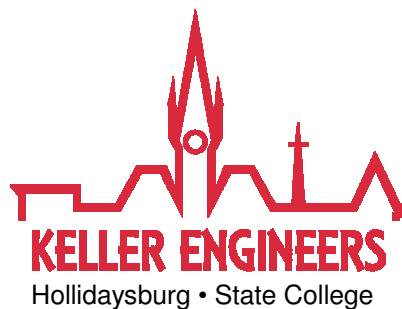


**WASTEWATER SYSTEM
RULES, REGULATIONS AND POLICY**

FOR

**WEST PROVIDENCE TOWNSHIP
MUNICIPAL AUTHORITY**

**ADOPTED: AUGUST 15, 2005
REVISED: MAY 21, 2012**



**WEST PROVIDENCE TOWNSHIP MUNICIPAL AUTHORITY
RULES, REGULATIONS AND POLICY**

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WEST PROVIDENCE TOWNSHIP MUNICIPAL AUTHORITY

A RESOLUTION

OF THE BOARD OF THE WEST PROVIDENCE TOWNSHIP MUNICIPAL AUTHORITY, ADOPTING RULES AND REGULATIONS GOVERNING USE OF ITS SEWER SYSTEM; IMPOSING A TAPPING FEE, CAPACITY FEE, AND USER CHARGES TO BE COLLECTED FROM THE OWNER OF EACH IMPROVED PROPERTY TO BE SERVED BY THE SEWER SYSTEM; AND PROVIDING FOR PAYMENT AND COLLECTION OF SUCH USER CHARGES.

DEFINITIONS

SECTION 1.01. Unless the context specifically and clearly indicates otherwise, the meaning of terms and phrases used in this Resolution shall be as follows:

“Ammonia Nitrogen as N” shall mean ammonia nitrogen as determined pursuant to the procedure set forth in the latest edition of “Standard Methods for the Examination of Water and Wastewater”, published by American Public Health Association, Inc.

“Application” shall mean a form upon which a prospective User signifies their desire for Sewer service.

“Authority” shall mean West Providence Township Municipal Authority, a municipal Authority of the Commonwealth, and its duly authorized representatives and employees.

“BEAMA” shall mean Borough of Everett Area Municipal Authority.

“Board” shall mean the Board of the Authority.

“B.O.D.” (Biochemical Oxygen Demand) shall mean the quantity of oxygen, expressed in ppm by weight, utilized in the biochemical oxidation of organic matter under standard laboratory procedure for five (5) days at twenty degrees (20°) Centigrade. The standard laboratory procedure shall be that found in the latest edition of “Standard Methods for the Examination of Water and Wastewater” published by the American Public Health Association.

“Building” shall mean each structure, Dwelling Unit, Multiple Dwelling Unit, Multiple Use Unit, store, shop, office, business, Educational Establishment, Institutional Establishment, Commercial Establishment, or Industrial Establishment contained within any structure, erected and intending for continuous or periodic habitation, occupancy or use by human beings or animals

and from which structure domestic sewage, sanitary, or wastes, or Industrial Wastes are or may be discharged, located in the Township.

“Building Sewer” shall mean the piping and related hardware extending from the Point of Connection to the plumbing fixtures within the building.

“Capacity Fee” shall mean an initial, one time assessment for all future customers -- and initial and future multi-users (more than one Equivalent Dwelling Unit) --to assist in paying for the construction or the future expansion of the WWTF.

“Commercial Establishment” shall mean any room, group of rooms, Building or enclosure connected, directly or indirectly, to the Sewer System and used or intended for use in the operation of a business enterprise for the sale and distribution of any product, commodity, article or service.

“Commonwealth” shall mean Commonwealth of Pennsylvania.

“Connection” shall mean the connection of a building sewer to the sewer system.

“Connection Ordinance” shall mean the ordinance enacted by the Township inter alia, requiring all Owners of Improved Property located in the Township, accessible to and whose principal Building is within 150 feet of a Sewer, to connect to such Sewer and use the same in such manner as the Township or the Authority may ordain.

“Developer” shall mean any Person who desires to construct, at their own cost and expense, a Sewer Main Extension or Private Sewer Main Extension to serve any one or more Improved Properties, Buildings (or portions thereof which may be subject to separate ownership) and to connect the Sewer Main Extension or Private Sewer Main Extension to the Sewer System.

“Developer Agreement” shall mean a written agreement between the Authority and Developer governing the construction of a Sewer Main Extension.

“Domestic Sanitary Sewage” shall mean any normal water-carried household and toilet wastes discharged from any Improved Property.

“Dwelling Unit” shall mean any room, group of rooms, house trailer, apartment, condominium, cooperative or other enclosure connected, directly or indirectly, to the Sewer System and occupied or intended for occupancy as living quarters by an individual, a single family or other discrete group of Persons, excluding institutional dormitories.

“Educational Establishment” shall mean any room, group of rooms, Building or other enclosure connected, directly or indirectly, to the Sewer System and used or intended for use, in whole or in part, for educational purposes, including both public and private schools or colleges.

“Engineer” shall mean a registered professional Engineer retained by the Authority, including any authorized member of the staff of such Engineer.

