be replaced using approved materials.

(13) The mouth, or opening, of the completed building sewer shall be kept properly closed and water tight at all times during construction.

(14) *Cleanouts*. Building sewer lines shall be vented, trapped, and a cleanout provided as follows:

(a) Where the main sewer is in the road, a cleanout shall be provided at the road right-of-way line.

(b) Where the main sewer is in an easement, the cleanout shall be located 1 foot from the permanent easement limit.

(c) Cleanouts shall be provided in each sanitary sewer lateral and/or building sewer at 75-foot intervals for 4-inch diameter pipe and at 100-foot intervals for all pipe 6-inch diameter and larger. Such intervals shall include lengths of lateral installed by the Borough. Cleanouts shall be installed immediately downstream of any change in grade or alignment. Cleanouts shall be constructed using a sanitary tee fitting in the run of the pipe and a cast iron or PVC riser to the ground surface. The riser pipe shall be provided with a screw type plug and shall be watertight.

(d) A minimum of one cleanout is required per building sewer line.

(e) Cleanouts shall be located in non vehicular traffic areas if possible. If this can not be avoided, then the cleanout shall be designed and constructed to accommodate vehicular loads. Refer to the standard detail provided.

(15) *Fresh Air Vents.* If it is determined that the plumbing system of the existing or proposed building will not provide adequate venting, a sewer vent trap and vent riser assembly shall be provided on the building sewer pipeline. The trap and vent assembly shall be placed as close to the building as possible. Vent risers shall extend at least 3 feet above the ground surface and shall be capped with a mushroom vent. Fresh air vents shall be at least 4 inches in diameter, and must be constructed of cast iron.

(16) Every cleanout and vent shall be properly supported by 2RC, 2B crushed stone or concrete in the bottom of the trench.

(17) New connections to the sewer shall not be placed through a cesspool or septic tank. They must be placed on solid ground on the building side of a cesspool or septic tank excavation area. With the exception that, under special circumstances, cast iron water pipe (AWWA C 151 and ANSI A 21.51 Class 51, with mechanical joints) may be used to span a cesspool or septic tank when properly supported and anchored against shearing forces from surface loading or other settlement.

(18) The contractor shall have sufficient pumping equipment ready for use at all times on the site. All groundwater which may be found in the trenches, and any other water which may get into them from any cause whatsoever, shall be pumped or bailed out so that the trench shall be dry during pipe laying and backfilling. Water shall be kept away from any mortar or concrete work until it has thoroughly set. When water is encountered, no less than 6 inches of No. 2B coarse aggregate shall be used for the foundation for the pipe. No storm or surface water shall be allowed to enter the sanitary sewer system. If, for any reason, construction is delayed or stopped, the pipe connected to the sewer main must be capped with a watertight plug.

(19) The contractor shall fill all existing septic tanks or cesspools with crushed stone or clean earth. Tanks shall be pumped after connection to the sewer and before backfilling.

B. *Pipe Bedding.* In all trenches (both earth and rock trenches) first class bedding shall be provided as a foundation for all pipe, unless a concrete cradle or concrete encasement or other type of bedding is required by the Engineer. Refer to the standard detail provided.

(1) *First Class Bedding.* AASHTO No. 57 Coarse Aggregate conforming to PADOT Standards, §703.2.

(2) Regardless of the type of pipe used, unsuitable material encountered in excavation, such as ashes, muck, and unstable soil, shall be removed from the site and shall not be used as backfill. When the bottom of the trench has been dug too deep, it shall be refilled to grade with 2-RC aggregate backfill, or No. 2B crushed stone backfill, and thoroughly compacted.

(3) Whenever rock or water is encountered in the trench bottom, a minimum of 6 inches of 2-RC aggregate or 2B crushed stone bedding shall be required for all pipe.

(4) Sewers constructed under groundwater conditions shall include trench plugs constructed of clay with a minimum 1-foot thickness and extending into the trench walls by at least 1 foot, and extending at least 1 foot above the pipe

or pipe bedding which ever is higher.

C. *Trench Plugs*. Construct trench plugs using on-site select earth backfill material in accordance with the standard detail provided.

(1) *Locations for Trench Plugs*.

(a) Install trench plugs in main sewer trenches at 100-foot intervals.

(b) Install trench plugs at a point not less than 3 feet upstream from in-line structures.

(c) Install trench plugs in trenches for lateral connections at a point not less than 3 feet from the main sewer trench.

D. *Building Sewer Air Test*.

(1) The inspector shall witness an air test of the building sewer from the end of the lateral to the point of connection at the building. Both ends of the building sewer shall remain uncovered until the air testing has been completed and the installation approved. Such approval shall be noted in writing on the connection permit and no other evidence of such approval shall be accepted. Persons utilizing air test equipment must be familiar with its use and be familiar with the criteria for judging acceptance based on various ground water conditions encountered. The air test shall be conducted by the building sewer contractor under the direction of the inspector, and made at the expense of the permittee.

(2) The air test shall be made by attaching an air compressor or other testing apparatus to any suitable opening in the section of the pipe to be tested. All other openings of the pipe section being tested shall be plugged. The pipe shall be subjected to a minimum uniform air pressure of 4.0 PSIG on the entire section of pipe being tested. This pressure shall be maintained for a minimum duration of 10 minutes and the maximum permissible pressure loss shall be 5 percent.

(3) The contractor shall repair all defects or leaks of any lines failing to meet the criteria of the above test and shall re-test same until acceptable to the Borough.

E. *Backfilling*.

(1) Upon completion of the building sewer installation, the trench, to a height of at least 1 foot above the pipe, shall be refilled with initial backfill material in 4-inch layers. No stones or rock other than previously noted shall be permitted in the initial backfill layer. Each layer shall be solidly tamped around the sewer pipe with hand or mechanical tampers. Care shall be exercised to not disturb the pipe. In filling to the height specified, the initial backfill material shall be deposited with hand shovels. Under no circumstances will placement of the initial backfill material by heavy equipment be permitted.

(a) *Initial Backfill*. AASHTO No. 57 Coarse Aggregate conforming to PDT §703.2.

(2) All backfill material shall be free from cinders, ashes, refuse, vegetable or organic material, or other material which, in the opinion of the inspector is unsuitable. However, from a point of 1 foot above the top of the

pipe to the finish grade (or subgrade of pavement, driveways, walks, etc.) material containing stones up to 6 inches in greatest dimensions may be used. The trench shall be thoroughly compacted without displacement of the grade or alignment of the building sewer. Backfill material shall be free of ice and no partially open trench shall be permitted to be left open during the night when temperatures below 28° F are anticipated.

(3) Trench backfill material in existing paved areas shall be 2RC stone or other approved aggregate material, and shall be compacted to 95 percent of maximum dry density at a moisture content of +/-2 percent of optimum moisture.

(4) Trench backlit material in all other areas unless directed otherwise by the Engineer shall be of suitable backfill material and shall be compacted to 95 percent of maximum dry density at a moisture content of +/- 2 percent of optimum moisture.

E. *Cleanup.* Removal of debris, which may have been stored within the public rights-of-way, including road, cartway, or sidewalk, shall be removed within 24 hours of completion of the building sewer work. Any concrete sidewalk or curb removed for the purpose of making a sewer connection must be temporarily restored within 48 hours, and permanent replacement must be completed within 30 days from the time installation has been approved.

(Ord. 2000-2, 9/27/2000, §101-36)

§18-256. Abandonment of Existing On-lot System.

No privy vault, cesspool, sinkhole, septic tank, or similar receptacle shall be used or maintained upon any property connected to the sewer system or which shall be required by this Part to connect to the sewer system. Every such privy vault, cesspool, sinkhole, septic tank, or similar receptacle in existence shall be abandoned when the connection to the sewer system is made. It shall be cleansed and filled under the direction and supervision of the Engineer. Failure to comply with this provision shall constitute a nuisance and such nuisance may be abated as provided by law, at the expense of the owner of the property.

(Ord. 2000-2, 9/27/2000, §101-37)

E. Prohibited Wastes and Pollutant Limitations**§18-261. Purpose.**

The purpose of this Part is to protect the public health, welfare, and the environment, by controlling and regulating the discharge to the sewer system of harmful or injurious substances, or unacceptable quantities or volumes of waste or water.

(Ord. 2000-2, 9/27/2000, §101-38)

§18-262. Prohibited Wastes and Pollutant Limitations.

1. No person shall discharge or cause or allow to be discharged into the sewer system, directly or indirectly, any substance, pollutant, wastewater, sewage, stormwater, or combination of such which will, alone or in conjunction with other discharges, cause or contribute to interference or pass through, release flammable, toxic or irritating gasses or vapors; create toxic or dangerous conditions within the sewer system, or otherwise pose a threat to human health, property, or the environment.

2. Where necessary to carry out the provisions and purposes of this Part, the discharge of industrial wastes or wastes other than domestic wastewater may be prohibited, or may be regulated as to volume, rate of flow, concentration or mass of pollutants or other substances, or in such other manner as may be necessary. To effect such regulation, there may be established a system of permits or licenses to discharge, or other means of control of individual sources of wastewater discharge. Conditions imposed in permits may include monitoring and reporting requirements, operational or management requirements, and such other provisions as may be necessary to ensure that the purposes of this Part are carried out.

3. In order to ascertain whether the purposes of this Part, including compliance with any permit or order issued hereunder, are being met, the Borough may enter and inspect, at any reasonable time, without advance notice, any place, building, structure, enclosure or equipment that generates or discharges, or may generate or discharge wastes or water, or where records or data are kept, prepared or stored. Unreasonable delay or denial of entry shall constitute a violation of this Part, subject to the penalties provided herein and such other remedies as shall be available at law or in equity.

(Ord. 2000-2, 9/27/2000, §101-39)

§18-263. Adoption of Rules and Regulations.

The New Morgan Borough has adopted an "Industrial Pretreatment Ordinance" in order to implement and carry out the provisions of this Part.

(Ord. 2000-2, 9/27/2000, §101-40)

§18-264. Penalties.

1. Any person who violates any provision of this Part, including any of the rules and regulations adopted thereunder or provisions in permits or orders issued according to the rules and regulations, upon conviction thereof in an action brought before a magisterial district judge in the manner provided for the enforcement of summary offenses under the Pennsylvania Rules of Criminal Procedure, shall be sentenced to pay a fine of not more than \$1,000 plus costs together with reasonable attorney fees and, in default of payment of said fine and costs, to a term of imprisonment not to exceed 90

days. Each day that a violation of this Part continues or each Section of this Part which shall be found to have been violated shall constitute a separate offense. [*Ord. 2015-4*]

2. The provision of penalties in this Part does not preclude the Borough from seeking such legal or equitable relief as may be available for violations of this Part or the rules and regulations adopted hereunder. Nor shall the provisions of this Part preclude New Morgan Borough from proceeding under the provisions of the Publicly Owned Treatment Works Penalty Law, Act 9 of 1992, 35 P.S. 752.1 *et seq.* Penalties provided by this Part may be sought concurrently with other non-monetary remedies, as deemed appropriate by the Borough.

3. Should the violation of any provision of this Part by any person contribute to or result in violation of any State or Federal law or regulation, for which the Borough is held liable, whether by judicial or administrative order or the settlement of a judicial or administrative penalty action, the person shall indemnify the Borough for the amount of that liability in addition to paying any penalty and costs and any damages that may be imposed for the violation under the provisions of this Part.

4. Copies of this Part will be available at the office of the Borough Secretary for review. If one wishes to purchase this Part, the prices are as follows:

A. Parts 2A through 2F, dealing primarily with lateral installation is in an amount as established, from time to time, by resolution of Borough Council. [*Ord. 2015-4*]

B. Parts 2G through 2H, dealing primarily with sewer main and lateral extensions in new development are in an amount as established, from time to time, by resolution of Borough Council. [*Ord. 2015-4*]

C. A complete Part, Parts 2A through 2H is in an amount as established, from time to time, by resolution of Borough Council. [*Ord. 2015-4*]

D. The above prices may be changed by resolution of the Borough.
(*Ord. 2000-2, 9/27/2000, §101-41; as amended by Ord. 2015-4, 9/8/2015*)

F. General Procedures and Provisions for Approval of Engineering Submissions for Sanitary Sewer Extensions

§18-271. Approval Procedures.

1. The following procedures are intended to facilitate proper design, material selection and installation of new sewerage facilities for the purpose of protecting the public interest upon dedication of the facilities to the Borough.

2. The procedures consist of the following three phases:

A. The application phase, which covers the period from project inception through final approval of the construction by the Borough, inclusive of permits and execution of agreements.

B. The construction phase, which covers the period from pre-construction conference through testing and certification of satisfactory construction.

3. The warranty phase, which covers submission of record plans, dedication and an 18-month warranty period.

(Ord. 2000-2, 9/27/2000, §101-42)

§18-272. Application Phase.

1. *General Procedures.* Any applicant desiring extension of the sewerage facilities shall make preliminary application in writing to the Borough on the prescribed form and accompanied by appropriate fees. There are three stages in the application process. Each stage requires approval by the Borough before proceeding with subsequent stages. These stages are:

A. Sketch plan.

B. Preliminary plan.

C. Final plan.

2. *Sketch Plan.* When a subdivision and/or land development sketch plan is submitted to the Borough, the following shall apply:

A. *Sketch Plan Requirements.* The sketch plan shall show the property boundaries and their relationship to adjoining tax parcels. The plan shall provide the approximate sewer layout and the point of connection to the sewer system with manhole number of the connecting sewer indicated. Plan sheets shall be at least 22 inches by 34 inches but no larger than 30 by 42 inches.

B. *Purpose of the Sketch Plan.* The principal purpose of the sketch plan is to provide the Borough with information on proposed additions to the sewerage facilities and to afford the opportunity for the prospective developer(s) and the Borough to work out problems related to the timing and location of service and determine whether an easement or other arrangements are needed to serve adjacent properties. This stage of planning is not intended to provide information with regard to the final design of the sewers.

C. *Potential Wetland Involvement.* Along with the sketch plan, a readable photocopy of the appropriate soils and wetland mapping shall be included. The sources for this information shall be the Soil Conservation Services County Soil Survey and the United States Fish and Wildlife Service's National Wetland

Inventory Maps. The copies shall be no less than 8½ by 11 inches in size with the proposed project area highlighted or outlined so as not to alter or conceal any soil groups, streams, springs, wetlands or other distinguishing features. The principal purpose of providing the soil and wetland maps is to ensure early recognition of potential wetland involvement.

D. *Application Fee.* An application fee is required by the Borough at the time of submission of the sketch plan and application. The application fee shall be established by resolution of the Borough Council.

E. *Review of Proposed Sewer Layout.* The Engineer shall evaluate the existing sewerage facilities and proposed routing to ensure it is situated to serve the best interest of the public and that is consistent with the Borough's overall sewerage planning. This will include an analysis to determine whether adjacent properties may receive sewerage service through the proposed extension. If further study is deemed appropriate, in the sole discretion of the Borough, the applicant will be advised that a feasibility study of extensions of the system beyond the planned area of development will be conducted by the Engineer. An estimate of the cost of the feasibility study will be provided to the applicant for establishment of an escrow to reimburse the Borough for work conducted by the Engineer. The Borough will make such comments, including technical comments from the Engineer, if any, as it deems appropriate. Significant changes and corrections to plans based on these comments must be satisfactorily addressed before sketch plan approval will be issued.

3. *Preliminary Plan.*

A. The developer and his engineer shall meet with the Engineer prior to the preparation of preliminary plans to establish the technical requirements and the format for plan presentation.

B. The preliminary plans shall include the detailed design of the sewerage facilities, including, but not limited to, the location and grade of sewers. The plans must be prepared under the supervision of or by a Pennsylvania registered professional engineer acceptable to the Borough whose seal, signature and registration number shall appear on each sheet of the plans. All plans must meet the current requirements of the DEP, New Morgan Borough, and other controlling agencies.

C. The following specific submittals are also required, if applicable:

(1) *Rights-of-Way and Easements.* If any sewer lines or other facilities are proposed outside of areas to be publicly dedicated or where off-site rights-of-way are involved, such property plats and legal descriptions and indications of ownership or transfer negotiation status shall be included. Sanitary sewer easements a minimum of 25 feet wide, with a main centered in the middle, shall be provided. The easement must extend to a publicly dedicated area to facilitate vehicular access. The width of the easement may increase dependent on the depth of the sewer. Where two sanitary easements intersect or join at a 90 degree angle, the easement shall include the fillet area of each intersection. The fillet area shall have a minimum radius of 25 feet. Additionally, should the easement be required for future construction of sewers, an easement of 40 feet may be required. All sewerage facilities must be accessible

by vehicle, and easements shall be graded accordingly. Where an easement must be accessed from a road, the curb will be depressed to allow vehicle ingress and egress. Standard rights-of-way agreement(s) with legal description must be executed before final approval will be issued.

(2) *Sewage Other than Domestic Waste.* If any sewage other than domestic waste, including industrial waste, is to be discharged, the applicant shall demonstrate compliance with all applicable requirements, including those of the New Morgan Borough Industrial Pretreatment Ordinance, including any required industrial waste discharge permits or agreements.

(3) *Wetlands.* If wetlands or other valuable natural resources are involved or in close proximity to the proposed project area, boundaries of these areas must be shown on the site plan. Also if permit(s) are required in association with the natural resources delineated above, a list of permits applied for shall be provided to the Borough, including the type of permit, the agency involved, the date the application was submitted, the agency's reference number and the agency's contact person.

(4) *Overall Sewer Routing.* The overall sewer routing shall be presented on a site plan which indexes the applicable plan and profile pages. Each plan and profile page shall include a key index to the overall site with the presented area highlighted. Where sewer runs extend onto subsequent pages, cross-reference information shall be provided.

(5) *Planning Module Procedures.* If required by DEP, the applicant must process a postcard application for sewerage facilities through the Borough to DEP. From the information provided on the form, DEP will identify the appropriate modules to be prepared. The applicant shall prepare the planning module components deemed appropriate by DEP for submission in the name of the Borough. The complete planning module package must be submitted to the Borough. Evidence of module approval from DEP must be furnished to the Borough prior to obtaining final approval.

(6) *Cost Estimate.* An itemized estimate of cost of the sewer project (materials, cost of installation, including excavation and restoration of unpaved surfaces and repaving of existing roads).

(7) *Written Application for Capacity.* Written application requesting capacity shall be made on the form provided by the Borough. Such application shall not be approved nor guaranteed until final plan approval by the Borough and payment of the applicable tapping fees.

D. Upon receipt of the preliminary application, required submittals, and escrow deposit, the Borough will submit the same to the Borough Engineer for review and comment. An incomplete submittal will not be accepted.

E. A written report from the Engineer will be provided to the applicant for use by his engineer in revising the preliminary plans. The applicant will be required to revise the plans. The response shall include written correspondence responding to the Borough Engineer's comments item by item. Once the plans satisfy the requirements herein, the Borough Engineer will recommend preliminary plan approval. Upon receipt of the Borough Engineer's recommendation, the Borough will review the preliminary application and advise the requesting party

of the results of the review.

F. *Financial Security.*

(1) *Escrow Deposit.* Escrow deposit in the amount of 2 percent of the itemized cost estimate for the project for reimbursement to the Borough for administrative and engineering services in reviewing the application, plans, and modules. A minimum deposit of \$2,000 is required. In the event the charges against the escrow are projected to exceed 85 percent of the deposit, the applicant will be notified by letter from the Borough to supplement the amount to cover the projected balance of charges. Any unused portion of the escrowed amount will be applied to the Borough's costs for inspection and testing during and after construction.