“Equivalent Dwelling Unit” or “EDU” shall mean the unit of measure by which the applicable Capacity Fee and User Charge shall be imposed upon each Improved Property served by the Sewer System, as determined in this Resolution or any subsequent resolutions of this Authority establishing the User Charges payable by Persons connected or to be connected to the Sewer System, according to the tables set forth in such Resolution or Resolutions.

“Governing Body” shall mean the Board of Supervisors of the Township.

“Hourly Rate” shall mean the rate charged by the Authority for work performed by Authority employees as established from time to time by resolution of the Authority.

“Improved Property” shall mean any property upon which there is erected a structure intended for continuous or periodic habitation, occupancy or use by human beings or animals and from which structure Domestic Sanitary Sewage and/or Industrial Wastes shall be or may be discharged, which is located within the Sewered Area and is subject to the Connection Ordinance.

“Industrial Establishment” shall mean any property used or intended for use, wholly or in part, for the manufacturing, processing, cleaning, laundering or assembling of any product, commodity or article, or any other Improved Property from which wastes, in addition to or other than Domestic Sanitary Sewage, shall or may be discharged.

“Industrial Wastes” shall mean any and all wastes discharged from an Industrial Establishment, and/or any wastewater having characteristics which may have the potential to be detrimental to the WWTF, other than Domestic Sanitary Sewage.

“Inspector” shall mean the Person or Persons appointed by the Authority to inspect the Sewer system (including both public, semi-public, and private Sewer systems), service lines, Connections, and all other Connections between Building conduits and Sewer Mains.

“Institutional Establishment” shall mean any room, group of rooms, Building or other enclosure, including but not limited to institutional dormitories, hospitals and Educational Establishments, which do not constitute a Commercial Establishment, a Dwelling Unit or an Industrial Establishment.

“Large Consumer” shall mean a Person whose metered or estimated consumption of water is in excess of 18,000 gallons per calendar quarter in the case of a Dwelling Unit, and any Commercial Establishment, Educational Establishment, Institutional Establishment or Industrial Establishment, regardless of water consumption or volume of Domestic Sanitary Sewage or Industrial Wastes discharged.

“Lateral” shall mean the piping and related hardware extending from the Sewer Main to the plumbing within the Building and shall include both the Service Sewer and Building Sewer.

“Meter” shall mean a device which registers and records the consumption of water.

“Multiple Dwelling Unit” shall mean apartments, multi-family or multi-unit, and multi-family dwelling projects. Does not include motels or hotels.

“Multiple Use Improved Property” shall mean any Improved Property upon which there shall exist any combination of a Dwelling Unit, Commercial Establishment, Industrial Establishment, Educational Establishment or Institutional Establishment.

“Multiple Use Unit” shall mean a combination of a single family Dwelling Unit, store, shop, office, business, institutional, commercial or industrial unit contained within any structure or any Building determined by the Authority to have more than one use.

“Other Terms” unless the context specifically indicates otherwise, the meaning of terms not defined above shall be as defined in the "Glossary-Water and Wastewater Control Engineering", prepared by joint editorial Board representing: American Public Health Association, American Society of Civil Engineers, American Water Works Association and Water Pollution Control Federation.

“Owner” shall mean any Person vested with ownership, legal or equitable, sole or partial, of real estate served by the Sewer system.

“Person” shall mean any individual, partnership, company, association, society, trust, corporation or other group or entity, including municipalities, municipality authorities, school districts and other units of government.

“pH” shall mean the logarithm of the reciprocal of the concentration of hydrogen ions, expressed in grams per liter of solution, indicating the degree of acidity or alkalinity of a substance.

“Point of Connection” shall mean the point at which the Building Sewer is attached to the Service Sewer. If the Improved Property is immediately adjacent to a Sewer Main right of way, the Point of Connection shall be the limit of the right of way. Otherwise, the Point of Connection shall be the curb line and in absence of a curb line the property line.

“ppm” shall mean parts per million parts of water, by weight.

“Pressure Sewer” shall mean a Sewer line transporting wastewater, flowing full and pressurized by mechanical surcharge or by virtue of negative grade.

“Private Service Sewer” shall mean a Service Sewer constructed pursuant to Section 6.15 which has not been dedicated and accepted by the Authority.

“Private Sewer Main Extension” shall mean an extension of the Sewer Main to be constructed by the Developer of a trailer park and not dedicated to the Authority.

“Service Sewer” shall mean that part of the Sewer System extending from a Sewer Main to the Point of Connection Unless otherwise specified herein, a Service Sewer may only serve one Building Sewer.

“Sewer” shall mean any pipe or conduit constituting a part of the Sewer System used or usable for collection of Domestic Sanitary Sewage and/or Industrial Wastes.

“Sewered Area” shall mean that geographic area of the Township served by the Sewer System as determined and designated, from time to time, by the Authority, including all areas subject to the Connection Ordinance.

“Sewer Main” shall mean a pipe or conduit owned by the Authority that carries sanitary sewage and other wastes from multiple Laterals.

“Sewer Main Extension” shall mean an extension of the Sewer Main to be constructed by a Developer and dedicated to the Authority.

“Sewer System” shall mean all facilities, at any particular time, acquired, constructed, operated, and/or owned by the Authority for collecting, pumping, transporting, treating and/or disposing of Domestic Sanitary Sewage and/or Industrial Wastes.

“Shall” is mandatory.

“Street” shall mean and shall include any Street, road, lane, court, cul-de-sac, alley, public way or public square, including such Streets as are dedicated to public use, and such Streets as are owned by private Persons.

“Tapping Fee” shall mean an initial, one time assessment to cover the cost of the physical installation of the sewage collection system, its amortization, and is intended to be in accordance with House Bill 444 (Act 1990-203). Please note that this fee does not include the surcharge for expanded capacity of treatment facilities, which will be covered by the "Capacity Fee" for new customer hookups.

“Tenant” shall mean any Building occupant other than the Owner who utilizes the services of the Sewer system.

“Total Phosphorus as P” shall mean total phosphorus as determined pursuant to the procedure set forth in the latest edition of “Standard Methods for the Examination of Water and Wastewater”, published by the American Public Health Association, Inc.

“Total Solids” shall mean solids determined by evaporating at 100°C a mixed sample of wastewater as determined pursuant to the procedure set forth in the latest edition of “Standard Method for the Extermination of Water and Wastewater”, published by the American Public Health Association. Total Solids include floating solids, Suspended Solids, Settleable Solids and Dissolved Solids, as defined below:

(a) “Suspended Solids” shall mean solids determined by standard laboratory procedure in the wastewater.

(b) “Settleable Solids” shall mean solids that settle in an imhoff cone from a standard sample of wastewater.

(c) “Dissolved Solids” shall mean solids that are dissolved in the wastewater and cannot be removed by filtration but can be determined by evaporation.

“Township” shall mean the Township of West Providence, Bedford County, Pennsylvania, a political subdivision of the Commonwealth, acting by and through its Governing Body or, in appropriate cases, acting by and through its authorized representatives.

“Treatment Agreement” shall mean the Sewage Treatment Agreement between the Authority and the Borough of Everett Area Municipal Authority, including any amendments thereto or successor agreements, governing the treatment of sewage collected by the Authority.

“User” shall mean any Person who discharges, causes or permits the discharge of, or is required under the Connection Ordinance to discharge wastewater into the Sewer System or the WWTF.

“User Charge” shall mean the rentals or charges imposed by the Authority hereunder, as amended from time to time, against the Owner of each Improved Property, or other User, for the use of the Sewer System and services rendered or available to be rendered thereby.

“WWTF” shall mean the Wastewater Treatment Facilities, and any other relevant sewage facilities owned and operated by the Borough of Everett Area Municipal Authority.

ARTICLE I

SECTION 1.01. The Owner of any Improved Property accessible to and whose principal building is within 150 feet from the Sewer System shall connect such Improved Property therewith, in such manner as this Township may require, within 60 days after notice to such Owner from this Township to make such connection, and shall use the Sewer System, for the purpose of discharge of all Sanitary Sewage and Industrial Wastes from such Improved Property, subject to such limitations and restrictions as shall be established herein or otherwise shall be established by this Township or the Authority, from time to time.

SECTION 1.02. If the Owner or Owners of any building or buildings shall neglect or refuse to comply as required, the Township of West Providence and or the West Providence Township Municipal Authority shall serve a written notice upon the owner or owners, or upon the tenants of the property in possession of the premises if said owner or owners cannot be found on the said premises, requiring the owners to comply with the provisions of the ordinance as found in Appendix A.

ARTICLE II

TAPPING FEE

SECTION 2.01. This Authority hereby does impose a “Tapping Fee”, in the amounts set forth in Section 2.02, against the Owner of any Improved Property in the Sewered Area which is required to be connected pursuant to the Connection Ordinance of the Township then in effect requiring such Connection , or otherwise connects to the Sewer System, even if a wye or tee has been pre-set in said Sewer Main at that location.

SECTION 2.02. The Tapping Fee payable by the Owner of an Improved Property described in Section 2.01 shall be the product of One Thousand Five Hundred Dollars (\$1500.00) times the number of Building Sewers required pursuant to Section 6.01. The minimum Tapping Fee applicable to any Improved Property served by the Sewer System shall be One Thousand Five Hundred Dollars (\$1500.00).

SECTION 2.03 The Tapping Fee shall be due and payable the earlier of: (1) the time Application is made to this Authority to connect the Improved Property to the Sewer System, as provided in Article IV, or if applicable, the date when the Township or the Authority shall connect any such Improved Property to the Sewer System, at the cost and expense of the Owner, when such Owner shall have failed to make such Connection as required pursuant to the provisions of the Connection Ordinance then in effect requiring such Connection, or (2) the date which is sixty (60) days after the date of issuance by this Authority of the applicable notice to connect.

SECTION 2.04. Calculation and itemization of the maximum Tapping Fee permitted under applicable law is set forth in Exhibit “A” hereof, which shall be deemed amended, from time to time, to reflect the actual costs, expenses and modified calculations set forth therein.

SECTION 2.05. All Tapping Fees shall be payable to the West Providence Township Municipal Authority.