(2) A determination will be made by the Borough Engineer as to what degree the developer's plans affect the Sewage Facilities Act 537 plan of New Morgan Borough. Based on said determination and the estimated expenses thereof, an escrow account will be created to pay for any and all costs associated with the modifications of the Sewage Facilities Act 537 Plan of New Morgan Borough. No plan can reach final approval stage without approval from DEP for any amendments or alterations to the Act 537 Plan.

4. *Final Plan.*

A. *Schedule of Construction.* Each application shall include a time schedule for construction and connection.

B. *Plan Content and Review Procedure.* The final plans shall contain the completed design for all sewers or other facilities required. They shall be prepared in compliance with the comments and/or conditions of the Borough resulting from the review of preliminary plans. The Borough Engineer and the applicant's engineer will work together to resolve all technical issues. When the Borough Engineer is satisfied that all contingencies have been addressed, the construction plans will be submitted to the Borough for approval.

C. *Wetlands.* If wetlands (or other natural resources) are involved, evidence of permit(s) approval shall be submitted to the Borough. All permits applied for as outlined in the preliminary plan must be addressed by either providing evidence of the approval or written explanation indicating why the permits were not applied for.

D. *Rights-of-Way.* If rights-of-way are involved, property plats and legal descriptions of the easement conveyed to the Borough must be submitted, together with the Borough's standard agreement and executed deeds of dedication in the form prescribed by the Borough.

E. *Water Quality Management Permit.* When required by DEP, final plans shall be accompanied by a completed water quality management permit application prepared in the name of the Borough and accompanied by two sets of final plans as required by DEP.

F. *Standard Agreements.* The following standard agreements must be executed by the applicant and returned to the Borough before final approval may be granted. All agreements prepared to the satisfaction of the Borough Solicitor must be submitted no less than 10 days prior to the Borough's regularly scheduled

monthly meeting. If the agreements are incomplete and/or incorrect, they will not be included on the Borough's agenda.

- (1) Tapping agreement.
- (2) Sewer extension agreement.
- (3) Rights-of-way agreement.
- (4) Construction escrow agreement.
- (5) Reimbursement agreement (if applicable).

G. *Financial Security.*

(1) The final application shall include the posting of financial security to ensure completion of the construction in accordance with approved plans and the requirements of the Borough. Financial security may be Federal or Commonwealth chartered lending institution irrevocable letters of credit and restrictive or escrow accounts posted with a Federal or Commonwealth chartered lending institution satisfactory to the Borough, if the lending institution is authorized to conduct such business within the Commonwealth. Such security shall provide for and secure to the Borough the completion of the improvements within 1 year from the date of posting the security. The amount of financial security shall be equal to 110 percent of the cost of the required improvements for which financial security is to be posted. The cost shall be established by estimate acceptable to the Borough Engineer.

(2) If more than 1 year from the date of posting such financial security is required for completion of the required improvements, the amount of financial security may be increased by an additional 10 percent for each 1-year period beyond the first anniversary date from the posting of financial security or to 10 percent of the cost of completing the improvements as reestablished on or about the expiration of the preceding 1-year period.

H. *Inspection Escrow.* The final application shall include a deposit of 15 percent of the cost of the required improvements with the Borough in escrow to pay for inspection during the construction, testing and inspection as construction is completed, and incorporation of as built drawings. The minimum deposit is \$2,500. Any unexpended balance in the escrow will be returned; however, release of funds will not be authorized until after the Borough accepts dedication.

(Ord. 2000-2, 9/27/2000, §101-43)

§18-273. Construction Phase.

Upon final plan approval by the Borough, the applicant must follow the following procedures:

A. *Pre-construction.*

(1) *Pre-construction Meeting.* The applicant or his designated construction manager must schedule a pre-construction meeting with the Borough's representative to review all aspects of the proposed project and construction schedule. It is the contractor's responsibility to maintain a current construction schedule and to notify the Borough of any changes to the schedule.

(2) *List of Contractors.* A list of contractors, subcontractors, and material

suppliers must be submitted for the Borough's approval. The list shall include the name and telephone number of the person in charge of the contract for each contractor and subcontractor. Where paving is involved, a point of contact and phone number shall be provided to ensure the immediate repair of temporary paving deficiencies. A phone number for non-working hours, evenings and holidays must be provided.

(3) *Material Samples*. Material samples and material compliance certifications shall be provided at the request of the Borough.

(4) *Highway Occupancy Permit*. The highway occupancy permit, if applicable, will be obtained by the applicant in the name of the Borough. The applicant is responsible for the cost of the occupancy permit and the securing of any other municipal permits or blasting bond.

(5) *Start of Construction*. Construction shall not begin until 45 days after a letter of approval is issued by the Borough. It may begin sooner with written permission by the Borough.

(6) *Wetlands*. If wetlands or other natural resources of concern are involved, these areas shall be delineated in the field by a qualified professional. The delineation shall be in such a manner that it is easily recognizable during all phases of construction.

(7) *Pre-construction Video*. Where construction is proposed to traverse existing properties, a pre-construction video shall be made to establish the original condition of the improved properties.

B. *During Construction*. Complete construction details are provided in Part 2G, "Standard Specifications for Construction of Sanitary Sewers and Appurtenances."

(1) *Inspection by Borough*.

(a) All construction must be conducted in accordance with the latest edition of the Borough's technical specifications covering sanitary sewage facilities. The Borough will designate an inspector to act on the Borough's behalf during construction. The cost for inspections performed by the inspector will be paid from the escrow established from the deposit of 15 percent of the cost of the required sewerage improvements.

(b) The Borough's inspector shall make periodic visits to the site to observe the progress and quality of the executed work and to determine, in general, if the work is continuing in accordance with the Borough's specifications. He will not make exhaustive or continuous on-site inspections to check the quality of the work unless he determines it is necessary due to his dissatisfaction with the contractor's work. This determination will be solely at the discretion of the Borough and the Borough Engineer. Notification of full time inspections will be issued to the contractor stating the reasons for such action. The contractor is obligated and shall pay any and all costs of said inspection time at a rate determined by the Borough Engineer.

(c) Neither the inspector's authority to act nor any decision made by him in good faith, either to exercise or not to exercise such authority, shall

give rise to any duty or responsibility of the inspector to the applicant, contractor, any subcontractor, any of their agents or employees or any other persons performing any of the work.

(d) The inspector will not be responsible for the construction means, methods, techniques, sequences or procedures or the safety precautions and programs incident thereto, and he will not be responsible for the applicant's or contractor's failure to perform the work in accordance with the construction documents and the Borough's specifications.

(e) The inspector will not be responsible for the acts or omissions of the applicant, contractor, any subcontractor, any of their agents or employees, or any other persons performing the work.

(2) *Defective Work.* The inspector shall have the authority to disapprove or reject work which is defective, unsatisfactory, faulty or does not conform to the requirements of the Borough's specifications.

C. *As-Built Drawings.* The developer/applicant shall be responsible for maintaining and submitting as built drawings.

D. *Partial Releases of Financial Security.* As the work of installing the required improvements proceeds, the party posting the financial security may request the Borough to authorize the release of portions of the financial security, as long as the progress of work remains satisfactory to the Borough. The time frame for requests for progress releases will be established-at the pre-construction meeting and may not be less than 30 days. Any such request shall be in writing to the Borough, in accordance with the following:

(1) At least 10 days prior to submitting the first application for a progress release, the applicant shall submit a schedule of values for the work, including quantities and unit prices aggregating the project estimate, satisfactory in form and substance to the Borough, and subdividing the work into component parts in sufficient detail to serve as a basis for progress releases during construction. This schedule should include a category for as-built drawings and for the Borough's Engineer to prepare the computer model and mapping. Component parts should include cost per foot for pipe installations and road restoration unit costs for manholes, etc.

(2) If the Borough approves the application, the Borough will, within 45 days of the presentation of a partial release estimate, authorize a release to the applicant on the basis of the approved partial release estimate.

(3) The Borough will not authorize release of more than 90 percent of the amount due the applicant on account of partial estimates. The retainage will be held until the Borough issues a certificate of satisfactory construction.

3. *Following Construction.*

A. *Inspection.* Each lateral connection must be inspected by the Borough's inspector before being backfilled. For connections going online immediately, connection and tapping fees must be paid and a connection permit obtained before connection is made. The connection will be inspected to check fitting-to-main co-installation, confirm no additional connections have been made, and examine materials used.

B. *Testing.*

(1) Testing must be conducted in the presence of the Borough's inspector and in accordance with the technical specifications. The costs for testing will be paid from the inspection escrow.

(2) Each section of pipe between manholes must be tested in accordance with the technical specifications before any lateral connections are made. No lateral connections shall be made until all sections and manholes downstream of the lateral have been deemed acceptable by the Borough's inspector.

C. *Guidelines for Completeness.*

(1) When the applicant considers the entire work ready for its intended use, the applicant shall, in writing to the Borough's inspector, certify the work is substantially complete and request the inspector issue a certificate of satisfactory completion. Within 15 days there after, the applicant and the Borough's inspector shall make an inspection of the work to determine the status of completion. If the inspector does not consider the work substantially complete, he will notify the applicant, in writing, giving his reasons therefore. If the inspector considers the work substantially complete, he will prepare and deliver to the applicant a certificate of satisfactory construction. There shall be attached to the certificate a detailed list of each and every uncompleted item and a reasonable cost of completion.

(2) Before the certificate of satisfactory completion is issued, the Borough requires the posting of financial security to secure the structural integrity of said improvements for a period of 18 months. The financial security shall be 15 percent of the actual cost of installation of the improvements.

(Ord. 2000-2, 9/27/2000, §101-44)

§18-274. Warranty Phase.

1. *As-Built Drawings.* All field notations about changes to the construction plans and a complete set of as-built drawings must be turned over to the Borough before the warranty period can begin. All as built drawings must be approved by the Borough Engineer.

2. *Use of Facilities.* The Borough shall have permission to use the applicant's system before acceptance by the Borough. The applicant shall maintain said system in good and workmanlike condition for 18 months from the date the Borough accepts dedication.

3. *Inspection of Facilities.* While the system is in use, periodic inspection will be made by the Borough and the applicant during periods of high water table. If manhole inspection indicates excessive infiltration, a video inspection will be done at the expense of the applicant to locate leaks. Leaks shall be repaired by the applicant, at his expense.

4. *Corrective Work.* If corrective work and punch list items are not completed promptly, defects will be repaired by the Borough and the financial security held in escrow shall be used for this purpose.

5. *Televising.* Prior to the end of the 18-month warranty period, the entire system installed by the applicant will be video inspected, at his expense, and all defects corrected at his expense.

6. *Release of Escrow.* When all the above are completed to the Borough's satisfaction, the Borough will authorize release of the balance of funds held in escrow. At this point, the Borough will accept the deed of dedication and become responsible for the operation and maintenance of the system.

(Ord. 2000-2, 9/27/2000, §101-45)

§18-275. General Provisions.

1. The sewerage facilities must be designed and constructed in accordance with the technical specifications established by the Borough.

2. The design drawing submittals must be certified by a Pennsylvania registered professional engineer representing the applicant.

3. Sewerage facilities proposed to serve new developments shall be properly sized to consider the ultimate needs of the area to be served, as designated by the Borough's Act 537 Official Sewage Plan.

4. Sewerage facility extensions shall be designed to utilize gravity interceptors. If necessary, after evaluation of alternate means is exhausted, use of a pump station may be approved, subject to the Borough's plans and specifications for pump stations. Where a pump station or low pressure sewer system is proposed, the Borough Engineer will investigate gravity alternatives before a pump station or low pressure system is approved.

5. The applicant shall bear all costs incident to the application, permits, construction, inspection and dedication of the facilities.

6. The applicant is also responsible for all costs in upgrading limiting capacities in existing down stream sewerage facilities to serve the ultimate needs of the designated area. A sufficient balance must be maintained in an escrow account to reimburse the Borough for costs associated with evaluating limiting sections.

7. The applicant must execute the appropriate agreements, in a form acceptable to the Borough Solicitor.

(Ord. 2000-2, 9/27/2000, §101-46)

§18-276. Connection of Private Sewage Systems.

No private sewerage system shall be connected to the Borough's sewer system, except in accordance with the Borough's sewer regulations, as amended from time to time. Said regulations shall apply to effective date of this Part which is not yet connected to the Borough's sewer system. As a condition of making connection to the sewer system, the owner of the private system shall grant to the Borough a perpetual easement and right of entry over the private system for the purpose of periodic inspections of said system by authorized representatives of the Borough. In addition, the owner of the property desiring to connect a private system to the sewer system shall cause the installation at his sole cost and expense of a sewage flow meter(s) at appropriate point(s) of connection between the private sewer and public sewer as determined by the Borough. The meter and meter pit shall conform to the technical specifications of the Borough. Where possible, the meter pit shall be installed within a public right-of-way. If it is not possible to install the meter pit within the public right-of-way, the Borough shall be granted a perpetual easement so as to enable the Borough

to have direct access to the meter. The costs of reading, maintaining, repairing and replacing the meter and the meter pit shall be the responsibility of the owner of the private system.

(Ord. 2000-2, 9/27/2000, §101-47)

G. General Provisions for Construction of Sanitary Sewers and Appurtenances

§18-281. Scope.

1. The items covered by these specifications require the contractor to furnish all labor, materials, equipment, apparatus, and tools. This includes all pipe, materials for joint connections, manholes, appurtenant structures, and sewer laterals to points of connection with building drains at the side of public or private rights-of-way, or beyond public utilities paralleling the sewer, including specials and fittings. They also require the contractor to perform all operations to complete the construction of laterals and appurtenances thereto, shown on the drawings and as herein specified. The contractor shall install, equip, adjust, and put in operation, the completed work so as to produce a satisfactory operating whole in conformance with plans and these specifications.

2. These specifications are not intended to cover every procedure and work sequence. However, all safety procedures including, but not limited to, sheeting, shoring, confined space entry, and blasting shall be in accordance with the rules and regulations as set forth by OSHA. All ordinances of New Morgan Borough as well as any County, State, or Federal regulations shall apply. If there is a conflict between regulatory agencies, the stricter of the regulations will apply.

(Ord. 2000-2, 9/27/2000, §101-48)

§18-282. Definitions.

Unless the context specifically indicates otherwise, the meaning of terms used in this Part shall be as follows:

Approved, etc.—the words “approved, acceptable, satisfactory,” or of like import, shall mean approved by the Engineer for general conformity with design concepts, unless another meaning is plainly intended or otherwise specifically stated. This approval shall not relieve the contractor of the responsibility for producing a complete and satisfactory end result.

Authority—any Federal, State, or municipal agency.

Borough—New Morgan Borough, a borough, governed by a three-person Council or any sewer authority the Borough may create.

Borough Engineer—the person or organization duly appointed by the Borough/authority as consultant and authorized to observe, supervise, and maintain control of the quality of the results of the sewer work under contract. He may act directly or through authorized agents, engineers, assistants, inspectors, or other representatives acting within the scope of the particular duties entrusted to them. The word “engineer” shall include the officers, agents, and employees of the Engineer. He has the authorization of the Borough to enforce all provisions of this Part and to stop said work if those provisions are not met.

Completion certificate—the certificate of the Engineer and approved by the Borough/authority, indicating general conformance to plans and specifications of all work performed under the contract.

Contractor—the contractor employed to construct sanitary sewers and appurtenances and his agents, representatives, superintendents, or employees in

accordance with Borough approvals, specifications, and supervision. Contractor is used as an all encompassing term to include: a developer, a person hired by an individual home owner to install building sewers; plumbers; and so on. All contractors and subcontractors, performing sewer installation related activities, must be licensed by New Morgan Borough.

Contractor's engineer—the licensed professional engineer, or his authorized representative, retained by the contractor to provide plans and specifications for the project.

Construction observation—the observation of the work performed by the contractor to ascertain its conformity with Borough standards and specifications.

Contract—the written agreement executed between the entity requiring the work to be performed and the contractor performing the work. It covers performance of the work and the furnishing of labor, materials, and equipment in the construction of sewer extensions and appurtenances to the sewage collection system.

Corresponding authority—the authority in charge of the item in question.

Engineer—unless noted otherwise, Engineer will always refer to the Borough Engineer. See “Borough Engineer.”

EPA—the Environmental Protection Agency, a Federal organization.

PennDOT—the Pennsylvania Department of Transportation.

Plans—all plans or reproductions relating to the construction of the project and made a part of the contract, and additional plans as may be required, from time to time, in order to more fully clarify contract plans and details not shown thereon.

Plans and specifications—the plans and specifications are complementary to each other, and the requirements of any one shall be considered as requirements for all.

Project—the scope of work under the contract described in the specifications and shown on the plans incorporating performance, services, and materials for the whole, entirely complete, and in full.

Specifications—contained in the specifications, inclusively, all definitions, descriptions, requirements, terms, stipulations, and all written supplements, made or to be made thereto pertaining to the contract, and all materials, equipment, and workmanship to be furnished under the contract.

Subcontractor—this term includes only those having a direct contract with the contractor, one who furnishes material worked to a special design according to the plans or specifications of this work, but does not include one who merely furnishes materials.

Work—the term “work” of the contractor or a subcontractor includes labor, materials, equipment, transportation, and other facilities necessary to complete the contract.

(Ord. 2000-2, 9/27/2000, §101-49)

§18-283. Shop Drawings and Specifications.

1. The contractor's engineer shall furnish all necessary copies of drawings and

specifications to the Borough and the Engineer for review. Shop drawings shall be submitted in quadruplicate to the Engineer with promptness as to avoid delay in the work. After review of these drawings by the Engineer, the contractor shall make any corrections required, providing the Borough four corrected copies and such other copies as may be needed for proper prosecution of the work. The Engineer's approval of shop drawings shall not relieve the contractor from responsibility for errors or discrepancies in such drawings. All shop drawings shall be identified with the name of the project and contractor, and numbered in consecutive order. Shop drawings will be required to be furnished for manufactured manholes, frames and covers, and other required appurtenances.

2. The contractor, when submitting the shop drawings for approval, shall do so with understanding he has checked said drawings before submission and is satisfied they meet the requirements of the plans and specifications and will present no difficulties in completing the contract. He shall clearly note his approval on all shop drawings prior to their submission. Failure of the contractor to note his approval will be reason for the Engineer to return such submission without review. If it appears the submitted shop drawings have not been properly checked, even though the contractor's approval has been noted thereon, it will also be considered reason for the Engineer to return such submission.

3. If the shop drawings show variations from the contract requirements because of standard shop practice or other reasons, the contractor shall make specific mention of such variations in his letter of submission so that, if accepted, suitable action may be taken for proper changes in the contract. Otherwise the contractor will not be relieved of the responsibility for executing the work in accordance with the contract even though the shop drawings have been approved.

4. The approval of shop drawings will be general and shall not relieve the contractor from the responsibility for proper fitting and construction, or from furnishing materials and work required by the contract not indicated on the shop drawings when approved.

5. The approval of any plans, specifications, contracts, or agreements or the issuance of any permits or approvals pursuant to the provisions of this Part or any regulations issued or adopted pursuant thereto shall not constitute a representation, guarantee, or warranty of any kind by the Borough or by any official, employee, agent, or advisor of the Borough as to the practicability, adequacy, functioning, or safety of any use, improvement, facility, or system installed or maintained pursuant to the aforementioned approved plans, specifications, contracts, agreements, permits, and regulations, and shall not create any liability upon the Borough/authority, or its officials, employees, agents and advisors.

6. Each submission of shop drawings must be accompanied by a transmittal letter with a list of the number of drawings. All drawings must be marked with the name of the project, the name of the contractor, and be numbered consecutively. All drawings must be complete in every respect and bound in sets.

7. The contractor shall keep one copy of all drawings and specifications on site, in good order, and available to the Borough Engineer and his representatives.