SECTION 2.06. Payment of Tapping Fee imposed by this Authority pursuant to this Resolution shall be enforced by this Authority in any manner appropriate under laws at the time in effect.

ARTICLE III

CAPACITY FEE

SECTION 3.01. Any new Connection to the existing Sewer System, a new Sewer Extension, or in a new development will be subject to a Capacity Fee , even if a wye or tee has been pre-set in said Sewer Main at that location. The Capacity Fee applicable to any Improved Property shall be Calculated pursuant to the Sewage Treatment and Transmission Service Agreement between the Authority and BEAMA.

SECTION 3.02. The Capacity Fee shall be due and payable the earlier of: (1) the time Application is made to this Authority to connect any such Improved Property to the Sewer System, as provided in Article IV, or if applicable, the date when the Township shall connect any such Improved Property to the Sewer System, at the cost and expense of the Owner, when such Owner shall have failed to make such connection as required pursuant to the provisions of the Connection Ordinance then in effect requiring such connection, or (2) the date which is sixty (60) days after the date of issuance by this Authority of the applicable notice to connect.

SECTION 3.03. If at any time an Improved Property is modified to increase the applicable number of EDU's, then an additional Capacity Fee will be assessed regardless of whether or not a new Connection is made to the Sewer system.

ARTICLE IV

CONDITIONS AND PROCEDURES FOR INITIAL SERVICE

SECTION 4.01. No Person shall connect any Building to the Sewer System or discharge or permit to be discharged any waste, sewage, Domestic Sanitary Sewage, or industrial waste into the Sewer System until they have complied with all of the following conditions and procedures:

A. Any Person who is required or desires to connect their Improved Property to the Sewer System must first make a written Application for a permit on a form furnished by the Authority, at least two (2) weeks before the service is required, stating the address location, the name of User, and the purpose of use and character of structure for which the service will be used. No work of any nature shall commence before the issuance of the aforementioned permit.

B. The Application must be signed by the Owner of the Improved Property or his duly authorized agent. The Application together with the Rules and Regulations of the Authority shall regulate and control the provision of Sewer service to the Building.

C. The Application must be accompanied by a required non-refundable \$15.00 Application fee. The Application will normally be acted upon at the next meeting after submitted to the Authority. If approved the applicant must forward the fees required herein to the Authority by the date specified or the Application will be voided.

D. The Application must contain indication of the date when the work will be complete and ready for inspection and making Connection.

E. If approved for service the applicant will receive a signed copy of his Application for service as a record of his approved service.

F. Construction must be completed according to the specifications and standards set forth herein.

G. The Lateral must be inspected and approved by the Authority's Inspectors. All costs associated with the Connection including the cost of construction and the cost of any alterations to the Sewer System necessary to complete the Connection shall be paid by the Owner.

SECTION 4.02 The Owner shall notify the Authority office at least 48 hours prior to the time when inspection is requested, to allow for scheduling of an Authority Inspector. The Inspector must be present to inspect and approve the construction.

SECTION 4.03 At any time of inspection, the Owner shall permit the Inspector full and complete access to the construction, the Lateral, pipes and appurtenances, sanitary and drainage facilities, in each Building and in and about all parts of the property. No portion of the construction or Lateral shall be covered over, or in any manner concealed, until after it is inspected and approved by the Inspector.

SECTION 4.04. The Authority may require the Owner to hydrostatically, pneumatically, dye or smoke test the construction and Lateral, at the discretion of, and in a manner determined by the Authority.

- A. Testing by water wherein all buried and under-slab piping (both inside and outside the foundation) is filled with water and a temporary water column is introduced to a minimum of ten (10) feet of head to the highest portion of the buried and under-slab piping, with no water loss observed during a fifteen (15) minute period; and
- B. Testing by air wherein all buried and under-slab piping is pressurized with air to a minimum of five pounds per square inch (3.5 psi) and thereafter held for a period of five (5) minutes with no noticeable pressure drop.

SECTION 4.05. The Inspector shall signify his approval of the Connection by endorsing his name and date of approval on the aforementioned permit.

SECTION 4.06 When an Application has been made for a new service or for reinstatement of or change in an existing service, it is assumed that all plumbing, piping and fixtures which will be serviced are in order to receive the service; and the Authority shall not be liable in any case for any accident, backup, break, or leakage arising in any way in connection with the acceptance of sewage flow or failure to accept sewage flow, or the freezing of pipes or fixtures, nor for any damage to the Building from the usage or non-usage of service provided to the Building.

ARTICLE V

RIGHT TO INSPECTION

SECTION 5.01. The Authority and its duly authorized representatives and employees, bearing proper credentials and identifications, shall be permitted to enter upon all property for the purpose of inspection, observation, testing and re-testing the Lateral and all matters pertaining to the discharge of wastes to the Sewer System to insure compliance with the Rules and Regulations at all reasonable hours.

SECTION 5.02. For all new Connections, the Authority will charge an inspection fee of \$25.00. The inspection fee of \$25.00 is per visit by the Inspector, with one visit being the norm unless the Connection is found to be faulty, in which case the subsequent inspection will also cost \$25.00. The inspection fee must be paid in advance to the Authority.