8. All drawings or plans pertaining to the project shall be submitted by the contractor, in duplicate, to the Borough Engineer for review. After review of these

drawings by the Borough Engineer, the contractor shall instruct his engineer to make the required corrections and re-submit six corrected copies. The Borough Engineer's approval of the drawings shall not relieve the contractor from responsibility for errors or discrepancies in such drawings. All drawings shall be prepared in conformance with the requirements set forth in this Part and shall be identified with the name of the project and contractor, and numbered in consecutive order.

9. All costs associated with the submittal and review of plans and drawings will be reimbursed to the Borough by the contractor. The contractor shall make payment in full for any invoice presented to him. by the Borough. Payment will be made no later than 10 days from the date of the invoice.

(Ord. 2000-2, 9/27/2000, §101-50)

§18-284. Order of Completion.

The contractor shall submit to the Engineer, prior to construction, a schedule showing the order in which the contractor proposes to perform the work. The schedule will include the dates when the contractor will start the various parts of the work and the estimated dates of completion. This schedule will be updated at least once a month during the duration of the contract.

(Ord. 2000-2, 9/27/2000, §101-51)

§18-285. Contractor to Pay Taxes.

The contractor shall comply with all tax laws for the jurisdiction in which the work is being done. He shall pay all taxes for which he may be liable as a consumer or user of goods and taxes based on income from the contract or a portion thereof. The contractor shall obtain, where applicable, sales and use tax exemption certificates.

(Ord. 2000-2, 9/27/2000, §101-52)

§18-286. Safety, Protection, and Emergencies.

1. The contractor will be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. He will provide the necessary safe guards to prevent damage, injury, or loss to:

A. All employees on the work and other persons who may be affected thereby.

B. All work and all materials or equipment to be incorporated therein, whether in storage on or off the site.

C. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

2. The contractor will comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property. He will erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for safety and protection, including posting danger signs and other warnings against hazards.

3. The contractor shall comply with the provisions of PA One-Call, 73 P.S. §176 *et seq.*, as amended, and notify owners of adjacent utilities when progression of the work may affect them.

4. When the use of explosives or other hazardous materials is necessary for the progression of work, the contractor will comply with all aspects of New Morgan Borough Ordinance 1999-10, as amended.

(Ord. 2000-2, 9/27/2000, §101-53)

§18-287. Observation of Work.

1. The Engineer, the Borough, and their representatives shall at all times have access to the work wherever it is in preparation or progress. The contractor shall provide proper facilities for such access and observation.

2. If the contract documents, the Engineer's instructions, laws, ordinances, or any public authority require any work to be specially tested or approved, the contractor shall give the Engineer timely notice of its readiness for inspection. Inspections by the corresponding authority shall be promptly made and, where practicable, at the source of supply. If any work should be covered up without the approval of the corresponding authority it must be uncovered for examination at the contractor's expense. The contractor is responsible to pay all corresponding authority expenses for inspections.

(Ord. 2000-2, 9/27/2000, §101-54)

§18-288. Superintendence and Supervision.

1. The contractor shall have, available on site, a competent superintendent and any necessary assistants while any work is in progress. The superintendent shall represent the contractor in his absence and all directions given to him shall be as binding as if given to the contractor. Important directions shall be confirmed in writing to the contractor. Other directions shall be so confirmed if a there is a written request. The contractor shall give efficient supervision to the work, using his best skill and attention.

2. If the contractor finds any discrepancy between the drawings and the physical conditions of the locality, any errors or omissions in the drawings or layout, as given by points and instructions, it shall be his duty to immediately inform the contractor's engineer, in writing. The contractor's engineer shall promptly verify the same. Any work done after such discovery, until authorized, will be done at the contractor's risk.

(Ord. 2000-2, 9/27/2000, §101-55)

§18-289. Indemnity.

1. The contractor shall indemnify and save harmless the Borough Council of New Morgan Borough and their representatives from and against all losses and all claims, demands, payments, suits, actions, recoveries, and judgments of every nature and description brought or recovered against them by reason of any act or omission of the said contractor, his agents, or employees, in the execution of the work or in the guarding of it, and shall defend and pay the costs of defending any such suit or suits.

2. The contractor is directed to maintain and pay for such insurance, issued in the name of the contractor, the Borough and their representatives as will protect them from their contingent liability under any and all contracts.

(Ord. 2000-2, 9/27/2000, §101-56)

§18-290. Rights of Various Interests.

Wherever work being done by the Borough contiguous to work covered by a contract, the respective rights of the various interests involved shall be established by the Borough Engineer, in order to secure the completion of the various portions of the work in general harmony.

(Ord. 2000-2, 9/27/2000, §101-57)

§18-291. Subcontracts.

1. The contractor shall, as soon as practicable after the execution of the contract, notify the Engineer, in writing, of the names of subcontractors proposed for work. He shall not employ any the Engineer may, within a reasonable time, object to as incompetent or unfit.

2. The contractor agrees he is as fully responsible to the Borough and for the acts and omissions of his subcontractors and of persons either directly or indirectly employed by them, as he is for the acts and omissions or persons employed by himself.

(Ord. 2000-2, 9/27/2000, §101-58)

§18-292. Provisions of Law.

Every provision of law, and every clause required by municipal, Federal, or State regulation are required to be inserted in the contract shall be deemed to be inserted herein. The contract shall be read and enforced as though it were included herein and, if through mistake or otherwise, any such provision is not inserted, or not correctly inserted, then upon the application of either party, the contract shall forthwith be amended to make such insertion. The contractor shall give all notices required by law or regulation and shall comply with all laws, ordinances, rules, and regulations applicable to the work.

(Ord. 2000-2, 9/27/2000, §101-59)

§18-293. Workmen's Compensation Act.

The contractor shall accept the provisions of the Workers' Compensation Act, 77 P.S. §1 *et seq.*, as amended, covering any work performed by him, his partners, associates, employees, or those of any subcontractor he may employ. He must also file, with the Engineer, any certificate of exemption from insurance from the Bureau of Workers' Compensation of the Department of Labor and Industry.

(Ord. 2000-2, 9/27/2000, §101-60)

§18-294. Insurance.

1. The contractor shall not commence work until he has obtained all insurance required under this Section from a responsible insurance company(s), authorized and qualified to do business under the laws of the Commonwealth of Pennsylvania. The insurance must be approved by the Borough. The contractor shall not permit any subcontractor to commence work on his subcontract until the insurance required of the subcontractor has been so obtained and approved.

2. The contractor shall obtain, pay for, and maintain: Employers liability; general public liability with contractual indemnity coverage; and automobile liability insurance

that will protect the contractor, any subcontractor, owner, the Borough, and their agents from claims for damages for personal injury, accidental death, and property damage which may arise from operations under the contract. This includes coverage whether such operations are performed by himself, any subcontractor, or anyone directly employed by either of them. In the event the contractor is unable to obtain the aforesaid coverage in a single policy of insurance, he shall furnish a policy covering his liability and that of his subcontractors and, in addition, an owners protective policy with respect to the liability of the Borough and their agents.

3. The amount of such insurance shall, unless otherwise specified as a special term of a contract, be as follows:

A. *General Liability.*

- (1) Bodily injury—\$250,000/\$500,000.
- (2) Property damage—\$100,000/\$300,000.

B. *Contractor's Protective Liability.*

- (1) Bodily injury—\$250,000/\$500,000.
- (2) Property damage—\$100,000/\$300,000.

C. *Automobile Liability (Owner, non-owned, and hired automobiles).*

- (1) Bodily injury—\$250,000/\$500,000.
- (2) Property damage—\$100,000.

If there is a possibility of special hazards existing in the work contemplated, they shall be covered by rider(s) to the policy or policies, as required by the Borough Engineer.

4. The contractor, during the progress of the work, shall maintain builders' risk fire and extended coverage insurance. Such insurance shall cover: labor and materials connected to or adjacent to the property insured; materials in place or to be used as part of the permanent construction, including surplus material, shanties, protective fences, bridges, temporary structures, miscellaneous materials, and supplies incident to the work; and such scaffolding, staging, towers, forms, and equipment not owned or rented by the contractor. The cost of which is included in the cost of work. This insurance shall not cover any tools owned by mechanics, any tools, equipment, scaffolding, or staging, the capital value of which is not included in the cost of the work. Such insurance shall be in the names of the contractor, the Engineers, and the Borough as their respective interests may appear. All such insurance policies shall be open to the inspection of the Borough and their representatives at all times.

5. Copies of the policies shall be provided with each executed copy of the contract. Renewal endorsements shall be delivered as necessary, for the duration of the contract.

6. The risk of damage to the work required to be covered by the said insurance, is that of the contractor and his surety. Failure by the contractor to maintain such insurance, or failure to collect the proceeds thereof, in case a claim, shall in no way relieve the contractor from the responsibility of completing his contract.

7. The contractor shall, upon executing the contract, deliver to the Borough proper proof of the insurance required hereunder and under §18-290. Indemnity certificates will be proof of public liability, property damage and workers' compensation insurance. Certificates shall include type, amount, class of operations, effective dates

and date of expiration of policies. An original policy for fire insurance must be submitted.

8. All policies and certificates must contain an endorsement stating the policy cannot be canceled or amended without first giving Borough at least 10 days notice in writing.

(*Ord. 2000-2, 9/27/2000, §101-61*)

§18-295. Contractor's Understanding.

It is understood and agreed the contractor has, by careful examination, satisfied himself as to the nature and location of the work; conformation of the ground; character, quality and quantity of the materials to be encountered; character of equipment and facilities needed to accomplish the prosecution of the work; general and local conditions; and all other matters which can in any way affect the work under the contract. No verbal agreement or conversation with any officer, agent, or employee of the Borough, either before or after the execution of the contract, shall affect or modify the terms or obligations herein contained.

(*Ord. 2000-2, 9/27/2000, §101-62*)

§18-296. Surveys, Lines, and Grades.

The contractor's engineer will furnish all the surveys, plans, measurements (workmen's lines and benches excepted), and other information necessary to properly construct the contemplated improvements as to the lines, grades, and dimensions as specified and called for by the plan. The contractor shall provide reasonable opportunities and facilities for setting points and making measurements. He shall not proceed until he has made timely demand upon the contractor's engineer for, and has received from him, such points and instructions as may be necessary as the work progresses. The work shall be done in strict conformity with such points and instructions. The contractor shall protect all stakes and reference points.

(*Ord. 2000-2, 9/27/2000, §101-63*)

§18-297. Existing Utilities and Pennsylvania One-Call.

1. The existence and location of underground utilities, whether or not indicated on the plans, are not guaranteed and shall be investigated and verified in the field by the contractor before starting work. Excavation in the vicinity of existing structures and utilities shall be carefully done by hand. Special care must be used by the contractor to avoid interference or damage to any operating utilities or plants. Where there is any possibility of any interference or damage, the contractor shall make arrangements with officers or owners of the utilities concerning the precautions to be used during the performance of the work. All work will be prohibited if these preparations are not completed before construction begins.

2. The contractor must adhere to the provisions of PA One-Call, 73 P.S. §176 *et seq.*, as amended. The Act specifies the responsibilities in regard to public health and safety during excavation and demolition operations in areas of underground utilities.

3. In order to comply with PA One-Call, 73 P.S. §176 *et seq.*, as amended, the contractor shall call 1-800-242-1776, a one-number calling system in direct contact with

many utilities within the Commonwealth of Pennsylvania.

(*Ord. 2000-2, 9/27/2000, §101-64*)

§18-298. Working Conditions.

No night or Sunday work requiring the presence of the Borough Engineer, or his representative, will be permitted except in cases of emergency, and then only with the written consent of the Engineer.

(*Ord. 2000-2, 9/27/2000, §101-65*)

§18-299. Service of Notice by the Borough.

The service of any notice by the Borough to the contractor shall be considered accomplished upon completion of any one of the following procedures:

A. When delivered, in writing or by facsimile, to the person in charge of the office used by the contractor to conduct business.

B. When delivered, in writing, to the contractor, or any of his authorized agents, in person.

C. When delivered, in writing or by facsimile, to the contractor, or any of his agents, at the office used to conduct the business of the contractor at or near the work site.

D. When deposited in the United States Mail, postage prepaid, and addressed to the party intended for such service at his/her office used for conducting the business of the contract.

(*Ord. 2000-2, 9/27/2000, §101-66*)

§18-300. Materials, Appliances, and Employees.

1. Unless otherwise stipulated, the contractor shall provide and pay for all materials, labor, water, tools, equipment, light, power, transportation, and other facilities necessary for the execution and completion of the work.

2. Unless otherwise specified, all materials shall be new. Both workmanship and materials shall be of good quality. The contractor shall, if requested, furnish satisfactory evidence as to the kind and quality of materials, original composition, and manufacture of all materials used in the project.

3. The contractor shall at all times enforce strict discipline and good order among his employees, and shall not employ any unfit person or anyone not skilled in the work assigned to them.

(*Ord. 2000-2, 9/27/2000, §101-67*)

§18-301. Accidents.

1. The contractor shall provide, on site, such equipment and medical facilities necessary to provide first-aid service to anyone who may be injured in connection with the work.

2. The contractor must promptly report in writing to the Borough all accidents whatsoever arising out of the performance of the work. This applies whether on, or adjacent to the site. The report shall include any injury causing death, personal injury,

or property damages. The report must provide full details and statements of witnesses. In addition, if death, serious injury, or serious damages are caused, the accident shall be reported immediately by telephone or messenger to both the Borough and Engineer.

3. If any claim is made against the contractor or any subcontractor because of an accident, the contractor shall promptly report the facts in writing to the Borough and Engineer, providing the full details of the claim.

(Ord. 2000-2, 9/27/2000, §101-68)

§18-302. Preservation of Monuments.

All property line and survey monuments shall be properly tied into fixed points before being disturbed, and properly reset by the contractor upon completion of the work.

(Ord. 2000-2, 9/27/2000, §101-69)

§18-303. Private Property.

1. Where sewer lines cross private property, all rights of way and entry will be acquired by the contractor. In opening trenches across private property, the contractor shall use every means to protect all property. This includes lawns, trees, shrubbery, fences, buildings, walls, roads, water courses, natural features, or any improvements which may exist. All damages resulting from the contractor's operation shall be repaired, without charge, to the satisfaction of the Borough. Upon the contractor's refusal to do so, the repairs will be done by the Borough at the expense of the contractor. The contractor shall confine his operations to the width of the right-of-way.

2. Before any work is to be done on private property, the contractor will provide a video tape of the entire easement area. Approval of the scope by the Borough Engineer is required before commencing any work.

(Ord. 2000-2, 9/27/2000, §101-70)

§18-304. Other Permits and Regulations.

1. Permits and licenses, including ones not mentioned in this Part, necessary for the completion of the work, such as blasting permits, trenching, etc., shall be secured and paid for by the contractor from the corresponding Federal, State, County, or Borough authority.

2. The contractor shall comply with the laws, ordinances, rules, and regulations pertaining to the work as drawn and specified. If the contractor observes the drawings and specifications are at variance therewith, he shall promptly notify the Engineer in writing, and any necessary changes shall be adjusted as provided in the contract. If the contractor performs any work knowing it is contrary to such laws, ordinances, rules, and regulations, and without notice to the Engineer, he shall bear all costs arising therefrom.

(Ord. 2000-2, 9/27/2000, §101-71)

§18-305. Temporary Provisions for Public Travel.

1. The contractor shall perform his work in a manner as to interfere, as little as possible, with the use of any roads or adjoining property. No excavation shall be left

open or other obstructions allowed to remain any longer than is absolutely necessary. The contractor shall provide all safeguards and temporary passageways necessary for the convenience and protection of all persons using said highway by day or night.

2. The contractor shall provide, place, and maintain all signs, sign mounts, flashers, steady bum lights, barricades, temporary lighting, and all other associated traffic maintenance devices in order to adequately protect the public from harm for the duration of the construction project.

3. When permission for detouring traffic is granted, the contractor shall post signs and maintain all detour routes to the satisfaction of the corresponding authority. No State highway shall be closed to traffic and no work performed on a State highway without first obtaining approval for closing from PennDOT. On a State highway, all warning signs for construction and detouring must be in accordance with PennDOT current standards.

4. At no time, during construction, shall any materials, spills, rocks, or other debris impede the flow of traffic through the job site. Any debris that has entered the traffic lanes shall be immediately cleaned up and removed. The contractor shall make every effort to protect traffic, both pedestrian and vehicular, against any possible injury or damage.

5. The contractor shall construct and maintain bridges over excavated areas as may be necessary, or as directed by the corresponding authority, and said bridges must have sufficient structural integrity to accommodate its purpose, whether vehicular and/or pedestrian traffic. The proposed bridge shall be approved by the corresponding authority.

6. All fire hydrants, water valves, gas valves, fire alarm boxes, and mail boxes shall be left accessible for use.

7. If the contractor should fail to provide the necessary safeguards, as specified, the corresponding authority may provide the same and charge the cost to the contractor.

(Ord. 2000-2, 9/27/2000, §101-72)

§18-306. Damage Due to High Water.

The contractor shall be responsible for all damage done, to his work, by heavy rains or floods. He shall take all reasonable precautions to protect adjoining property, by building such temporary channels to carry off the stormwater as required.

(Ord. 2000-2, 9/27/2000, §101-73)

§18-307. Partially Completed Work.

Partially completed work shall mean work which is in progress, such as trenching, pipe laying, and material in place.

(Ord. 2000-2, 9/27/2000, §101-74)

§18-308. Completed Work.

1. Completed work is defined as work which is entirely done, including removal of all tools, equipment, excess material, rubbish and debris and the clearing of sidewalks, rights-of-way, and the restoration of street surfaces to original or better

condition. The same applies for lines installed on private property.

2. The Engineer permitting a full release of funds for completed work shall in no way relieve the contractor, or his representative, of repairing defective work which may not be detected until after the said release of funds.

(Ord. 2000-2, 9/27/2000, §101-75)

§18-309. Condemned Work and Materials.

1. The contractor shall promptly remove, from the premises, all materials condemned by the Engineer. This includes materials failing to conform to the contract, whether incorporated in the work or not, and the contractor shall promptly replace his work in accordance with the contract. He shall bear the expense of making good all work of other contractors damaged by such removal or replacement.

2. Failure or neglect on the part of the Borough Engineer to condemn or reject any inferior work or materials shall not be construed as an acceptance of such work or materials, should the same become evident at a later date, prior to delivery of completion certificate by the Borough to the contractor.

(Ord. 2000-2, 9/27/2000, §101-76)

§18-310. Acceptance, Final Estimate, and Payment.

Upon the completion of the contract, including clean up, the contractor shall notify the Borough the work is ready for final inspection. If the contract is complete, the Engineer will notify the Borough of satisfactory completion so that a completion certificate may be issued and outstanding funds released.

(Ord. 2000-2, 9/27/2000, §101-77)

§18-311. Cleaning Up.

The contractor shall, at all times, keep the project site free from accumulations of surplus material, rubbish, and waste materials resulting from his operation. The contractor shall also restore all lawns and shrubbery damaged in the course of construction.

(Ord. 2000-2, 9/27/2000, §101-78)

§18-312. Sanitary Facilities.

The contractor shall provide toilet facilities for the use of all personnel working on the project. Facilities shall be of the portable type and shall be kept in a clean and sanitary condition.

(Ord. 2000-2, 9/27/2000, §101-79)

§18-313. "Or Equal" Clause.

1. Any reference to an item of equipment or material by a specific manufacturer's brand or trade name is intended merely as a standard. Products or materials of other manufacturers which, in the opinion of the Engineer, are the equal of that specified, considering quality, workmanship, economy of operation, and are suitable for the intended purpose, will be acceptable.

2. The contractor shall not, under any circumstance, substitute an alternate

manufacturer's product or material without prior written approval of the Borough Engineer.

(*Ord. 2000-2, 9/27/2000, §101-80*)

§18-314. Special Requirements.

Should there be any conflict with the general or special conditions, the following requirements shall govern:

A. Where reference is made to government specifications, or to those of well known organizations such as ASTM, AWWA, etc., the latest editions shall apply.

B. The contractor will be required to maintain, at all times during construction, the flow of sewage in the existing sewerage systems.

C. Connections to existing sewers shall be made providing a watertight installation. Where manholes are broken into for connections, they shall be restored to original condition using materials similar to those in the existing structures.

D. Where sewers will be constructed within State highway rights-of-way, the contractor will make necessary applications for permits to construct such sewers through the Borough Council. It shall be, however, the responsibility of the contractor to construct the sewers in strict conformance with the requirements of the Borough and PennDOT. [*Ord. 2015-4*]

E. Where sewers are to be installed within the limits of streets, all removal and replacement of street paving and restoration of shoulders shall be in strict conformance with the requirements of New Morgan Borough and PennDOT.

F. Streets shall, not be unnecessarily obstructed. The contractor shall take measures to keep the streets or roads open and safe for traffic after working hours.

G. When sewer lines cross telephone, telegraph, electric, cable TV, gas, oil, or water lines, no excavation or pipe laying shall be done at those crossings without the presence of an authorized representative from the office of the corresponding authority, i.e., Bell Atlantic, AT&T, PECO Energy, Morgantown Properties, etc., and their successors.

H. The contractor should plan his work to provide adequate protection during storms. Certain portions of the work may be affected during storms and floods. Provisions for preventing damage should be made available at all times. Sewer lines and other work shall be protected at all times against damage from uplift due to high ground water levels.

I. The contractor shall provide a competent and reliable person delegated to be readily available and have full authority to act in his behalf in case it is necessary to deal with an emergency situation arising during after working hours.

J. The contractor shall provide a list of responsible parties to contact on a normal or emergency basis. The list shall include telephone, fax, pager, and cell phone numbers.

(*Ord. 2000-2, 9/27/2000, §101-81; as amended by Ord. 2015-4, 9/8/2015*)

H. Standard Specifications for Construction of Sanitary Sewers and Appurtenances

§18-321. Standards.

Municipal, Federal, and State specifications and standards will govern in any situation not covered in the contract documents.

(Ord. 2000-2, 9/27/2000, §101-82)

§18-322. Traffic Control.

1. The contractor shall provide and maintain access to and from all properties along the line of the work. He shall also provide temporary by-passes and bridges and maintain them in a safe and usable condition whenever, in the opinion of the Engineer, detouring of traffic to parallel routes cannot be done without hardship or excessive increase in travel by the public.

2. Where single lane by-passes are provided, the contractor shall furnish signal men to control traffic operations and minimize delays.

3. Where directed by the Borough Engineer, the contractor shall perform excavating, paving, and other operations on one-half of the road at a time to allow for movement of traffic.

(Ord. 2000-2, 9/27/2000, §101-83)

§18-323. Detours.

The contractor shall set up and maintain all necessary detours to the satisfaction of the Engineer and PennDOT. He shall supply and erect all necessary signs along the routes approved by the Engineer and PennDOT. He shall notify police, fire, school, and New Morgan Borough officials, as well as adjacent municipalities. All proposed detours shall be marked clearly on a map and submitted to the Engineer 2 weeks in advance of the time the detour will go into effect. The Engineer will submit the plans to PennDOT for approval.

(Ord. 2000-2, 9/27/2000, §101-84)

§18-324. Safeguards.

1. The contractor shall provide, erect, and maintain adequate barricades, warning signs and lights at all excavations, closures, detours, and points of danger.

2. *Dust Control.* It will be the responsibility of the contractor to control dust during the project by sweeping and/or the proper use of chemicals such as calcium chloride.

3. *Maintenance of Public Ways.* Streets, crosswalks, and sidewalks shall be kept broom clean, clear, and free for the passage of vehicles or pedestrians, unless otherwise authorized by the Engineer. Additional passageways may be required where deemed necessary.

4. All applicable regulations of the Occupational Safety and Health Act (OSHA) shall be complied with during the performance of the contract, including the provisions of confined space entry. Safety provisions shall be enforced by OSHA as required by law and not by the Borough or its representatives.

5. The safety provisions of applicable laws and regulations of the Pennsylvania Department of Labor and Industry, and building and construction codes shall be observed. Machinery, equipment, and other hazards shall be guarded in accordance with safety provisions of the "Manual of Accident Prevention in Construction," published by the Associated General Contractors of America, to the extent that such provisions are not in contradiction of applicable State and local laws.

6. Special attention is drawn to the regulations of the Pennsylvania Department of Labor and Industry relating to trenches and excavations, tunnel construction, equipment, materials, labor, safety, sanitation, and other regulations of which the contractor shall be fully informed and he shall fully comply. Observance of and compliance with said regulations shall be solely, and without qualification, the responsibility of the contractor, without reliance on supervision or direction by the Borough or the Borough Engineer.

(Ord. 2000-2, 9/27/2000, §101-85)

§18-325. Certification of Materials.

1. The contractor shall forward to the Engineer a certification for each material used on the site. This certification shall state the materials used on the site conform with the specifications set forth herein and shall be signed by the person having responsible charge of the plant or company producing such materials.

2. All material used in sewer construction not herein before specified, or specified on the plans, shall conform to the material specifications of the ASTM for that material.

(Ord. 2000-2, 9/27/2000, §101-86)

§18-326. Inspector's Duties.

1. Duly authorized inspectors, performing their duties under the direction of the Engineer, may be assigned to all or any part of the work. They shall be authorized to inspect the result of work and materials furnished. If any dispute arises as to the materials furnished, or the acceptability of the final work, they shall have the authority to reject materials and/or work until the issue can be decided by the Engineer. All fees incurred by the inspectors and Engineer are paid by the contractor to the Borough.

2. The contractor shall furnish the inspector with records, as required, of the materials delivered or materials incorporated in the work.

3. All pipe laying, concrete pouring, and masonry construction shall be done only in the presence of an inspector representing the Engineer unless specifically waived by the Engineer.

(Ord. 2000-2, 9/27/2000, §101-87)

§18-327. Erosion and Sediment Pollution Control Regulations.

1. The contractor shall schedule and conduct his operations to minimize erosion of soils and prevent silting and muddying of streams, rivers, irrigation systems, and impoundment.

2. Pollutants, such as fuels, lubricants, bitumen, raw sewage, and other harmful materials shall not be discharged into or near rivers, streams and impoundment or into natural or man-made channels leading thereto. Wash water or waste from concrete

mixing operations shall not be allowed to enter live streams.

3. All applicable regulations of fish and wildlife agencies and statutes relating to the prevention and abatement of pollution shall be complied with in the performance of the contract.

4. All waterways shall be cleared as soon as practicable of false work, piling, debris, or other obstructions installed during construction operations and not a part of the finished work.

5. Frequent fording of live streams will not be permitted.

6. When it becomes necessary, the Engineer will inform the contractor of unsatisfactory construction procedures and operations. If the unsatisfactory construction procedures and operations are not corrected promptly, the Borough may suspend the performance of other construction until the conditions have been corrected.

7. All provisions of the erosion control plan for this project shall be followed. Erosion and sedimentation control practices shall be carried out in strict accordance with the construction drawings and the Erosion and Sediment Control Program Narrative Report. In the event no narrative report has been established, and notes concerning same are not specifically addressed on the construction drawings guidelines, the mitigation of erosion and sediment collection shall be carried out in accordance with the guidelines of "Soil Erosion and Sedimentation Control Manual" prepared by the Pennsylvania Department of Environmental Protection dated March 2000, as amended. Also, any measures undertaken must meet the current practices of the Berks County Conservation District and are subject to the approval of the Engineer. [Ord. 2015-4]

8. The contractor must acquire a grading permit.

9. The contractor shall also conform to the following erosion and sedimentation control practices:

A. Reduce by the greatest extent practicable the area and duration of exposure of readily erodible soils.

B. Protect the soils by use of temporary vegetation, seeding, and mulch, or by accelerating the establishment of permanent vegetation. Complete and protect segments of work as rapidly as is consistent with construction schedules.

C. Retard the rate of runoff from the construction site and control disposal of runoff.

D. Trap sediment resulting from construction in temporary or permanent silt holding basins. This includes pump discharges resulting from dewatering operations.

E. Sprinkle or apply dust suppressors or otherwise keep dust within tolerable limits on haul roads and at the site.

F. Use temporary bridges or culverts where fording of streams is objectionable. Borrow areas should be at a location where pollution from the operation can be minimized. Locations should be avoided where pollution would be inevitable.

G. Should construction operations be suspended for any appreciable length of time, temporary measures for the control of erosion must be utilized.

H. Provision be made for protection against discharge of pollutants such as chemicals, fuel, lubricants, sewage, etc., into the stream.

I. All operations shall be conducted in such a manner to minimize turbidity in the stream at and below the site of the structure.

J. The contractor shall, at all times, keep the premises free from accumulation of waste material of rubbish caused by his employees or work.

(Ord. 2000-2, 9/27/2000, §101-88; as amended by Ord. 2015-4, 9/8/2015)

§18-328. Sequence of Construction.

1. Manholes and sewer mains shall be constructed and completed in sequence with service connections being constructed.

2. Temporary paving in public roads shall be placed immediately after completion of trench backfill, and permanent paving shall be placed in accordance with State, Federal, and local regulations. All street surfaces shall be cleaned.

3. Failure of the contractor to comply with these requirements shall be sufficient reason for the Borough to stop all other work, pending compliance with these requirements.

(Ord. 2000-2, 9/27/2000, §101-89)

§18-329. Material Specifications.

1. *Concrete.*

A. All concrete shall consist of plant mix or "ready mix" concrete unless job mixed concrete is permitted by the Borough Engineer. All ready mixed cement shall conform to ASTM C-94. The producer of the concrete shall be approved by the Borough Engineer and certificates of test materials and proportions shall be furnished by the supplier as many times as may be required. The Borough Engineer shall have the right to inspect the plant of the supplier at any time.

B. Job mixed concrete shall conform to all applicable specifications for ready mix concrete contained herein and all concrete shall be mixed in an approved mixer.

C. Cement shall conform to ASTM C-150, Type 11 or ASTM C-175 for air entraining cement. Air entrained concrete shall be used for all walk and curb replacement and other exposed concrete work and shall contain 3 to 6 percent of air.

D. Coarse and fine aggregate shall conform to ASTM C-33, and shall be graded to produce a dense concrete. Maximum size of aggregate shall be $\frac{3}{4}$ inch.

E. Water shall be clean, free from deleterious amounts of acids, alkalis, or organic materials. Maximum water content shall be 6.6 gallons per sack, including free moisture in aggregate. No concrete exposed to the action of freezing weather shall have more than 6 gallons of water per sack of cement. No frozen, lumped or caked materials shall be used.

F. *Proportions.* All materials for concrete shall be proportioned by weight and, once the proportions required for the desired concrete are obtained, they shall not be changed without permission.

G. *Strength of Concrete.* Concrete for general use shall develop a compressive strength of 2,500 psi when tested in accordance with the Standard Method of

Making Compression Tests of Concrete of the American Society for Testing Materials (ASTM). Samples of concrete shall be taken by the contractor as and when directed by the Engineer, and tests shall be made at the expense of the contractor by a reputable laboratory approved by the Engineer. State Department of Highways Class "A" concrete shall be used for concrete base under State highways.

H. *Slump*. Slump tests shall be made by the contractor throughout the course of the work and as required by the Engineer. A slump cone shall be provided by the contractor for the Engineer's use. Slump of concrete shall be 2 to 4 inches. Slump shall be determined by ASTM C-143.

I. *Temperature for Concrete Work*. No concrete or cement work shall be done when the atmospheric temperature is below 40° F., except under special conditions when heaters are employed. No anti-freezing ingredient shall be mixed with concrete or cement work. Freshly laid concrete shall be covered by approved shelters, and means shall be provided for keeping the air beneath the shelters warm and moist by live steam or other methods. The Engineer shall approve the method of protecting all concrete.

J. *Small Quantities of Concrete*. If small quantities of concrete are mixed by hand, the fine aggregate and cement shall be mixed dry in a steel mortar box until the mixture is an even and uniform color throughout. It shall then be wet with the proper quantity of water and thoroughly mixed by hoes. The crushed stone shall be spread on a wooden or steel platform to make a bed of uniform thickness, and after being wet the mortar shall be added and the whole mass turned with square edged shovels until it is thoroughly mixed.

K. Concrete additives shall be used only with the permission of the Engineer and in accordance with the manufacturer's directions.

L. *Curing*. Provision must be made for maintaining concrete in a moist condition for a period of 5 days after placement, except that for high early strength concrete moist curing shall be provided for 2 days.

M. White pigmented concrete curing compound shall be applied in conformance with the manufacturer's directions to all curb and walk replacement and all other above-grade concrete work.

N. The basis for final acceptance of concrete shall be the specified minimum allowable compressive strength at 28 days in terms of tests of standard specimens cured under standard laboratory conditions for moist curing as determined on samples taken from the transportation unit at the point of discharge.

O. The contractor shall provide the Engineer with a carbon copy of each original delivery ticket accompanying loads of ready-mixed concrete for each day's pour. The manufacturer shall certify, on each delivery ticket, the proportions selected will produce concrete of the quality specified and that the mix has the desired air content and slump.

P. The contractor shall also furnish a statement to the Engineer giving the proportions by weight (dry) of cement and of fine and coarse aggregates used in the manufacture of each class of concrete.

Q. All rejected concrete shall be promptly removed and replaced at the

expense of the contractor.

R. During the work, compression test specimens may be required by the Engineer. All tests shall be made in accordance with ASTM Standards C-31 and C-39.

S. The contractor shall assume all cost of all preliminary and field tests on the concrete as well as any corrective measures.

T. Forms shall conform to the shape, lines, and dimensions of the members as called for on the plans, and shall be substantial and sufficiently tight to prevent leakage of mortar. They shall be properly braced or tied together so as to maintain position and shape. The Engineer may require that only wooden forms be used on certain structures.

U. Depending on the method of curing used, the forms shall not be removed within 48 hours after the concrete has been placed. No rubbing to correct irregularities will be permitted until the full curing period has elapsed.

V. After removal of forms and the curing period has elapsed, all unsightly ridges or lips shall be removed and undesirable local surfaces bulges shall be remedied. All voids and holes left by the removal of tie rods shall be reamed and neatly filled with dry-parching mortar (preshrunk) mixed with one part cement and two parts fine aggregate or as directed by the Engineer. The cement used in the mortar shall be a blend of Portland Cement and White Portland Cement properly proportioned so the final color of the cured mortar will be the same as the color of the surrounding concrete. Defective concrete shall be repaired by removing or cutting out the unsatisfactory material and placing new concrete, formed with keys, dovetails, or anchors to attach it securely in place. Concrete for patching shall be drier than the usual mixture and shall be thoroughly tamped into place. All unformed surfaces of concrete not to be covered by additional concrete or backfill, shall have a wood float finish without additional mortar.

W. Adequate equipment shall be provided for heating of concrete materials and protecting the concrete during freezing or near-freezing weather. No frozen materials or materials containing ice shall be used.

X. All concrete materials and all reinforcement, forms, fillers, and earth which the concrete is to contact shall be free from frost. Whenever the temperature of the surrounding air is below 40 degrees F, all concrete placed in the forms shall have a temperature of between 70 degrees F. and 80 degrees F., and adequate means shall be provided for maintaining a temperature of not less than 70 degrees F. for 3 days or 50 degrees for 5 days except that when high-early strength concrete is used the temperature shall be maintained at not less than 70 degrees F. for 2 days or 50 degrees F. for 3 days or for as much time as is necessary to insure proper curing of the concrete. The housing, covering or other protection used in connection with curing shall remain in place and intact at least 24 hours after the artificial heating is discontinued. No dependence shall be placed on salt or other chemicals for the prevention of freezing.

Y. Connections shall be made by the contractor at such a time and in such a manner as the Borough may direct. Any customers to be affected by the plugging of mains shall be notified by the contractor and all plugs will be placed under the direction of the Borough representative. Connections shall be completed as quickly

as possible to keep inconvenience at a minimum. If deemed necessary by the Borough, connections will be made at night. Any existing facilities that must be removed to make connections shall be removed by the contractor.

2. *Reinforcing Steel.*

A. Reinforcing steel shall be deformed bars complying with ASTM A-15-58T, or the latest revision, rolled from new billets of identified heats manufactured by the open-hearth process. Welded wire fabric shall conform to ASTM A-82 or A-185 and shall be 6 inches by 6 inches by 6/6 unless otherwise shown in the details or standards.

3. *Steel Casing Pipe.*

A. Shall have a minimum diameter as shown on drawings or specified herein and have a minimum yield strength of 35,000 psi. Pipe shall be uncoated and of the following minimum thickness:

Diameter	Minimum Thickness
18	0.344 inches
20	0.375 inches
24	0.438 inches
30	0.501 inches
36	0.626 inches
42	0.688 inches

B. Joists shall be of the butt and weld type construction suitable for jacking.

4. *Brick.* Sewer brick shall conform to the requirement of AASHTO Designation M91 for Grade SS sewer bricks.

5. *Crushed Aggregate or Granular Backfill.* Where specified, crushed aggregate backfill shall conform to PADOT Specifications, latest revisions, for AASHTO Number 57 modified stone. Formerly acceptable 2B modified as specified in PennDOT Form 408. Granular backfill, when specified shall consist of 2RC aggregate as specified in PennDOT Publication 408, latest revision.

6. *Mortar.* All mortar specified shall consist of one part cement to two parts sand or fine aggregate. One volume of sand shall be 1 cubic foot; one volume of cement shall be 94 pounds.

7. *Portland Cement.* All Portland cement shall conform to ASTM C-150 Type 1.

8. *Reinforcement.* All reinforcing base shall be free from rust or other material inhibiting the concrete bonding process. Placement, splicing, tying, bending, and protection of reinforcing base shall be in accordance to the PennDOT 1994 Specifications, latest revisions.

9. *Construction Joints.* All constructions joints not indicated on the construction plans shall be constructed and formed as to least impair the strength of the structure. Where a joint is to be made, the abutting concrete surfaces shall be thoroughly cleaned. Also all vertical joints shall be thoroughly wetted and slushed with a coat of neat

cement grout immediately preceding the placement of the new concrete.

10. *Watertight Joints.* Whenever new concrete surfaces abut old concrete surfaces, the contractor shall provide a watertight joint. The joint sealant shall be an Igas joint sealant, or an approved equal. The joint shall be primed with Igas primer and the joint shall be made in strict accordance with the manufacturer's recommendations.

11. *Sand.* Sand shall conform to the requirement of ASTM C-144. L. Stone or Gravel Foundations.

12. Stone or gravel foundation shall consist of crushed stone or "run of pit" gravel that shall be clean, sharp, trap rock, and free of loam, organic matter, soft or flaky materials, or other deleterious material. Prior to the stone or gravel being brought on the site, the size, type, and source must be approved by the Engineer. Maximum permissible stone size for foundations shall be No. 2 stone, approximately $\frac{3}{4}$ inch, as specified by PennDOT form 408 1976 edition. Under the PennDOT 1994 Specifications AASHTO number 67 stone shall be considered acceptable.

13. *Water.* Water used in mixing or curing of Portland Cement Concrete shall be reasonably clean, and free from vegetable matter, oil, acid, alkali, sugar, or any foreign substance.

14. *Manholes and Manhole Construction.*

A. Manholes shall be of precast concrete wall and base unit construction, with precast or cast in place concrete flow channels, aluminum or steel-reinforced polypropylene steps and cast iron frames and covers as indicated.