ARTICLE VI

SPECIFICATIONS AND STANDARDS

SECTION 6.01. A separate Lateral shall be required for each Building or portion thereof which may be subject to separate ownership including but not limited to condominium units, townhouses, and lots in a trailer park. At the discretion of the Authority, a single Lateral may be permitted to serve a school, factory or other permanent Multiple Dwelling Unit or Multiple Use Unit structure whose individual units may not be subject to separate ownership.

Individual lots in a trailer park shall be connected to a Private Sewer Main Extension which has been constructed by a Developer according to the provisions of this resolution, with each individual lot having its own Lateral to the Private Sewer Main Extension. As long as the individual lots remain under common ownership, the owner of the trailer park shall be responsible

for the installation and maintenance of the Private Sewer Main Extension and all Building Sewers, and for the payment of all User Charges and Capacity Fees. User Charges shall not be suspended during any period in which a lot in a trailer park is vacant. If the trailer park is later subdivided into individual lots then the Private Sewer Main Extension shall be dedicated to the Authority and shall become a Sewer Main Extension, and a Tapping Fee shall be assessed against the owner of each individual lot.

Condominium units in the same building may share a Lateral provided the Condominium Association assumes all responsibility for installation, maintenance, payment of all User Charges Capacity Fees and Tapping Fees, and signs a Condominium Agreement with the Authority.

SECTION 6.02. No repairs, alterations or additions to any Building Sewer, or any part of the Sewer System shall be made unless the Person desiring to make same shall first make application to and receive permission from the Authority.

SECTION 6.03. No User shall be allowed to permit any other Persons or Buildings to use or connect with or share any portion of his Lateral, except upon written permission of the Authority, which may be withheld in the Authority's sole discretion.

SECTION 6.04. The minimum size Building Sewer shall be four (4) inch diameter pipe laid on a minimum grade of one-fourth (1/4) per inch foot length, and having permanently sealed water tight and gas tight joints. Smaller diameter pipes and lesser grade may be allowed, on a case by case basis, at the sole discretion of the Authority or its Engineer. The size of the Lateral serving other than detached residential units shall be considered on an individual basis by the Authority.

SECTION 6.05. Sewer Main Extensions, Private Sewer Main Extensions, and/or Service Sewers shall not be installed when they pass through property which at the time may be the

property of Persons other than the Owner of the Building or Improved Property to be served, unless the Owner obtains a right-of-way. The right-of-way shall be recorded with the Recorder of Deeds at the Bedford County Courthouse.

SECTION 6.06. All pipe shall have at least thirty (30) inches of cover, mechanically tamped in layers not to exceed twelve (12) inches. All pipe shall be laid in a straight grade, avoiding summits and depressions. All pipe shall be placed on a six (6") inch 2B aggregate base and backfilled with 2B aggregate to at least six (6") inches above top of pipe. Where rock is encountered on a trench bottom, over excavate six (6") inches and backfill with 2B aggregate. Minimum gravity pipe grade shall be two (2%) percent for Building Sewers. Note that all Township Roads are to have 100% stone backfill using 2A aggregate according to the Authority's details.

SECTION 6.07. All Connections to a new Sewer Main shall utilize a polyvinyl-chloride (PVC) wye conforming to ASTM D3034 or equal, and at the discretion of the Inspector or Engineer a deep socket adapter. All Connections to an existing Sewer Main shall utilize a PVC wye conforming to ASTM D3034 which shall be spliced in to the sewer main using a SDR 35 Gasketed Repair Coupling or an acceptable method approved by the Authority's Engineer.

SECTION 6.08. All pipe shall be type SDR 35 PVC pipe conforming to ASTM D3034 or equal.

SECTION 6.09. Within five (5) feet of any Building there shall be a double "P" trap, with a vent stack to the surface, one (1) foot above the finish grade. The trap is to be constructed in such a manner so as to have access to the Building Sewer through the stack toward the Sewer Main. An observation port shall be installed by the User at the property line or Point of Connection.

If any residence or Building is engaged in any food processing activity, fast food franchise, as a restaurant or in an operation that generates fatty grease waste product that congeals to a solid or semi-solid, the applicant must provide for a suitable grease trap ahead (upstream) of the double “P” trap that will effectively remove such waste product. The grease trap must be pumped at the Owners’ expense at a time interval to be established to the satisfaction of the Authority.

Any customer required by the Authority to utilize a grease trap must post a weekly record of trap inspection(s) and cleaning by employees. Authority personnel may review the record to ensure compliance.

SECTION 6.10. Grinder pumps and Pressure Sewers with the appropriate cleanouts may be utilized only where conditions require and with Authority approval. Pressure Sewers shall be SDR 21 PVC. All grinder pump Connections will require a curb box and ball valve at the property line or Point of Connection. The grinder pumps shall be manufactured by Environment One Corporation. The Authority shall, at its discretion, require that the electrical wiring for the grinder pump be installed in conduit.

SECTION 6.11. A cleanout shall be provided by the applicant at any severe bend and every one hundred (100) feet in the Building Sewer line, at the direction of the Authority's Inspector or Engineer. A cast iron cleanout cover shall be required for the cleanout at the discretion of the Authority’s inspector or Engineer.

SECTION 6.12. No pipe shall be laid in the same trench with a water or gas pipe within any facility of a public service company or within three (3) feet of any excavation without permission of the Authority.

SECTION 6.13. All new wells for water must be at least fifty (50) feet from the nearest point of the Sewer System and Building Sewer, or further if required by the Pennsylvania

Department of Environmental Protection. If it is not possible to place a well at least fifty (50) feet from the Sewer System and Building Sewer, then the Authority may authorize the installation of a well within fifty (50) feet provided the Owner agrees to release and hold the Authority harmless from any claim relative to the contamination of the well. The release and hold harmless agreement will be prepared by the Authority's solicitor.

SECTION 6.14 All construction shall be done at the sole cost of the Owner or Developer, and the Owner or Developer shall pay all costs and expenses incurred by the Authority as a result of the construction. In the event the Authority is required to perform any work as a result of the construction, the Owner or Developer shall be billed for work performed by Authority Personnel at the Hourly Rate.

SECTION 6.15. When an Owner desires Sewer service to a Building which does not have any existing Sewer Main of adequate capacity in the roadway abutting the Building, the Service Sewer to be constructed by Owner shall be subject to the provisions of this Section 6.15. The size and length of the Service Sewer shall be determined by the Authority, and said Service Sewer shall require the written permission of the Authority, and, if appropriate, rights of way and the proper Commonwealth permits which shall be obtained at the sole cost of the Owner. As a condition of such approval, the Authority may require that the Service Sewer be dedicated to the Authority or in the alternative that it remain the property and sole responsibility of the Owner. Any such Service Sewer shall be constructed according to standards set forth by the Authority on a case by case basis.

ARTICLE VII

CONSTRUCTION OF SYSTEM BY DEVELOPER

SECTION 7.01. Any Developer or Person constructing a Sewer Main Extension or Private Sewer Main Extension (collectively referred to in this Article VII as "Extension") shall comply with this Article. For the purposes of this Article, any Person constructing an Extension shall be considered a "Developer".

SECTION 7.02. A request for service for Buildings where the Extension would be below an elevation which would require pumping facilities as determined by the Engineer, which would be an additional operation and maintenance cost for the Authority will be discouraged.

SECTION 7.03. The Developer shall submit five (5) copies of plans for the proposed Extension to the Engineer for review, comments, recommendations and approval on 24" x 36" sheets showing plan view to a scale of 1" = 50' and profiles to a scale of 1" = 10' vertically and 1" = 50' horizontally, or such other scale as the Engineer shall deem acceptable, a north point, a suitable title block, date and the name of the Developers' Engineer and imprint of his registration seal. The Developer shall be responsible for the fees charged by the Authority's Engineer in Connection with the review of the plans.

SECTION 7.04. Upon completion of any Extension, the Developer shall furnish to the Authority "Record Drawings" showing the location of all Sewer Mains, Extensions, manholes, Laterals (including Building Sewers and Service Sewers) and Points of Connection relative to permanent landmarks such as Buildings, trees, utility poles or property corners; the angle and distance between manholes, the top and invert elevation of each manhole, and the location of all

Points of Connection relative to the nearest manhole both upstream and downstream. Tap locations, wye locations, manholes, cleanouts, pressure cleanouts and all pressure/force main pipe every 100' to be GPS located with method approved by the Authority's Engineer.

SECTION 7.05. Prior to final approval of any Extension by the Authority, the Developer shall execute a "Developer's Agreement" in a form acceptable to the Authority.

SECTION 7.06. Easements for Extensions outside of dedicated rights-of-way shall be recorded in the name of the Authority.

SECTION 7.07. All pipe used for Extensions shall be type SDR 35 PVC pipe conforming to ASTM D 3034 or equal. The minimum size pipe for Sewer Main Extensions and Private Sewer Main Extensions shall be eight (8) inch diameter, except where Pressure Sewers are proposed and approved. The minimum size pipe for a Lateral shall be four (4) inch.

SECTION 7.08. Construction of Extensions will not be permitted until proper Commonwealth permits have been obtained in the name of the Authority by the Developer.

SECTION 7.09. All Extension pipe shall be placed on a six (6") inch 2B aggregate base and backfilled with 2B aggregate to at least six (6") inches above top of pipe. Where rock is encountered on the trench bottom over excavate six (6") inches and backfill with 2B aggregate. All pipe shall have at least forty-eight (48") inches of cover mechanically tamped in layers not to exceed twelve (12") inches. Where pipe is installed in traveled portions of roadways, including shoulders, berms, median strips, etc., the pipe shall be backfilled with 2A aggregate to the surface.

SECTION 7.10. All fittings shall be PVC conforming to ASTM D 3034 or equal.

SECTION 7.11. Manholes shall be precast reinforced concrete manholes conforming to ASTM C-478. Manhole opening shall be twenty-seven (27) inch diameter. Inside diameter of

manhole shall be forty-eight (48) inch standard with custom preform opening in manhole base to accommodate pipe at time of manufacture.