B. Manhole construction shall conform to design of applicable standard details made part of these specifications and other details set forth herein. The base of the manhole shall first be set on an aggregate base, then the walls set in place. The base shall then be completed by constructing channels, using form work for straight or curved channels, and filling in the space around forms with concrete up to a point equal to two-thirds of the diameter of the largest pipe passing through the manhole. The top surfaces or shelves shall be neatly trowelled off and given a slope from sides toward center of no less than 1 inch per foot measured perpendicular to the adjacent flow channels.

C. The precast concrete sections shall have a 4-, 5- or 6-foot internal diameter, with a 2½-foot diameter at the top of the cone section. The risers and cone sections shall be adequately reinforced in accordance with ASTM C-478 specifications.

D. All brick manholes shall have both inner and outer walls pargeted.

15. *Cast Iron Fittings.*

A. The contractor shall furnish and install all cast iron fittings and castings where needed. Unless otherwise called for, fittings shall be ASTM Standard A-48, Class 30, and shall be coated with bitumin paint before delivery.

B. All castings shall conform to the standards set forth in the detail drawings.

C. All cast iron must have an ultimate tensile strength of 35,000 pounds per square inch with a light gray fracture. All castings shall be free from cracks, cold shuts or blow holes, straight, true to pattern, and have a workmanlike finish.

16. *Manhole Frames and Covers.*

A. Ferrous castings shall be manufactured of uniform quality, free from

blowholes, porosity, hard spots, shrinkage, distortion, or other defects, Also castings shall be smooth and well cleaned by shot blasting. Materials used in the manufacturer of castings shall conform to the requirements of ASTM A48-76, Class 30 or better, for Gray Iron or ASTM A36-77 for Ductile Iron. The castings shall be coated with asphalt paint resulting in a smooth, resilient casting when cold and not tacky or brittle. All manholes frames and covers shall be the standard self-sealing type. Ferrous castings shall be manufactured by Neenah Foundry Company, Neenah, Wisconsin, or approved equal.

B. Castings shall be designed for AASHTO Highway Loading Class HS-20. Material used in manufacturing of castings shall conform to ASTM designation A48-Class 35 Gray Iron. Tensile test bars made from each heat, from which castings are poured, must be tested by a fully accredited laboratory. A notarized certificate for these test bars must be provided to verify minimum tensile strength of 35,000 psi.

C. All castings shall be manufactured true to pattern; component parts shall fit together in a satisfactory manner. Round frames and covers shall have machined bearing surfaces to prevent rocking and rattling under traffic. Covers and frames shall be interchangeable.

D. Self-sealing lids shall be used and shall have a continuous one piece round gasket which is designed to press fit within a machined dovetail groove in the bearing surface of the lid. The gasket material shall be neoprene of a composition with good sealing, abrasion resistance, and low compression set qualities. Gluing of gaskets to covers in any manner is prohibited.

E. Manufactures shop drawings must be submitted to the Engineer for approval prior to manufacture. The Engineer shall retain the right to reject castings not conforming to this specification and or approved submittal drawings.

F. Where shown on the plans or required by the Engineer, the contractor shall install a watertight manhole cover and frame in place of the standard manhole cover and frame. The watertight manhole frame and cover shall be as shown on the detail drawings.

17. *Cast Iron Pipe.* Where specified on the plans and in these specifications cast iron pipe shall be used. Cast iron pipe shall conform to Federal Specifications WW-P-421 and shall be 150 pound class. All cast iron pipe shall be of the bell and spigot type with special joints or mechanical joints. The joint shall be approved by the Engineer before use and installed in accordance with the manufacturer's instructions. Another acceptable joint is the "slip-on" joint made by the insertion of a large rubber gasket into the soil pipe hub such as "dual-tite," "multi-tite" and "tyseal."

18. *Ductile Iron Pipe.* When ductile iron pipe is designated, all pipe shall be ductile iron, push-on joint or mechanical joint, and shall conform to ASA-A2 1.51 (AWWA C-15 1). All pipes shall be coated outside and seal coated inside. All joints shall make use of rubber gaskets to effect a seal. All joints shall be in accordance with ASA Specification A2 1.11.

19. *PVC Plastic Gravity Sewer Pipe.* This specification designates general requirements for unplasticized polyvinyl chloride (PVC) plastic gravity sewer pipe with integral bell and spigot joints for the conveyance of domestic sewage.

A. *Materials.* Pipe and fittings shall meet extra-strength minimum of SDR-35

of the requirements of ASTM specification D3034-74. Elastomeric gasket, if rubber, should comply with the physical requirements specified in ASTM-D-1 819, C-361 or C-433.

B. *Pipe.* All pipe shall be suitable for use as a gravity sewer conduit. Provisions must be made for contraction and expansion at each joint with a rubber ring. The bell shall consist of an integral wall section with a solid cross-section rubber ring factory assembled, securely locked in place to prevent displacement. Sizes and dimensions shall be as shown in this specification. Standard lengths shall be 20 feet and 12.5 feet +/- 1 inch. At manufacturer’s option, random lengths of not more than 15 percent of total footage may be shipped in lieu of standard lengths.

C. *Fittings.* All fittings and accessories shall be as manufactured and furnished by the pipe supplier, or approved equal, and have bell and/or spigot configurations compatible with the pipe.

D. *Physical and Chemical Requirements.* Pipe shall be designed to pass all tests at 73 degrees F. (+/- 3 degrees F.).

E. *Deflection.* Deflections due to earth loading on PVC sewer pipe shall be limited to a maximum of 5 percent, as calculated by the Spangler equation (Note: refer to the 1970 edition of the American Society of Civil Engineers Manual of Practice No. 37, Chapter 9, Section E, Subsection 1, latest revisions).

F. *Pipe Stiffness.* Minimum pipe stiffness: (F/y) at 5 percent deflection shall be 46 psi for all sizes when tested in accordance with ASTM Method of Test D2412 External Loading Properties of Plastic Pipe by Parallel-Plate Loading.

G. *Joint Tightness.* Two sections of pipe shall be assembled in accordance with the manufacturer’s recommendation. Joint shall be tested in accordance with ASTM D3212-73T, “Joints for Drain and Sewer Plastic Pipe Using Flexible Elastomeric Seals.”

H. *Flattening.* There shall be no evidence of splitting, cracking, or breaking when the pipe is tested as follows:

Flatten specimen of pipe, 6 inches long between parallel plates in a suitable press until the distance between the plates is forty percent of the outside diameter of the pipe. The rate of loading shall be uniform and such that the compression is completed within 2 to 5 minutes.

I. *Drop Impact Test.* Pipe (6-inch long section) shall be subjected to impact from a free falling tup (20-lb. Tup A) in accordance with ASTM Method of Test D2444. No splitting (denting is not a failure) shall be evident when the following energy is impacted:

Nominal size in inches	4	6	8	10	12
Ft.-Lbs.	150	210	210	220	220

J. *Installation.* PVC sewer piping installations should be made in accordance with ASTM D-232 1, “Underground Installation of Flexible Thermoplastic Sewer Pipe,” and with the following supplementary recommendations:

- (1) The particle size of Class I materials shall be AASHTO #8 course

aggregate.

(2) Class I and Class II backfill materials as listed in ASTM D-2321 are to be normally used with PVC sewer pipe. Class III materials are permissible upon consent of the Engineer. Class IV and Class V materials are not recommended for bedding, haunching, or initial backfill.

(3) Where high water tables or flowing water is likely to be present, it is recommended that Class I materials should be used for bedding, haunching, and initial backfill. If water is present, the trench must be dewatered during construction.

(4) When compacting the soil around the pipe, care should be employed to only compact the sides.

(5) Joint assemblies shall be made in accordance with the manufacturer's recommended procedure.

20. *Testing and Certification of Materials.*

A. All suppliers of materials incorporated into the project shall supply notarized statement in duplicate stating their material complies with the specifications set forth herein.

B. Notarized certification of tests made at the plant on all pipe shall be provided.

C. All materials will be tested periodically by the methods specified previously. The contractor shall render all necessary labor, materials, and equipment necessary for collecting, packaging, and identifying all samples.

(Ord. 2000-2, 9/27/2000, §101-90)

§18-330. Excavation.

1. *General.*

A. The contractor shall furnish all labor, tools, materials, and equipment necessary to accomplish all work including, but not limited to: the clearing and grubbing of areas of work; removal of existing paving; excavation of trenches to the depth shown on plans; support of all utility lines where the proposed sewer line crosses; and the maintenance of all excavated areas and trenches. This includes: sheeting; shoring; the removal of all water; and the disposal of excess fill. Also, it includes incidental work necessary to complete the project in a first class workmanlike manner as shown on the drawings and/or as specified and directed by the Borough.

B. Excavation shall include all materials regardless of character, excluding rock excavation as herein defined. Excavation shall be an open cut, unless written permission is granted by the Borough to excavate by other methods or other methods are specified on the construction drawings. The Borough shall be empowered to require that hard excavation be employed by the contractor where deemed necessary for proper construction.

C. All openings to be made within a State highway shall be made in accordance with the most recent standards and specifications prescribed by PennDOT, including any provisions established as conditions of approval for a

PennDOT Highway occupancy permit.

D. All openings to be made in Borough roads shall be made in accordance with the permit and regulations issued by New Morgan Borough.

E. Before beginning road trenching, the contractor shall clear the work site by removing all underbrush or any other obstructions to the work. See paragraph .G concerning tree removal.

F. In general, road trenches may be excavated and backfilled either by machinery or by hand. Provided, however, the contractor shall use hand excavation where necessary to protect existing structures, utilities, and private or public properties. And provided, further, that backfilling shall be done by hand to the extent hereinafter specified.

G. If construction is on a right of way other than in a road or street, no cutting, removal of trees, or cutting of main tree roots may be done unless permission has been obtained from the Borough. All work must be done in such a manner that the damage to the trees and other plantings is kept to a minimum. Any damage to trees, such as nicks, gouges, or broken limbs, shall be trimmed and painted with tree wound paint. Any tree damaged beyond repair shall be replaced at no cost to the Borough and/or owner of the property. Maximum diameter of trees used for replacement shall be 4 inches. The above restrictions also apply to trees or plants adjacent to a street, road, or highway right-of-way.

2. *Excavated Material.* Excavated material shall be so placed as not to unreasonably interfere with travel on the streets and driveways by the occupants of adjoining property or with access to fire hydrants. Surface loam, sod, etc., shall be kept separate from the remainder of the excavated material and replaced in its original position after backfilling of the trench. All surplus excavation not disposed of as stated above, shall be removed from the site of the work by the contractor, but none shall be deposited on private property, unless written consent of the owner(s) has been filed with the Engineer. In business districts, important thoroughfares, narrow streets, or in limited working areas, material excavated from trenches may be required to be removed from the street, as soon as excavated, to temporary storage areas or used as backfill within the trench excavation. When it is necessary to haul soft or wet materials over the streets, the contractor shall provide suitable tight vehicles to prevent spillage.

3. *Removal of Water from Excavation.* The contractor is responsible for keeping all excavations free of water during the construction process at their sole expense. The contractor shall at all times have ample equipment and means available on site by which they may de-water the excavated areas or trenches. The equipment and means shall include, but are not limited to, pumps, power source, labor, and other tools. Well points are an acceptable means by which dewatering may be propagated and shall be utilized wherever necessary in order to maintain dry conditions. Any methods proposed by the contractor as a means to de-water excavated areas are subject to the approval of the Engineer.

4. *Condition of Excavation.*

A. The contractor shall be solely responsible for the conditions of all his/her excavations including the maintenance thereof. Any slides or cave-ins shall be promptly removed.

B. Regardless of whether or not the use of bracing or sheeting and shoring

has been mandated by the Borough, the contractor shall be solely responsible for the condition of the excavations. Failure of the Borough to give direction concerning the size of timer sections, sheet piling, and/or the methods of placement of piling, sheeting, bracing, and shoring shall not relieve the contractor of any responsibility for the condition of the excavation. Any delay requiring an excavation to be open longer than usual shall not relieve the contractor from his obligation to properly and adequately protect the excavation from slides, cave-ins, or slipping.

5. Test pits, ordered in advance by the Borough, shall be made by the contractor along the line and site of work in order to determine the composition of subsurface materials and/or the exact location of utility lines.

6. *Miscellaneous Excavation.* The contractor shall do any excavating work as may be necessary as directed by the Borough. All such excavation shall be subject to the same conditions and requirements specified for trench excavation.

(Ord. 2000-2, 9/27/2000, §101-91)

§18-331. Rock Excavation and Blasting.

1. Rock shall be considered any material which requires drilling, blasting, wedging, or any means over and above direct removal by large power shovel and/or simple hard tools.

2. Where blasting is necessary, and only after receiving a permit, it shall be performed by an experienced and licensed blaster. All blasts shall be carried out in strict accordance with the laws and regulations of the State, County, and Federal agencies. No storage of explosives is permitted in New Morgan Borough.

(Ord. 2000-2, 9/27/2000, §101-92)

§18-332. Boring and Tunneling.

1. Only when permission is granted by the Borough shall boring and tunneling operations be used as a method for pipe installation.

2. If boring and/or tunneling operations are approved, sufficient openings shall be provided for the joining of pipe sections, placement of sleeves, and proper backfilling and compaction around the pipe or pipe structure. Tunnels shall use timber or steel sheeting and shall be constructed only by approved methods of the Borough.

(Ord. 2000-2, 9/27/2000, §101-93)

§18-333. Sheeting and Shoring.

1. *General.* The contractor shall support the sides and ends of all excavation wherever necessary with braces, sheeting, shores, or stringers of the quality and character hereinafter specified. All timbering, under pinning, or sheet piling shall be put in place by men skilled in such work and shall be arranged allowing it to be withdrawn, as backfilling proceeds, without injury to the structures or property. If, in the opinion of the Engineer, the timbering material is not of proper quality or sufficient size, or not properly placed, the contractor shall, upon notice, procure and place said timbering in a satisfactory manner. If contractor fails to do so, the work may be ordered stopped until the contractor is in compliance.

2. *Materials.* All timber used for sheeting, bracing, shoring, forming, or in

foundations, shall be of approved quality and required dimension. Except where allowable for temporary work, it shall be sound, straight, and free from cracks, shakes, and large or loose knots. Where conditions require it, sheeting shall be tongued and grooved, grooved and splined, or steel sheet piling.

3. *Sheeting Left in Place.*

A. All timbering shall be withdrawn as the backfilling is being done except where, and to such extent as the Engineer shall order, in writing, that said timbering be left in place. The contractor shall cut off any sheeting, wherever ordered, and shall remove the material without compensation. However, said sheeting shall be cut off at least 12 inches below finished grade.

B. Wherever necessary in quick sand, soft ground, or for the protection of any structure or property, sheeting shall be driven, at the contractor's expense, to such a depth below the bottom of the trench required by the Engineer.

(Ord. 2000-2, 9/27/2000, §101-94)

§18-334. Trenching.

1. *Lengths of Trenches.* The Borough Engineer shall have the right to limit the length of trench to be left opened in advance of work. The Borough may at anytime be empowered to require the contractor to backfill open trenches where pipe has yet to be laid if such trench is being left opened for an unreasonable period of time and/or only overnight, if it is deemed necessary to be in the best interest of the health, safety, and welfare of the public. Such backfilling shall be performed by the contractor even if the contractor must stop other work to backfill. The contractor shall not again open said trench until he is prepared to complete the operation. If the contractor refuses to backfill, the Borough shall be authorized to do so and expenditures for said work shall be the sole responsibility of the contractor. Excavation of all trenches, unless otherwise authorized, shall not exceed 20 feet in advance of pipe laying.

2. *Width and Depth of Trenches.*

A. The trenches shall be at a width and depth shown on the construction drawings, and specified or as directed by the Engineer in order to provide for the intended grade. Sides of trenches shall be kept as vertical as possible. The width of trench shall be taken as the nominal outside diameter of the pipe plus an additional 1 foot on either side. Where sheeting is used, this trench width shall be taken as the measured distance between interior faces of sheeting. In no case shall stringers and walling strips be placed in such a way as to interfere with the proper compaction of backfill material around the pipe.

B. Where trenches have been excavated below proper grade (over-excavated) the contractor shall be required to bring the pipe bedding to its proper grade by the use of first class bedding material unless other suitable material is found to be acceptable by the Engineer. Trenches that have been over-excavated and subsequently filled to proper grade with suitable material shall be properly and thoroughly compacted prior to pipe installation. The adequacy of the tamped trench to receive the pipe will be determined by the Engineer.

3. *Relocation of Guide and Alignment of Trenches.* The Borough reserves the right to change the alignment and grade of the proposed pipe installation as shown on the construction drawings. These changes may be due to the presence of obstructions or

other conditions making the realignment and/or grade adjustment necessary, more desirable, or advantageous to the Borough. Such changes will not entitle the contractor to additional compensation over the agreed cost for installation. Also, the contractor shall not be entitled to claim damages from the Borough as a result of these changes, even if these changes require the contractor to abandon trenches already excavated. These excavated trenches shall also be backfilled at the contractor's expense.

4. *Trench Foundation Preparation.* Irregularities and cavities occurring in earth or rock excavation, at trench bottoms or exposed tunnels, shall be filled to the required elevation with first class bedding material or clean earth, or other backfill material approved by the Engineer, and firmly compacted before the installation of pipelines. It should be noted, however, that if in the opinion of the Engineer, the proper grade for pipe installation has been encountered and the soil condition composed of unsuitable foundation material, the bottom of the trench shall be excavated to an additional depth. This additional depth shall be filled with first class bedding material, gravel and/or other material approved by the Engineer placed and properly compacted to the proposed grade as directed by the Engineer.

5. *Clearing, Grubbing, and Storage of Materials.*

A. The contractor shall clear and grub the surface over the proposed trench line in accordance to §200 of the most recent revisions of the PENNDOT Specifications. Curbs, sidewalks, gutters, flagstones, and paving material removed from trenches shall be stored at locations designated by the Engineer. Any curbs, sidewalks, gutters, flagstones, paving material, or suitable trench backfill that become damaged or lost through careless removal, wasteful storage, neglect, disposal, or use shall be replaced by the contractor without additional compensation.

B. The contractor shall be responsible for permanently restoring, repaving, and replacing any and all areas disturbed as a result of excavating trenches for a greater width than is necessary, excavation outside the limits or work, or disturbing areas through negligence.

6. *Trenching Machines.* Trenching machines may be used, but the contractor will be held responsible for all damages to private property, State, Federal, or municipal highways, or any overhead or underground structures.

(Ord. 2000-2, 9/27/2000, §101-95)

§18-335. Backfilling of Trenches.

1. Backfilling shall be done as promptly as is consistent with non-injury to the pipe and the pipe joints, but no backfilling shall be done before the Engineer gives permission.

2. Backfilling shall be done in layers 8 inches in depth and each layer shall be thoroughly tamped by a vibrating compactor to optimum density. For a depth of 1 foot above the top of the pipe, initial backfill material shall be placed by hand. Tamping at joints shall be done using hand tools to minimize damage to the pipe.

A. *Initial Backfill.* Coarse aggregate conforming to PDT §703.2.

(1) For pipe having a diameter of 21 inches and less use AASHTO No. 8 coarse aggregate.

(2) For pipe having a diameter of 24 inches and larger use AASHTO No. 57 coarse aggregate.

3. The remainder of backfill material shall be placed, moistened if necessary, and compacted with a mechanical compactor in suitable layers according to equipment used.

4. Where specified by the Engineer and in all State highways, trenches shall be backfilled with PENNDOT Specification 2 RC material which conforms to §703, Publication 408 of the Department. Material shall be placed in suitable layers and compacted to optimum density. Trenches shall be backfilled with this material from a point 12 inches above the top of the barrel of the pipe to the bottom of the paving section to be installed. Compacting of backfill in State highways by puddling or jetting will not be permitted.