SECTION 7.12. Manhole frame/cover shall be R-1753-A Neenah Foundry Company or equal. Watertight manhole frame/cover shall be R-1755-F2 Neenah Foundry Company or equal. Manhole frames shall have a twenty-seven (27) inch diameter opening. Material shall be cast iron, conforming to ASTM A-48, class 30. The words "SANITARY SEWER" shall be embossed on cover. The inside of all manholes, pump station holding tanks, manhole cover lids and any corrodible material exposed to Sewer gasses and effluent must be coated with a protective agent such as a tar based paint or other durable paint.

SECTION 7.13. Manhole steps shall be of polypropylene plastic cast in manhole.

SECTION 7.14. Flexible gasket type sealant shall be placed between all manhole sections, eccentric cone section and grade ring (if required) or manhole frame, and grade ring (if required) and manhole frame. Flexible gasket-type sealant shall be ConSeal butyl rubber sealant, or equal, and shall conform to Federal Specification SS-S 210A. Sealant shall be one (1) inch size. Use two (2) sealant strips between manhole sections. Developer shall take such other steps as deemed appropriate by the Inspector or Engineer to cause manholes located in low-lying or saturated areas to be watertight and impervious to groundwater, surface water, and storm water infiltration.

SECTION 7.15. Manhole frame shall be fastened to eccentric can section of manhole with two (2) three-quarter (3/4) inch high strength low alloy steel all threads. A three-quarter (3/4) inch lead corker shall be used with each all thread. All threads shall penetrate any and all grade rings used and manhole frame.

SECTION 7.16. Ready mixed cement concrete for flow lines shall be 3,300 psi. equivalent to Pennsylvania Department of Transportation Class A cement concrete.

SECTION 7.17. All Extensions shall be subject to an air pressure and vacuum test specified by Engineer, in such a matter as determined by Article 4.04. Developer shall provide air compressor, portable air control equipment, manhole vacuum tester, and all necessary apparatus for testing. The duration of test shall be determined by Authority's Inspector.

SECTION 7.18. Depending on layout of the existing Sewer System and/or potential for future development beyond the area in question, the size of an Extension could vary, based upon Engineer review and recommendations.

SECTION 7.19. Awye or tee for each anticipated Building Sewer shall be installed while the Extension is being constructed.

SECTION 7.20. The Developer or his contractor, at the Developer's cost, will make the connection of the Extension to the Sewer System. The Developer shall furnish the necessary fittings, and/or manhole to make the connection. The actual connection shall be done in the presence of the Authority Inspector.

SECTION 7.21. The Extension and all appurtenances shall be subject to full time inspection by the Authority's representative at the sole cost of the Developer. If the installation of the Extension or appurtenances has been properly made, written approval will be furnished to the Developer or his designated representative. If the work is not satisfactory, the Inspector shall advise what must be done to meet the Authority requirements.

SECTION 7.22. No Extension constructed by a Developer will be approved for use and acceptance by the Authority until the Extension is formally approved by the Authority, all tapping, inspection, capacity and review fees have been paid, the Authority has been reimbursed in full for

all inspection costs incurred by the Inspector during construction, testing and approval, three (3) copies of reproducible as built drawings have been provided, and the Extension has been dedicated to the Authority.

SECTION 7.23. The Developers Agreement may require that the Developer provide the Authority a written warranty against latent defects in construction of the Extension. Notwithstanding the subsequent dedication of an Extension or the conveyance of a lot serviced by the Extension to a new Owner, Developer shall remain liable for any portion of the Extension or attached Lateral constructed by Developer which violates these Rules and Regulations. By way of example, if Developer constructs a house on a lot serviced by the Extension and connects the foundation drains of such house to the Extension, Developer shall be liable for correcting the violation regardless of whether the house has subsequently been conveyed to a new Owner. Nothing in this section 7.23 shall relieve the current Owner from compliance with these rules and regulations and the liability of Developer under this section shall be in addition to the liability of the current Owner.

SECTION 7.24 User charges shall commence with respect to each newly constructed Improved Property within the development upon the earlier of: i) the date which the Improved Property is occupied, or ii) the date upon which ownership of the Improved Property is transferred by the developer to the new Owner. It shall be the Developer's responsibility to notify the Authority of the occupancy or sale of a newly constructed Improved Property. Any User Charges accruing prior to the notice required by this section shall be the responsibility of the Developer. The Authority may require, as a condition of the Developer's Agreement, that the Developer post a reasonable security deposit securing Developer's obligations under this section.

ARTICLE VIII

MAINTENANCE AND REPAIR

SECTION 8.01. The Authority shall have the ultimate responsibility for the use, operation, maintenance and repair of the Sewer System from the terminal point of the interceptors up to and including the Point of Connection, except in the case of a Private Sewer Main Extension which shall remain the sole responsibility of the Developer, and in the case of a Private Service Sewer which shall remain the sole responsibility of the Owner.

SECTION 8.02. All Building Sewers including observation port are the responsibility of the Owner and shall be maintained and repaired by the Owner. The repairs to the Building Sewer shall be subject to the direction, approval, and inspection of the Authority.