5. The contractor is advised the use of unsuitable material for backfill of trenches will not be permitted, and borrow material will be required to provide stability and safe conditions for loading on the sewer pipes.

6. The best of materials excavated shall be used in backfilling in a manner approved by the Engineer. Frozen material shall not be used for backfilling. Selected earth, sand, or gravel shall be provided in rock trenches and used as backfill in the manner herein described, to a height of 2 feet above the top of the sewer. The balance of the backfill for the trench shall be, in all cases, good earth, sand, or gravel containing stones not exceeding 6 inches in dimension, but not exceeding 20 percent by proportion of backfill volume.

7. Backfilling or tamping with trenching machines is prohibited.

8. Upon completion of backfilling, the streets or property shall be cleaned, surplus material removed, and the surface restored to the condition in which it was before ground was broken. All materials left in public highways shall become the property of the contractor, and shall promptly be removed by same.

9. Where traffic conditions warrant, or work is to be stopped for an extended period, the entire trench shall be backfilled to permit traffic to pass. Backfilling of the entire trench will not be required for an overnight work stoppage except in isolated instances for safety.

10. Irrespective of location of sewer construction, within public or private rights-of-way, backfilling shall be accomplished with an equal degree of compaction as specified above.

11. The contractor shall backfill all excavations as rapidly as practicable, following the inspection and approval of work by the Borough.

12. No part of a pipe line or other structure needing tested, located, or measured, shall be filled until required tests and measurements have been made by the Borough. Only then will permission be given to backfill. Any backfilling done without authorization shall be uncovered by the contractor.

13. No ashes, putrescible refuse, large stones, or other material of an unsatisfactory character shall be used in backfilling. All suitable excess material from trenches and other excavations on the contract shall be used for backfill.

14. In the event additional material is needed, the contractor shall obtain borrow material from approved sources. All borrowed material shall be of satisfactory quality for the required purposes. In certain locations, grading and filling of adjacent ground

may be required by the Borough.

15. The space between pipe and sides of trench shall be backfilled by hand and thoroughly tamped with a light tamper in layers not to exceed 4 inches in thickness to a depth of at least 1 foot above top of pipe.

16. After completion of backfill, all material not used therein, shall be removed and disposed of by the contractor in such a manner and designation approved by the Borough. All roads, sidewalks, and other places on line of work shall be left free, clean, and in good order.

17. All removal and cleaning-up shall be the responsibility of the contractor. If he fails to do such work after receipt of notice, the work can be performed by the Borough and the cost charged to the contractor.

18. The contractor shall maintain all backfilled excavations in proper conditions as specified. All depressions appearing in backfilling excavations shall be promptly repaired. If he fails to make repairs within 48 hours after receipt of written notice from the Borough, the same may backfill said depression and charge its cost to the contractor. In an emergency, the Borough take action on any dangerous depression without giving previous notice to the contractor and charge the cost to the contractor.

19. The contractor shall be required to compact all backfill materials to a minimum of 95 percent of the materials maximum dry density as determined by ASTM D-698-64T (Standard Proctor).

20. During or after backfill operations, the Borough may order the contractor to take soil compactions tests in conformance with ASTM Standard Procedures or other available methods. If determined by the Authority that any lift does not meet 95 percent of the maximum dry density, the contractor shall be required to dig test holes, as directed by the Borough at various levels, throughout the backfill, at the contractors expense, for additional testing. If the additional tests indicate unsatisfactory compaction the contractor shall remove all unsatisfactory backfill and re-compact same to the required standards at their expense.

(Ord. 2000-2, 9/27/2000, §101-96)

§18-336. Watertight Installation of Pipe.

1. Every precaution must be taken to obtain watertight construction of all joints in pipe. The same precautions must be taken for all connections with manholes and “Y” or “T” branches, extensions of laterals, and construction of drop connections.

2. All ground water, from any cause whatsoever, shall be pumped or bailed out so that the trench shall be dry during pipe laying and backfilling.

3. All water pumped from the trenches shall be disposed of in a manner satisfactory to the Engineer.

4. When standard de-watering methods cannot maintain proper dry trench conditions, the contractor shall lower the water table below the trench bottom by well points and pumping, and provide pumps of sufficient capacity for de-watering excavations.

(Ord. 2000-2, 9/27/2000, §101-97)

§18-337. Pipe Installation.

1. *General.*

A. After the trench has been brought to the specified grade, the pipe, fittings and required specials shall be laid. All pipe shall be laid with the bell or couplings upgrade. Pipe laying shall be done only in the presence of an inspector and the contractor shall give ample notice to the Engineer before laying pipe, so an inspection can be performed. All pipe, before being lowered into the trench, shall be inspected and both ends shall be cleaned. The contractor shall not have more than 20 feet of trench open at any one time.

B. Pipes shall be thoroughly cleaned before they are laid and shall be kept clean until acceptance of completed work. Open ends shall be provided with a stopper carefully fitted so as to keep dirt and other substances from entering the main. A stopper shall be kept in the end of the line when work is not in progress.

C. Pipe shall be laid using laser-controlled grade setting equipment so the interior bore will conform accurately to the grades and alignment indicated by the construction drawings or as directed by the Engineer.

D. Before joints are made, each pipe shall be set in first class bedding and no pipe shall be brought into position until the preceding length has been thoroughly secured in place. Coupling or bell holes shall be dug sufficiently large to ensure a proper joint. All joints shall be made in strict conformance with the manufacturer's recommendation.

E. The excavation shall be kept free from water and no joints shall be made under water. Water shall not be allowed to rise in an excavation until joint is complete. Care shall be used to secure water tightness and to prevent damage to joints during backfilling. All pipe joints shall be watertight within the established specifications.

F. No pipe shall be placed upon a foundation into which frost has penetrated, or at any time when the Borough shall deem there is a danger of the formation of ice or penetration of frost at the bottom of excavation. Where the foundation is unstable or consists of rock, first class bedding or another stone or gravel foundation as approved by the Engineer shall be placed to restore the grade of the bottom of the trench prior to placement of first class bedding material for the pipe.

G. The lateral pipe shall be installed in a trench separate from any water service and the lines shall have a minimum horizontal separation of 10 feet. The pipe shall be of cast iron or SDR-35 PVC where it connects to the main and laid on a grade of $\frac{1}{4}$ inch per foot. In special cases $\frac{1}{8}$ inch per foot will be allowed.

H. Only in special circumstances, as determined by the Engineer, may the lateral be installed in the same trench as the water service. If permitted, in writing, the two lines shall be separated by a bench of undisturbed earth. Water and sewer lines shall have a horizontal separation of no less than 10 feet. The top of the sewer shall be at least 18 inches below the invert of the water main. The sewer pipe material shall be cast iron or SDR-35 PVC at the point of connection and shall be installed with approved joints being watertight and root proof.

I. If conditions prevent the above vertical separation, or when the water service must cross beneath a lateral, the bottom of the lateral shall be at least 18 inches above the top of the water service line and the lateral shall be of cast iron pressure pipe with push-on or mechanical joints, at least 10 feet on either side of

the crossing.

J. When a lateral is installed on filled or unstable ground, it shall be push-on or mechanical joint cast iron pressure pipe.

2. *Line and Grade.*

A. Care shall be taken to lay the pipe to true lines and grades as given by the contractor's engineer or as mandated by the Borough. All pipe shall be laid, to line and grade, using the laser beam method, or the double string method. Laser beam equipment shall be of the type that shines a beam through the pipe so that the grade and line may be checked easily. Correctness of the laser beam setting shall be verified at each manhole and in the middle of each run of pipe.

B. The grade, as shown on the profile, is the inside bottom of the pipe and to which the work must conform. All pipe shall be laid true to line and grade with bells, or couplings, on up grade. Under no conditions shall pipe be laid in water or on subgrade containing frost, or when trench conditions are unsuitable for such work. The contractor's engineer will set all stakes for lines and grades. The contractor must maintain and keep the stakes uncovered so they can be examined at any time. Stakes shall be placed at a minimum of every 50 feet, and the contractor shall be required to check the line and grade in order to insure accuracy. Lesser intervals shall be used only if permitted by the Borough Engineer.

3. *Pipe Bedding.*

A. In all trenches, whether earth or rock, first class bedding shall be provided for all pipe foundations. All pipe shall be laid with a smooth, uniform invert.

B. All pipe barrels and bells shall be bedded uniformly on first class bedding. First class bedding shall extend below the bottom outside diameter of the pipe a distance equal to one-fourth the outside diameter of the pipe or 4 inches, whichever is greater. Refer to the standard detail provided.

(1) *First Class Bedding.* AASHTO No. 57 Coarse Aggregate conforming to PENNDOT §703.2.

C. *Trench Plugs.* Install trench plugs composed of on-site select earth backfill material. Construct trench plugs in accordance with the standard detail provided. Place trench plugs by hand and compact with proper tools designed especially for such purpose.

(1) *Locations For Trench Plugs.*

(a) Construct trench plugs in main sewer trenches at 100-foot intervals.

(b) Construct trench plugs at a point not less than 3 feet upstream from in-line structures.

(c) Construct trench plugs in trenches for service connections at a point not less than 3 feet from the main sewer trench.

4. *Pipe Mouth Stoppered.*

A. During construction, the mouth of the completed sewer shall always be kept properly closed when pipe laying is not actually in progress. An expanding rubber plug is used to prevent the entrance of any water, earth, stones or other debris. Employees shall not walk on, over, or otherwise disturb the finished lines.

The contractor shall take any and all other measures to keep the sewer clean and free from deposits and protect the lines from damage until final inspection and acceptance by the Borough Engineer.

5. *Damage to Sewer.* If the sewer is damaged from any cause or becomes either partially or completely filled with dirt, stones, sand, or other debris, the contractor shall make all necessary repairs and remove such material to the satisfaction of the Engineer.

6. *Recommendations of Pipe Manufacturer.* Recommendations of manufacturer must be followed in laying pipe with special joints.

7. *Laterals and Fittings.*

A. As shown on the plans, or as directed by the Engineer, the contractor shall lay 4 inch to 6 inch ductile iron or PVC pipe to the road right-of-way line, easement limit or other location as determined by the owner and reviewed and approved by the Borough. If other existing or proposed utilities run parallel to the roadway or easement, laterals shall be extended at least 24 inches beyond the utility. The contractor shall make the connections to the sewer by means of wye or tee branch fittings. Ductile iron or PVC saddles may be used with the permission of the Engineer and installed per the instruction of the pipe or saddle manufacturer. In private rights-of-way, pipe will be installed to the edge of the right-of-way.

B. The lateral pipe shall be properly capped with a cap made especially for the size and type of pipe in use, and shall be properly blocked to permit air testing. All laterals shall be physically marked by a 2 x 4 inch board extending plumb from the capped end of the lateral to 18 inches above the ground surface. The 2 x 4 shall be painted green on top. Tunneling shall be used only with the Engineer's permission, and the lateral shall be marked with an 18-inch metal rod driven directly over the capped end. The capped end shall be blocked securely to prevent the cap from blowing off during the air testing. Upon completion of the work and prior to issuance of any connection permits, the contractor shall supply the Borough with an as built plan showing the location and depth of all lateral stubs.

C. All laterals shall be laid on a minimum $\frac{1}{4}$ inch per foot grade unless approved, in writing, by the Engineer.

8. *Concrete Cradle.*

A. Where directed by the Engineer or as shown on the plans, the contractor shall install concrete cradles along the pipeline. Install concrete cradles by carrying the trench excavation 4 inches deeper than the bottom of the pipe bell and laying the pipe in 2,500 psi mix high early strength concrete. Care shall be taken in laying the pipe in the concrete so as to secure an even bearing. Refer to the detail drawing provided.

B. Whenever concrete cradles are installed, the entire run of pipe between manholes must be ductile iron pipe.

9. *Concrete Encasement.*

A. Where directed by the Engineer, or as shown on the plans, the contractor shall install concrete encasement along the pipeline. Install concrete encasement by carrying the trench excavation 4 inches deeper than the bottom of the pipe bell, and laying the pipe in 2,500 psi mix high early strength concrete. Care shall be

taken in laying the pipe in the concrete so as to secure an even bearing. Refer to the detail drawing provided.

B. Whenever concrete encasement is installed, the entire run of pipe between manholes must be ductile iron pipe.

10. *Infiltration.* The contractor shall clean all debris from pipes and repair all apparent leakage. After which, the infiltration of water from any manhole to manhole section of the contract shall not exceed 100 gallons per inch of inside pipe diameter per mile of sewer per 24 hours where ground water is encountered above the sewer line.

11. *Air Testing.*

A. In addition to infiltration testing, the Borough will require the performance of line acceptance testing using low pressure air. The test shall be performed at the expense and with the full cooperation and manpower and materials of the contractor. It shall be performed according to stated procedures and in the presence of the Borough Engineer.

B. Equipment used shall meet the following minimum requirements:

(1) Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe to be inspected.

(2) Pneumatic plugs shall resist internal test pressures without requiring external bracing or blocking.

(3) All air used shall pass through a single control panel.

(4) Three individual hoses shall be used for the following corrections:

(a) From control panel to pneumatic plugs for inflation.

(b) From control panel to sealed line for introducing the low pressure air.

(c) From sealed line to control panel for continually monitoring the air pressure rise in the sealed line.

C. *Procedures.* All pneumatic plugs shall be seal tested before being used in the actual test. One length of pipe shall be laid on the ground and sealed at both ends with the pneumatic plugs to be checked. Air shall be introduced into the plugs to 25 psi. The sealed pipe shall be pressurized to 5 psi. The plugs shall hold against this pressure without bracing and without movement of the plugs out of the pipe. After a manhole to manhole reach of pipe has been completed, cleaned, and the pneumatic plugs are checked, the plugs shall be placed in the line at each manhole and inflated to 25 psi. Low pressure air shall be introduced into sealed line until the internal air pressure reaches 4 psig greater than the average back pressure of any ground water that may be over the pipe. At least 2 minutes shall be allowed for the air pressure to stabilize. After the stabilization period (4.0 psig minimum pressure in pipe), the air hose from the control panel to the air supply shall be disconnected. The portion of line being tested shall be termed "acceptable" if that portion does not lose air at a rate greater than 0.02 cfm per square foot of internal pipe surface when tested at an average pressure of psig greater than the back pressure exerted by ground water that may be over the invert of the pipe at the time of the test.

D. The above requirements shall be accomplished by performing the test as

follows: The time required in minutes for the pressure to decrease from 4.0 to 3.5 psig (greater than the average back pressure of any ground water that may be over the pipe) shall not be less than the time shown for the given diameters in the following table:

Pipe Diameter in Inches	Minutes
4	2.0
6	3.0
8	4.0
10	5.0
12	5.5
15	7.5
18	8.5
32	10.0

E. In areas where ground water exists, the contractor shall install a ½-inch diameter capped pipe nipple, approximately 10 inches long, through the manhole wall on top of one of the sewer lines entering the manhole. This shall be done at the time the sewer line is installed. Immediately prior to the performance of the line acceptance test, the ground water shall be determined by removing the pipe cap, blowing air through the pipe nipple into the ground so as to clear it, and then connecting a clear plastic tube to the pipe nipple. The hose shall be held vertically and a measurement of the height in feet of water over the invert of the pipe shall be taken after the water has stopped rising in this plastic tube. The height, in feet, shall be divided by 2.3 to establish the pounds of pressure that will be added to all readings. (For example, if the height of water is 11½ feet, then the added pressure will be 5 psig. This increases the 4.0 psig to 9.0 psig, and the 3.5 psig to 8.5 psig. The allowable drop of ½ pound and the timing remain the same.)

F. If the installation fails to meet this requirement, the contractor shall determine, at his own expense, the source of leakage. He shall then repair or replace all defective materials and/or workmanship.

12. *Final Inspection.*

A. Each section of installed sewer will be visually inspected by the Engineer prior to final testing. The pipe shall: be true to both line and grade; contain no breaks; show no leaks; show neither obstructions or the projection of connecting pipes into the main pipe and; contain no debris or other deposits which shall in any way reduce the full cross section area of the pipe.

B. Any section of pipe not complying with the inspection criteria, as determined by the Engineer, shall be promptly corrected, replaced or repaired by the contractor at his own expense. Methods employed for the correction shall be approved by the Engineer.

C. In addition, deflectometer testing shall be required for sections of PVC or polyethylene pipe installed. After notification from the contractor of the schedule

for testing, the Engineer will select the lines to be tested. A deflection greater than 5 degrees will be deemed sufficient reason to cause the work to be rejected. Rejected work will be corrected by the contractor at his own expense in a manner acceptable to the Engineer.

D. If 50 percent or more of the tested linear feet of PVC or polyethylene sewer fail the deflectometer test, the contractor shall be required to test the remaining linear feet of PVC or polyethylene sewer at his own expense. The deflection tests that are to be run shall be performed without pulling devices of any sort. If rigid bells or mandrels are used they shall have diameters equal to 95 percent of the inside diameter of pipe being tested.

E. Force mains shall be hydrostatically field tested to a pressure point 50 P.S.I. in excess of the operating pressure of the main. This pressure shall be maintained for a period of not less than 1 hour.

F. The contractor shall repair all defects of any nature on mains failing to meet the above tests and shall re-test same until acceptable to the Borough.

G. In addition to testing for water leakage the Borough reserves the right to inspect the inside of all sewer lines by the TV camera method, at the contractor's expense.

13. *Force Mains.* Force mains shall be installed as called for on the plans for the project. All specifications covering the laying of gravity sewers shall apply to the laying of force mains.

A. Cast iron or PVC pipe of the class called for on the approved plans shall be used. Joints may be special or mechanical and shall be installed in accordance with good practice and the manufacturer's directions and the Borough. Pipe shall be bedded in 2B crushed stone.

B. Pipe shall be cut in a neat and workmanlike manner with an approved cutting device to insure a good joint.

C. *Thrust Blocks.* Thrust blocks shall be installed at all points where the bend is greater than 10 degrees and at all tees, caps, valves, and reducers and where shown on the plans.

(1) Thrust blocks shall be constructed of 2,500 psi concrete. Care shall be taken when pouring to prevent the inclusion of foreign matter.

(2) Care shall be taken to prevent the concrete from flowing over or near any joint in a manner as- to obstruct the use or access to the joint for future maintenance or addition of pipes.

(3) At points where a bend is affected by bending the pipe at the coupling, thrust blocking shall be installed at least 1 foot from the coupling.

14. *Incidental Items of Work.* Unless thrust blocks are called for, all fittings at bends in force mains shall be firmly wedged against the vertical face of the trench in order to prevent the fittings from being blown off the line when under pressure. Where pipe ends are left for future connections, they shall be valved, plugged, or capped, as directed by the Engineer. Where connections are made between new work and old force mains, the connections shall be made in a thorough and workmanlike manner to the satisfaction of the Engineer.

15. *Hydrostatic Tests.*

A. The contractor shall supply all materials and labor necessary for testing the system.

B. After the pipe has been laid and partially backfilled, all newly laid pipe or valved section shall be subjected to a hydrostatic pressure test. Pressure shall be maintained 50 percent in excess of normal working pressure or 150 pounds per square inch, whichever is greater, for a period of 1 hour. Each valved section shall be slowly filled with water at the specified test pressure. This water shall be supplied by means of a pump connected to the pipe in a manner satisfactory to the Engineer. The contractor will also be required, if necessary, to provide suitable taps in the pipe for the purpose of inserting gauges required for testing.

C. All pipe fittings, valves and joints shall be examined carefully during the pressure test and any leaking joints or fittings repaired or replaced. Any cracked pipe or fittings shall be removed and replaced. The test shall be repeated until satisfactory to the Engineer. Section of force main to be tested at one time shall not exceed 1,000 linear feet.

16. *Leakage.*

A. During the hydrostatic tests, provisions shall be made to measure the quantity of water necessary to maintain test pressure. No pipe installation shall be accepted unless the leakage (evaluated on a pressure basis of 150 pounds per square inch) is less than 100 U.S. gallons per 24 hours per mile, per inch of diameter of pipe of 12-foot lengths, 75 U.S. gallons for 16-foot lengths, and correspondingly varied for other lengths of pipe.

B. Evaluation of the actual to the leakage under the assumed basic pressure of 150 pounds per square inch shall be calculated by the application of the ratio determined from the square root of the respective pressures.

17. *Air Relief Valves on Force Main.*

A. An air relief valve shall be furnished and installed on the force main in manhole at all high points in the force main. The air valve shall be of the type equivalent to Simplex type "AVS" with gate valves and flushing connection, Clow Co. or approved equal. See detail drawing.

18. *Anchoring Pipe on Steep Slopes.*

A. Whenever the slope of the pipe is 20 percent or greater, pipe anchors as shown on the detail drawing shall be used. Spacing of anchors shall be as shown on the detail drawing.

(Ord. 2000-2, 9/27/2000, §101-98)

§18-338. Sewer Structures.

1. *Manholes.*

A. Manholes shall be constructed as shown on the plans, or as may be directed by the Engineer. Refer to the details drawings provided.

B. Precast concrete manholes shall be used unless permission to use brick is given in writing. Precast manholes used shall be watertight and of the eccentric cone type. All manholes shall conform to ASTM C-478-61T or latest revision.

Manhole steps should be AASHTO M-199 plastic coated steel grade 60 reinforcing bars within the shaft of the step that enter the manhole wall.

C. Precast bases shall be used and shall be bedded on a minimum of 6 inches of AASHTO No. 57 stone.

D. Lengths of pipe immediately adjacent to each manhole shall have a maximum length of 6 feet.

E. Joints between manhole components shall be sealed with a flexible rope form butyl rubber sealant that meets or exceeds the requirements of ATSM C-990-96 or a rubber gasket sealant that meets or exceeds the requirements of ASTM C-425 and ASTM C-443.

F. Manholes shall be provided with one coat of bitumastic material on both the inside and outside wall surfaces.

G. Sections of manhole shall be set so that the manhole steps form a straight vertical alignment.

H. Concrete used inside and outside manholes shall be 2,500 psi mix or greater. In junction manholes, care shall be taken to properly connect the sewer pipes entering from the sides with the main channel. All such connecting channels shall be molded in the concrete base of proper size, cross sections, to the required grade, and finished smooth.

I. Concrete for manhole foundations, if brick manholes are permitted, shall be 2,500 psi mix or greater. The contractor shall carry the excavation from 6 to 9 inches lower than the bottom of the concrete foundation, filling this space with spalls or crushed stone to act as an under drain and cover the underdrain with a layer of paper or cloth sufficiently heavy to prevent the mortar in the concrete from penetrating into the base.

J. *Ground Water.* In constructing manholes, all ground water shall be kept away from newly poured concrete or freshly laid brick work until cement has properly set and until a watertight job is obtained. Manholes which admit ground water after completion must be repaired to the satisfaction of the Borough.

K. *Shallow Manholes.* Where required because of limited depth, flat top precast manholes shall be constructed in accordance with the detail drawing.

L. *Setting Castings.* All manhole frames and covers shall be set true to line and grade. Frames and covers shall conform to requirements set forth under materials. When set in a road or paving the frame shall be sloped to conform to the existing paving and shall not project above or below. Four $\frac{3}{4}$ inch anchor bolts shall be used to secure the frame to the manhole after two rings of butyl rubber sealant, conforming to ASTM C-990-6 have been placed under the frame. The sealant ring shall be placed in such a manner that tightening of the anchor bolts will cause a continuous watertight seal both inside and outside of the cover frame bolt holes to be formed between the manhole structure and the cast iron frame.

M. *Manhole Steps.* Manhole steps shall be of aluminum or polypropylene construction. Aluminum steps shall be drop-front type and manufactured of type 6061 - T6 aluminum. Polypropylene steps shall meet the requirements of ASTM C-478 and AASHTO M-199 and incorporate ____ inch dia. grade 60 deformed reinforcing bars within the shafts of the step that enter the manhole wall. Steps

shall either be cast in place into the wall of the manhole or driven into locking inserts cast in place into the wall of the manhole. Steps driven into cylindrical holes cast into the wall of the manhole are unacceptable. Steps shall be spaced vertically no less than 12 inches and no greater than 16 inches center to center. Steps shall provide 14 inches of tread surface width. In manholes where there are drop connections of more than 4 feet, an additional step shall be placed in the wall opposite to the step which is nearest to 3 feet below the upper opening of each drop connection.

N. *Lifting Lugs.* Through-wall lifting holes are not acceptable in any precast manhole components.

O. *Precast Grade Rings.* Adjust the elevation of the frame and cover of the manhole to match finish grade elevation using precast concrete grade rings. Leveling and adjusting units of 2 to 4 inches are acceptable. Provide precast grade rings of four-piece construction or provided with hold down bolt holes matching location of bolt holes in manhole cover frame. Wet, but do not saturate the grade rings immediately before laying. Pre-set grade rings to proper plane and elevation using wedges or blocks of cementitious material not exceeding the joint thickness. No more than four wedges or blocks per grade ring permitted. Incorporate wedges or blocks in fresh mortar in a manner to completely encase each. Crown fresh mortar to produce squeeze-out between grade rings. Tool exposed joints with appropriately shaped tool and compact mortar edge into joints. Clean off excess mortar prior to initial mortar set.

P. Manholes shall be constructed promptly as the sections of the sewer between them are completed and, unless this is done, the Borough shall have authority to stop trenching and pipe laying until manhole construction is completed.

2. *Drop Connections.*

A. In all junction manholes where the grade line of one sewer is 2 feet greater than the other, or if directed by the Borough, the connection shall be made by means of an outside drop connection. Refer to the detail drawing provided.

B. The pipe and fittings used for the drop connection shall be of the same type and class as used for the sewer line coming into and exiting the manhole. Concrete for encasing pipe shall be 2,500 psi mix high early strength type.

C. Care shall be taken to have all pipes laid to correct lines and grades, as established by the contractor's engineer.

3. *Connections to Manholes.*

A. An approved manhole adapter shall be used to form a watertight connection between the pipe and the manhole. The adapter shall be a coupling or a rubber ring integrally cast into the wall of the manhole. The adapter shall conform to the requirements of ATSM C-923.

B. The pipe shall not terminate in the coupling, but shall extend into the manhole a sufficient distance to properly connect the sewer pipe entering from the side of the manhole with the main channel.

4. All other appurtenances and structures will be constructed according to the detail drawing.

5. Manholes shall be installed at the end of each line, at all changes in grade, size or alignment and at distances not greater than 400 feet between them.

6. *Watertight Manhole Covers.* Watertight manhole covers and frames shall be as shown on the detail drawings. This type cover and frame shall be used whenever the manhole is located within the 100-year floodplain as delineated by the Federal Emergency Management Agency as well as wherever dictated by good design practice. (Ord. 2000-2, 9/27/2000, §101-99)

§18-339. Temporary Paving.

1. Temporary paving on New Morgan Borough roads shall consist of 2 inches of cold patch. On State roads, temporary paving shall conform to PENNDOT Form M948 B which states, "Temporary restoration shall consist of a minimum of 8-inch stone base with a coat of 2-inch bituminous material, and shall be kept in place a minimum of 90 days." Temporary paving on trenches in State and Borough roads shall be maintained by the contractor until final paving is installed. The top surface of the temporary paving shall be maintained flush with the surface of the existing paving. Any special conditions contained in the PENNDOT permit for the project will take precedence.

2. Where the sewer is installed along or across a road shoulder, the top 18 inches will be 2RC material which shall be laid and compacted as part of the trench backfill. This restoration shall extend a minimum of 12 inches on either side of the trench. If the length of trench exceeds 50 feet, the shoulder must be shot with 30 gal. per square yard of RT-6C bituminous material. In the event of settlement, more stone will be added to bring the ditch to the level of the surrounding shoulder.

3. The contractor shall be responsible for the maintenance of all trenches. In the event of settlement outside of paved areas, he shall promptly fill the trench. In the event of settlement within paved areas, the contractor shall promptly fill the trench to the level of the paved surface with temporary paving.

4. The contractor shall have men available on weekends and holidays in the event that any temporary paving settles sufficiently to make travel on the roads hazardous. The contractor will be required to continuously maintain all temporary paving, without compensation, until it is replaced by the permanent paving. All unpaved areas or streets shall be regraded as soon as trenches are backfilled.

(Ord. 2000-2, 9/27/2000, §101-100)

§18-340. Replacement over Trenches.

1. *Trench Paving Restoration.*

A. The contractor shall meet all requirements of PENNDOT and/or Borough regulations where the sewer crosses or is adjacent to their paving. In State highways, the requirements of the PENNDOT Form 945-B, latest revision, and the State Highway's Inspector shall govern. Temporary paving shall be installed within 48 hours after backfilling the trench. Permanent paving shall not be replaced until a minimum of 90 days has elapsed after backfilling.

2. *State Roads.*

A. Restoration of all trenches in State roads shall conform to PENNDOT specifications and the requirements delineated in the highway occupancy permit.

B. *State Road Overlay*. Where required on State roads, there shall be a complete road overlay of a minimum of 1½-inch compacted thickness of ID 2 wearing material with tack coat. Width of paving shall conform to the existing width of paving. Length shall be as required by the PENNDOT material and installation shall conform to PENNDOT specifications. Where complete overlay is required, the total depth of bituminous concrete surface and base course over the trench shall not be less than 7½ inches. Trench cutbacks, tack coats and sealer shall equally apply as required under paragraph .A above.

3. *Borough Roads*.

A. *Longitudinal and Lateral*. Base course for repaving on all local roads shall be bituminous base course unless a crushed stone base course is approved in writing by the Engineer. Bituminous concrete base course shall conform to PENNDOT specifications, Publication 408, §305. Just prior to placing the permanent paving, the existing paving shall be cut back 12 inches on each side of the trench. This cutback shall be to a depth sufficient to contain the entire cross-section of replaced paving.. The edge of the cut shall be neat and straight. Minimum depth of bituminous concrete base course laid shall not be less than 5 inches. Prior to placement of any bituminous concrete, the edges of the cut shall be painted with Class BM- I asphaltic cutback.

B. Crushed stone or slag used for base courses shall be #3A or 44 ballast and shall conform to PENNDOT specifications. Crushed stone or slag shall be laid in place, chocked with screenings and rolled with at least a 10-ton roller in 4-inch layers until a firm, stable base is obtained. Prior to laying the bituminous concrete, the base course shall be broomed to expose the ballast and provide a bonding surface for the surface courses. Thickness shall be as shown in the detail drawings. One inch of limestone screenings shall be placed under all crushed stone base courses.

C. All roads shall be restored with a minimum of 2-inch ID-2 binder course and 1½-inch ID-2 wearing course. The ID-2 shall be made with B.M. I asphalt unless the Engineer approves another. These materials shall conform to PENNDOT specifications with respect to composition and laying procedures. Thickness of each course shall be after compaction and shall conform to the detail drawings. Finished paving shall be smooth and conform in grade to the surrounding paving. All compaction shall be done with at least a 10 ton roller.

D. Prior to placement of any bituminous concrete, the edges of the cut shall be painted with Class B.M. I asphalt cutback. Edges of the finished paving shall have hot poured Class A-I asphalt cement applied as a sealer.

E. *Borough Road Overlay*. Where required, there shall be a complete overlay of 1½-inch compacted thickness of ID 2 surface material, with tack coat. Width of paving shall conform to the existing width of paving and present uniform edges throughout. Where bituminous base course is used with the 1½-inch overlay, the depth of the base paving shall be increased 2 inches and brought level to the original road paving surface. Where crushed stone or slag base is used for base course with the 1½-inch overlay, a 2-inch ID-2 binder course shall be placed and brought level to the original road paving surface. Trench cut backs, tack coats and sealers shall equally apply as required under the parameters of this Section.

4. Paving that has been scarred or cut by the contractor's equipment outside the trench shall be cut to a minimum depth of 1½-inch and paved with bituminous concrete wearing course. The edges of the patch will be sealed with hot poured Class A-I asphalt sealer.

5. All paving that settles shall be replaced by the contractor. Settled paving shall be removed to the base course and the edges cut square. Paving shall then be replaced according to the above specifications and the edges shall be resealed.

6. The contractor shall arrange with all utilities to reset water and gas boxes and manhole frames and covers not conforming with the finished grade of paving. If necessary, the contractor shall reset manhole frames and covers for the sanitary sewer.

7. *Temporary Paving.* Temporary paving shall be installed and maintained as specified in the trenching and backfilling section, immediately upon backfilling of the trench.

8. *Restoration.* Prompt restoration is of the utmost importance to maintain access to homes and places of business and to maintain public relations. If it is the opinion of the Engineer that complete restoration is not proceeding fast enough behind pipe laying operations, he shall notify the contractor, in writing, to correct the situation. If, within 7 calendar days after the date of notice, the contractor has not corrected the situation, the Borough shall stop all excavation and pipe laying operations until restoration is brought up to date.

(Ord. 2000-2, 9/27/2000, §101-101)

§18-341. Sidewalks.

1. *Concrete Sidewalks.* The existing sidewalk shall be broken off evenly at the nearest "groove" or "dummy joint" on both side of the trench. The sidewalk shall be replaced using reinforcement and thickness as shown in the detail drawings. The width of the replaced sidewalk shall conform to that of the old sidewalk (4 inch minimum). The replaced sidewalk shall be finished in a workmanlike manner. Concrete used shall be 3,000 psi concrete. Concrete shall be sprayed with a white pigmented membrane curing compound immediately after its initial set.

2. *Bituminous Sidewalks.* The ends of existing sidewalks shall be cut square on both side of the trench and replaced according to the detail drawings. Width of the replaced sidewalk shall conform to the old sidewalk, and it shall be finished in a workmanlike manner. All bituminous sidewalks shall be rolled.

(Ord. 2000-2, 9/27/2000, §101-102)

§18-342. Curb Replacement.

1. *Concrete Curb.* All concrete curb shall be replaced in 10-foot sections with expansion joints every 30 feet. Straight sections shall be formed with steel forms and curved sections with plywood forms. All curb shall be constructed using 3500 psi concrete and finished in a workman like manner. Surfaces of concrete curb shall be rubbed or brushed. All curb shall be constructed with a cross-section the same as that of the existing curb. Concrete shall be sprayed with a white pigmented membrane curing compound immediately after its initial set.

2. *Bituminous Curb.* Bituminous curb shall be replaced in a workmanlike manner

with a cross-section equal to that of the existing curb. In the event that the curb was machine laid, the replaced curb shall be machine laid also. Bituminous material used shall be ID 2 wearing course.

3. *Granite Curb*. Granite curb shall be replaced in 4 to 8 foot sections and shall consist of granite or bluestone of approved quality free from structural defects. Curb shall be cut square on the front and top and 3 inches down in the back. Cross-section of replaced curb shall equal that of the existing curb. All joints are to be no wider than $\frac{1}{4}$ inch and shall be set on 12-inch x 12-inch 3,000 psi concrete chairs, Wherever possible, the existing granite curb will be removed before construction.

4. *Rubble Curb and Gutter*. Shall be replaced in a workmanlike manner to conform to the existing curb or gutter. Materials shall conform to those used in the original gutter.

(Ord. 2000-2, 9/27/2000, §101-103)

§18-343. Driveway Replacement.

1. Bituminous drives shall have the existing faces cut square. The subgrade shall be rolled with a 5-ton roller until hard and the paving replaced as shown in the detail drawings. Four-foot minimum crushed stone for the base shall be 2B or 3A and shall conform to PENNDOT specifications. After the stone is in place, it shall be choked with fines and rolled until it forms a firm, stable base for the paving. The surface of the base shall be broomed until it is substantially free of fines with coarse stone exposed to provide a good bonding surface for the paving.

2. The paving shall consist of a 2-inch ID 2 wearing course asphaltic concrete that conforms to PENNDOT specifications. The asphaltic concrete shall be rolled with a powered roller weighting a minimum of 5 tons until it is compacted and smooth and blends with the surrounding paving. Thickness of the various layers shall be as shown in the detail drawings. Edges of the finished paving shall be sealed with hot Class A-I asphalt cement.

3. *Concrete Drives*. All edges shall be cut square. The concrete shall be of 3,500 psi mix or Class A cement concrete and shall conform to the detail drawing. Reinforcement shall be as shown in the detail drawing. The concrete shall blend smoothly with the old pavement, be smooth and have a broom finish. Concrete shall be sprayed with a white pigmented membrane curing compound immediately after its initial set.

4. *Stone Drives*. Shall have the subgrade thoroughly tamped and covered with 4 inches of 2B stone. After the stone is in place, it shall be choked with fines, then broomed and tamped until it becomes stable.

(Ord. 2000-2, 9/27/2000, §101-104)

§18-344. Restoration of Grassed Areas.

1. Grass areas shall be restored as soon as practical after backfilling of the trench. However, planting will be limited to work days between the fifteenth of March and the fifteenth of October of the same year.

2. Topsoil will be placed over the trench to a minimum depth of 4 inches and on other damaged areas to a minimum depth of 2 inches. The topsoil and surrounding areas shall then be raked smooth and be free from all stones, wood, and other debris.

A commercial 10 - 10 - 10 fertilizer shall then be applied at a rate of 10 pounds per 1,000 square feet and mixed into the topsoil for a depth of 2 inches. Grass seed of the specified composition shall then be spread evenly at a rate of 6 pounds per 1,000 square feet by means of a mechanical spreader over the trench and any surrounding area. All seeded areas shall be rolled with a lawn roller weighing not more than 100 pounds per foot of width.

3. Grass seed shall be mixed and certified to be as follows:

Lawn Mixture Part	Percentage	Purity	Germination
Kentucky Bluegrass	35%	90%	85%
Pennlawn Fescue	25%	0%	85%
Pennfine Ryegrass	15%	90%	85%
Annual Ryegrass	15%	90%	85%
Red Top	10%	90%	85%

4. *Slopes and Banks.* Any area to be seeded having a slope of 5 percent or greater shall be mulched with seed and weed-free salt hay, not moldy or rotten, at the rate of one 75 lb. bale per 1,000 square feet. Slopes in excess of 3:1 shall also be covered with jute matting and installed per manufacturer’s recommendation.

5. *Sod.*

A. Sod shall be at least 60 percent perennial grass, strongly rooted, and free of pernicious weeds. It shall be mowed to a height not to exceed 2 inches before lifting and shall be of uniform thickness with not over 1½ inch or less than 1 inch of soil. All sod shall meet the requirement of PENNDOT Publication 408 as far a composition and installation requirements.

B. All sod shall be set and in place within 48 hours of being cut. Due consideration shall be given to weather conditions. Dried out sod will be rejected whenever, in the judgment of the Engineer, survival is doubtful.

C. Surfaces on which sod is to be laid, will be finned with a light roller and dampened before the sod is put down. Sod pieces shall fit snugly to prevent water from lifting them.

D. *Tamping.* Each piece of sod, shall be tamped sufficiently to bring the under surface into firm contact with the soil.

E. Each strip or section of sod shall be staked securely with at least one wooden stake for each square foot of sod. Stakes measuring ½ inch x 1 x 12 foot shall be driven flush with the top of the sod, with the long face parallel to the slope contour, sod strips to be 2 feet 0 inches O.C. The contractor shall keep the sodded areas adequately moist.

6. *Maintenance.* Watering will depend on weather conditions, but maintaining favorable moisture conditions for seed germination is the responsibility of the contractor.

7. *Guarantee.* The contractor shall guarantee germination, maintain plantings, up to and including the second cutting, and shall re-seed or re-sod as often as necessary

to insure 90 percent coverage of the affected area. It is the contractor’s responsibility to restore all seeded and sodded areas to a smooth and even surface with a dense, uniform growth of grass. Final payment of the contract will not be made until these conditions are satisfied.

8. *Clean Up.* All rubbish and other material will be removed from the premises and the entire job will be left in a condition satisfactory to the Engineer. In areas where work has been on or near paving, the paving shall be swept or flushed clean to the satisfaction of the Engineer.

9. In a few instances it will be apparent that a particular property owner has gone to additional expense and effort to establish a fine lawn. In these cases the contractor will use grass seed of the same type and quality of the surrounding lawn. Seed application will be at the rate of 7 pounds per 1,000 square feet.

10. *Hydro-Seeding.* In lieu of other mechanical seeding operations, hydro-seeding (technique of mixing seed, fertilizer and a green fiber mulch into a homogenous slurry which is then sprayed on the area being seeded) may be substituted.

11. All slopes of 5 percent or over will be “tack-coated.” Rates and types of materials shall be approved by the Engineer before applying.

12. *Special Seasonal Seeding.* Should it become necessary, in the opinion of the Engineer, to perform Lawn work and restoration of grassed areas beyond the normal planting cut-off of the fifteenth of October, the contractor will be required to use the following late fall seeding formula, with mulch, as a protective winter cover only:

Description	Application Rate
Winter Rye	10 lbs. per 1,000 sq. ft.
Annual Rye	6 lbs. per 1,000 sq. ft.

(Ord. 2000-2, 9/27/2000, §101-105)

§18-345. Supplemental Requirements.

1. *Private Property.*

A. Where the sewer lines are proposed to be located on private property, the owner or responsible party for sewer construction will obtain easements and/or permission from the property owner to enter thereon for the purpose of constructing sewers prior to construction. The contractor shall confine his operations to as narrow limits as possible to install sewers.

B. The contractor shall conduct his work so there will be a minimum disturbance of the property crossed. All work on private property shall be done in such a manner as to avoid the unnecessary cutting of vegetation and other disturbance not actually obstructing the installation of the sewers. Any damage to the property shall be made good by the contractor at his expense. Upon completion of the work, the contractor shall clean up the disturbed areas and restore them to a condition at least equal to that previously existing.

2. *Cleanup.*

A. During the progress of the work and until the completion and final acceptance thereof, all pipe lines and their appurtenances shall be kept thoroughly

clean throughout. Obstructions or deposits, discovered at any time, shall be removed at once by the contractor without extra compensation. After completion of work and prior to testing, all pipe lines and their appurtenances shall be left clean, free, and in good order.

B. On or before the completion of work, the contractor shall, without charge, tear down and remove all trailers, temporary buildings, and other structures built by him. He shall remove all rubbish and debris from any grounds he has occupied and shall leave the line of the work in a clean and neat condition.

3. *Conformance to Required Rules and Regulations.*

A. Prior to proceeding with any work the contractor shall secure the necessary permits from all the governing regulatory agencies and municipal bodies.

B. During the execution of the work the contractor shall comply with all applicable rules and regulations of the governing regulatory agencies and municipal bodies including, but not limited to, OSHA, DEP, EPA, PENNDOT and New Morgan Borough.

C. In accordance with the provisions of PA One-Call, 73 P.S. §176 *et seq.*, the contractor shall be responsible for verifying the location of all existing underground utility installations within the project area. Owners of the respective utilities involved shall be notified by the contractor at least 48 hours in advance of the commencement of any excavation by the contractor in the project area. No permits to begin work will be granted until the requirements of PA One-Call are met.

4. Copies of this Part will be available at the office of the Borough Secretary for review. If one wishes to purchase this Part the prices are as follows:

A. Parts 1A through 1F, dealing primarily with lateral installation is in an amount as established, from time to time, by resolution of Borough Council. [*Ord. 2015-4*]

B. Parts 1G through 1H, dealing primarily with sewer main and lateral extensions in new development is in an amount as established, from time to time, by resolution of Borough Council. [*Ord. 2015-4*]

C. A complete Part—Parts 1A through 1H is in an amount as established, from time to time, by resolution of Borough Council. [*Ord. 2015-4*]

(*Ord. 2000-2, 9/27/2000, §101-106; as amended by Ord. 2015-4, 9/8/2015*)

I. Pumping Stations

§18-346. Pumping Station Specifications.

1. *General.*

A. The purpose of this Part is to establish technical and design specifications for developers and their engineers for the design and acceptance of wastewater pumping stations with the Borough of New Morgan. The criteria are intended to assure uniformity and quality of construction for the facilities constructed hereunder. Any deviation from the criteria contained herein shall be at the approval of the Borough Engineer. Plans and specifications shall be prepared and certified by a professional engineer registered in the Commonwealth of Pennsylvania.

B. Certain equipment manufacturers have been noted herein for purposes of establishing standards for: the level of quality for materials, workmanship, and reliability; ease of maintenance; and minimization of inventory. Alternate equipment manufacturers will be considered on an approved equal basis by the Borough Engineer.

2. *Design Data.*

A. All work shall be in accordance with the requirements of the Pennsylvania Department of Environmental Protection (PADEP) and the PADEP Domestic Wastewater Facilities Manual (DEP 1357 Rev. 10/97), or most recent revision.

B. Pump(s) shall be capable of handling the maximum peak hourly flow with one pump out of service.

3. *Site Requirements.*

A. The pumping station site shall be protected by a chain link fence 8 feet in height in accordance with the standard specifications for chain link fences and gates. Provide one 4-foot walk-through gate and one 12-foot drive-through gate at the access drive.

B. Access to the station site shall be via a dedicated "all weather" road of single lane width. In cases where a steep grade creates conditions of erosion on the surface or insufficient traction for maintenance vehicles, the requirement for a concrete or bituminous paved surface shall be imposed. In unusual cases as determined by the Borough, curb and gutter may be required. In no case shall the access drive grade exceed 10 percent.

C. The driveway within the fenced area shall provide an adequate turn around for types of vehicles expected at the pumping station, such as fill delivery trucks.

D. The site grounds shall be landscaped and seeded for grass. Slopes requiring mowing shall not exceed 20 percent.

E. The pumping station site shall be designed to be fully operational and accessible during the 100-year flood event.

F. The pumping station site shall be dedicated by deed to the Borough.

4. *Building-Enclosure Requirements.*

A. The pumps, valves and emergency power shall be located above ground in

a building or an enclosure meeting the specifications contained herein. In cases where an above ground location is not feasible, then a below ground station with a separate dry well for the pumps may be considered for approval by the Borough Engineer.

B. Furnish a fiberglass enclosure, as supplied by the pump manufacturer complete with all lighting, heating and ventilation, ready for immediate hookup at the site. In lieu of the enclosure, the developer can provide a building to enclose and protect the pumping station. Submit plans and specifications of the building for approval by the Borough.

C. The fiberglass enclosure shall be designed to withstand 150 mile per hour winds and shall have a minimum snow load rating of 40 pounds per square foot. The fiberglass coating shall be flame retardant and resistant to ultraviolet light. Provide reflective white interior with a minimum R-factor equals 10. If a building is provided, then utilize R-19 type batt insulation or equal.

D. The building-enclosure shall have a minimum 8-foot ceiling and shall provide adequate area for routine maintenance activities to be performed inside. Provide a minimum 8-foot wide by 20-foot long enclosure. The enclosure area may be increased by the Borough depending upon the size of pumps necessary to provide a 4 foot clearance around the pumps for maintenance.

E. The enclosure shall have a single doorway, 3 foot by 6 foot, located on the side and a double doorway, 6-foot by 6-foot, located on the front of the enclosure adjacent to the pumps. The driveway should provide access to the double doors. All doorways shall have key locks to prevent unauthorized entry. Deliver four master keys to the Borough Manager.

F. No manholes shall be located inside the lift station building enclosure. The building-enclosure shall not be sited or constructed over the wet well.

G. Water service shall be provided to the building and shall have backflow prevention valve, meter, and one ¾-inch non-freezing hose bibb.

H. Sufficient electrical heat shall be provided so as to prevent freezing inside the building at a minus 10 degrees ambient temperature.

I. Provide outside light(s) with appropriate glare shield to provide light to the well and entrance door.

J. Provide a minimum of two 220-volt interior wall receptacles and four 110-volt interior wall receptacles with ground fault current protection and waterproof covers.

K. Should the equipment removal consideration require such, the inclusion of a loading dock, fold-up door, lifting eyes, and/or overhead beam hoist shall be required so as to facilitate maintenance and repair of the pumping equipment.

L. Provisions shall be made for protection of the building walls during wash down of the floor. For wood frame buildings, this can be accomplished by setting the building on a concrete foundation and allowing 12 inches of freeboard from the top of the block to the finished floor.

M. In general, the building type and architecture should match and compliment adjacent buildings and properties.

5. *Wet-Well Considerations.*

A. Wet-well design should be based upon good engineering practice. Slope bottom of wet-well on a 1:1 slope toward the pump suction inlet so as to minimize solids settling. Provide adequate distance between inlets and above wet-well floor to prevent any vortex action from occurring. Influent to wet-well should be located to minimize splashing and turbulence from occurring.

B. The wet-well volume shall be of sufficient capacity to assure that the time between pump run cycles is within the requirements of the electric motor manufacturer. For duplex pumping stations with alternating pumps, the minimum pump cycle time shall not be less than 15 minutes, and shall be increased to 20 minutes for motors which are 15 horse power and greater.

C. An aluminum (6061-T6) basket strainer on the influent to the wet-well may be required as determined by the Borough. Furnish a Dyna Strainer as manufactured by the Dyna Systems Company (Worthington, Ohio) with the opening size as determined by the Borough.

D. *Grinder Pump Wet-Well.* Provide a 5-foot inside diameter precast reinforced concrete manhole with a flat top slab in accordance with the standard specifications and drawings. Approval for use of a fiberglass type wet-well may be requested by the developer; however, an adequate concrete collar must be provided to prevent flotation. Submit design calculations with request for use of a fiberglass type wet-well.

6. *Pumps and Associated Controls.*

A. Provide duplex, self-priming suction lift sewage pumps and controls as manufactured by the Gorman-Rupp Company (Mansfield, Ohio). All valves, pump air release valves, piping, control circuitry and wiring shall be as furnished by the Gorman-Rupp Company. Pumps shall be self-priming without requiring the aid of external check valves, compressors, or vacuum pumps.

B. Provide an Autostart Pump System as manufactured by the Gorman-Rupp Company. The autostart system provides a modular combination of pump, electric motor.

C. The pump control shall be based upon the use of a bubbler system to monitor the level in the wet-well. A submersible transponder located in the wet-well may be utilized if an appropriately sized and designed carrier tube is provided to enclose the transponder for protection from accumulation of oil, grease or other debris.

D. All pumps and passageways within the pump, valves and piping shall be designed to pass a 3- inch or larger spherical solid.

E. Provide hour meters for each pump on the motor control panel.

F. Provide a glycerin-filled compound gauge to monitor suction pressures, and a glycerin filled pressure gauge to monitor discharge pressures, for each pump. Gauges shall be a minimum of 4 inches in diameter and graduated in feet of water. Mount gauges to avoid excessive vibration from the pumps.

7. *Grinder Pumps for Low Pressure Sewer Systems.*

A. Provide simplex submersible grinder pumps and controls as manufactured by the Environment One Corporation (Schenectady, New York), F. E. Myers

(Ashland, Ohio), or Hydromatic, Aurora Pump (North Aurora, Illinois). Controls shall be mounted in a NEMA 4X enclosure with alarm light. Provide a bronze body check valve, shut-off valve and a quick disconnect within the pump station wet-well. Pump(s) shall be mounted on a slide rail system for ease of installation/removal.

8. *Electrical.*

A. Electrical service shall be 460 or 220-volt, 3-phase power. The use of phase conversion equipment is not acceptable. Control voltage shall be 110-volt.

B. All work shall, at a minimum, be in accordance with the National Electric Code. When a building is provided, the developer shall obtain and pay for duplicate certificates from the Middle Department Inspection Agency (Camp Hill, Pennsylvania), stating that the installation is in accordance with the requirements of the National Electric Code; deliver one certificate to the Borough Manager.

C. All equipment shall be wired for automatic restart capability after restoration of power.

9. *Flow Meter.*

A. Provide one magnetic type flow meter and circular pen chart recorder for each force main for the measurement of flow through the pump station. The flow meter shall be as manufactured by: Fischer and Porter Company (Warminster, Pennsylvania), or Spading Instruments, Inc. (El Monte, California). The meter shall incorporate empty pipe detection circuitry to avoid false readings if pipe were to empty. The meter shall have a non-resettable totalizer.

B. The circular pen chart recorder shall record flow over a 7-day, 24-hour a day, basis.

10. *Emergency Operation.* The pumping stations shall be designed to prevent or minimize bypassing of raw sewage. For use during possible periods of extensive power outages, mandatory power reductions or uncontrolled storm events, an emergency diesel powered generator or pump shall be provided in order to prevent backup of sewage into basements, or other discharges which may cause severe adverse impacts on public interests, including public health and property damage.

A. *Equipment Requirements.*

(1) *General.* The following general requirements shall apply to all internal combustion engines used to drive auxiliary electrical generating equipment.

(2) *Engine Protection.* The engine must be protected from operating conditions that would result in damage to equipment. Protection equipment shall be capable of shutting down the engine and activating an alarm on site. Protective equipment shall monitor for conditions of low oil pressure and overheating, except oil pressure monitoring will not be required for engines with splash lubrication.

(3) *Size.* The engine shall have adequate rated power to start and continuously operate all connected loads.

(4) *Fuel Type.* Reliability and ease of starting, especially during cold weather conditions should be considered in the selection of the type of fuel.

(5) *Engine Ventilation.* The engine shall be located above grade with

adequate ventilation of fuel vapors and exhaust gases.

(6) *Route Start-Up.* All emergency equipment shall be provided with instructions indicating the need for regular starting and running of such units at full loads.

(7) *Protection of Equipment.* Emergency equipment shall be protected from damage at the restoration of regular electrical power.

B. *Diesel Engine-Driven Generating Equipment.* Where permanently installed or portable engine-driven generating equipment is used, the following requirements, in addition to the general requirements, shall apply:

(1) *Generating Capacity.* Generating unit size shall be adequate to provide power for pump motor starting current and for lighting, ventilation, and other auxiliary equipment necessary for safety and power operation of the lift station. Special sequencing controls shall be provided to start pump motors unless the generating equipment has capacity to start all pumps simultaneously with auxiliary equipment operating.

(2) *Operation.* Provisions shall be made for automatic and manual start-up and load transfer. The generator must be protected from operating conditions that would result in damage to equipment. Provisions should be considered to allow the engine to start and stabilize at operating speed before assuming the load.

(3) *Portable Generating Equipment.* Portable generating equipment or manual transfer is only permitted upon approval by the Borough Engineer. Where portable generating equipment or manual transfer is provided, sufficient storage capacity to allow time for detection of the pump station failure and transportation and connection of generating equipment shall be provided. The use of special electrical connections and double throw switches are recommended for connecting portable generating equipment.

C. *Engine-Driven Pumping Equipment.* Where permanently installed or portable engine-driven pumps are used, the following requirements, in addition to the general requirements, shall apply. Portable engine-driven pumps and manual startup engine-driven pumps are only permitted upon approval by the Borough Engineer.

(1) *Pump Capacity.* Engine-driven pumps shall meet the design pumping requirements unless storage capacity is available for flows in excess of pump capacity. Pumps shall be sized for anticipated operating conditions, including suction lift.

(2) *Operation.* The engine and pump shall be equipped to provide automatic startup and operation of pumping equipment unless manual startup and operation is justified. Where manual startup and operation is justified and approved by the Borough Engineer, storage capacity and alarm system must be provided.

(3) *Portable Pumping Equipment.* Where part or all of the engine-driven pumping equipment is portable, sufficient storage capacity with alarm system shall be provided to allow time for detection of the pumping station failure, transportation and hookup of the portable equipment. A riser from the force

main with quick connect coupling and appropriate valving shall be provided to hook up the portable pump(s).

11. *Suction and Header Piping.*

A. All piping shall be ductile iron pipe, minimum 6-inch diameter, unless otherwise approved by the Borough Engineer.

12. *Force Mains.*

A. The minimum size force main for a sewage pumping station is 4-inch diameter, unless a sewage grinder is provided in the pumping station.

B. The minimum depth of cover for all force mains is 4 feet to the crown of the pipe.

C. A plug valve shall be installed on the discharge of each pump to allow for maintenance activities.

D. Allowable force main line velocities—2.5 to 5.5 feet per second.

13. *Sewage Air Release and Surge Valves.*

A. To allow for efficient and satisfactory operation of the pumping system, air release and surge relief valves are required at appropriate locations within the system. Valves shall be suitable for handling wastewater.

B. Provide combination air release vacuum valves at all high points in the system. Valves shall be as manufactured by GA Industries, Inc. (Mars, Pennsylvania), or the Val-Matic Valve and Manufacturing Company (Elmhurst, Illinois). The combination valve shall automatically exhaust large quantities of air during the filling of the pipeline and automatically allow air to re-enter the pipeline when the internal pressure of the pipeline approaches a negative pressure thereby preventing pipe collapse. The air release portion of the combination valve shall automatically release small pockets of air from the pipeline while the pipeline is in operation and under pressure.

C. Provide air release valves at intervals of 1,500 to 2,000 feet on all long horizontal runs that lack a clearly defined high point. The valve shall be as manufactured by GA Industries, inc. (Mars, Pennsylvania), or the Val-Matic Valve and Manufacturing Company (Elmhurst, Illinois). The air release valve shall automatically release small pockets of air from the pipeline while the pipeline is in operation and under pressure.

D. Provide surge release valves where pumping stations will experience excessive operating pressures, that have large static heads, or as otherwise directed by the Borough. Valves shall be as manufactured by GA Industries, Inc. (Mars, Pennsylvania).

14. *Start-Up.*

A. Start-up and equipment check operations shall be performed by an authorized service technician from the pump equipment manufacturer. A minimum of 48-hours notice shall be provided to the Borough Engineer prior to beginning start-up operations.

B. A copy of the technician's report showing all field data control, gauge readings, set points and equipment conditions shall be furnished to the Borough Engineer.

C. Sufficient water for start-up and the equipment check shall be the responsibility of the developer.

15. *Submittals.*

A. *Initial Application.* Submit completed application form and all design calculations and assumptions utilized for: head, flow quantification, wet-well volume, pump duty cycle at average and peak flows, force main velocities, system and operating system curves for C equals 100, 120 and 140, water hammer evaluation, as well as any other design calculations. Include copies of the site plan and drainage area, as well as building blueprints for the pumping station.

B. *Construction Phase.* Submit a minimum of four copies of shop drawings detailing the pump station construction to the satisfaction of the Borough, including the manufacturer's certified pump test results. Submit three copies of the manufacturer's operation and maintenance manuals for all the electrical and mechanical equipment.

(Ord. 2000-2, 9/27/2000, §101-107)

Standard Details

Detail Title.

Building Sewer and Lateral Connection
Pipe Bedding and Backfill
Trench Plug
Cleanout Riser Cap Protection Casting
Concrete Cradle and Encasement
Standard Precast Manhole
Flat Top Precast Manhole
Standard Self-Sealing Manhole Frame and Cover
Watertight Manhole Frame and Cover
Manhole Drop Connections
Concrete Anchor
Encasing Conduit with Removable Carrier Pipe
Temporary and Permanent Pavement Repair
Sewage Force Main Air Release Valve