SECTION 8.03. The Authority reserves the sole right to excavate or allow excavation of any Sewer System component. The Authority reserves the right to enter the property of the Owner for the purpose of inspection of the Building Sewer.

SECTION 8.04. The Authority shall in no event be responsible for maintenance or damage done by sewage escaping from the Building Sewer or any other pipe fixture on the inlet side of the Point of Connection.

SECTION 8.05. The Owner shall keep the Building Sewer in good condition at all times under penalty of discontinuance of service by the Authority, upon forty-eight (48) hours' notice. However, should a serious break or other accident occur on the Owner's property which would threaten the Authority's Sewer System or its capacity, the Authority reserves the right to discontinue service without notice until such time as the condition is corrected.

SECTION 8.06 Before making any repairs to or replacing any lateral and/or connection, the Owner shall make application to the Authority for inspection of the proposed work. The Owner shall be responsible for paying any repair charges as set forth in the Rules, Regulations and Policy.

SECTION 8.07. In the case of leakage of or damage to the Service Main or Building Sewer, the location of which is not readily apparent, the Authority will conduct tests and/or excavate in and about the Point of Connection for the purpose of determining the responsibility for the leak. If the leak or damage is determined to be on the inlet side of the Point of Connection, the Owner shall reimburse the Authority for the actual costs of the work required to determine responsibility. Labor provided by Authority Employees shall be billed to Owner at the Hourly Rate.

SECTION 8.08. The Authority may at any time require User to install, in connection with his Building Sewer, such vents, traps, gates, or other apparatus as may be in the opinion of the Authority required for the safeguarding and protection of the Authority's or Owner's property.

SECTION 8.09. When it is necessary to repair or replace an existing Building Sewer, or part thereof, due to malfunction or infiltration, the Owner will repair or replace the Building Sewer at its cost at the same location. Such work will require 48 hour advance notification to the Authority and inspection by and Authority Inspector. If any portion of the Building Sewer is repaired or replaced, at that time, the Owner shall also bring the remaining Building Sewer into compliance as per Article 6.

SECTION 8.10. When the Owner desires a change in location or size of an existing Building Sewer, the cost of the change shall be borne entirely by the Owner. This cost shall include any work that must be done to the Sewer System including the Service Sewer as a result of the change. Labor provided by Authority Employees shall be billed to Owner at the Hourly Rate.

SECTION 8.11 If the Owner or Owners of any building or buildings shall neglect or refuse to comply as required, the Township of West Providence and or the West Providence Township Municipal Authority shall serve a written notice upon the owner or owners, or upon the tenants of the property in possession of the premises if said owner or owners cannot be found on the said premises, requiring the owners to comply with the provisions of the ordinance as found in Appendix A.

ARTICLE IX

USER CHARGES

SECTION 9.01. A User Charge is hereby imposed upon the Owner of each Improved Property which shall be connected to the Sewer System, and any other User, for use of the Sewer System, whether such use is direct or indirect, and for services rendered by the Authority in Connection herewith, and shall be payable as provided herein. At the discretion of the Authority, such User Charge may be imposed upon the Owner of an Improved Property or other User who fails to timely connect such Improved Property to the Sewer System in violation of the Connection Ordinance, as compensation for the availability of service by the Authority in Connection with the Sewer System.

SECTION 9.02. The User Charge shall be payable by the Owner of each Improved Property or other User commencing the earlier of: (1) the date of actual, physical Connection of an Improved Property to the Sewer System, or (2) the date which is sixty (60) days from the date indicated in a notice to connect, as described in the Connection Ordinance and in a Resolution adopted by the Authority, unless another date for the commencement of payment of the User Charge is established by the Authority.

SECTION 9.03. The User Charge applicable to any Improved Property served by the Sewer System shall be calculated, imposed and collected on a flat rate basis as a specific amount per Equivalent Dwelling Unit or EDU applicable to such Improved Property, as determined by the Authority, from time to time. The number of Equivalent Dwelling Units applicable to each Improved Property shall be determined as follows:

COMPUTATION OF EQUIVALENT DWELLING UNITS

<u>Description of Improved Property</u>	<u>Unit of Measurement</u>	<u>Number of EDUs Per Unit of Measurement</u>
Dwelling Units and Multiple Dwelling Units (year-round or seasonal)	Each single family dwelling unit	1
Retail store, professional offices or other Commercial Establishment (attached to or forming a part of the Owner's residence)	1 to 8 employees Each additional 4 employee or fraction thereof	1 ½
Retail store, professional offices or other Commercial Establishment (<u>NOT</u> attached or forming a part of the Owner's residence)	1 to 8 employees Each additional 4 employee or fraction thereof	1 ½ ½
Hotel, motel or boarding house (not including restaurant facilities)	Each rental unit	½
Restaurant, club, tavern or other retail food or drink establishment	1 to 15 customer seats Each additional 15 seats or fraction thereof	1 1
Laundromat	Each washing machine	1
Automotive service station or commercial vehicle repair shop	1 or 2 bays Each additional 2 bays or fraction thereof	2 1
Car Wash	Each bay	1
Beauty parlor or barber shop (whether or not attached to or part of a Dwelling Unit)		1

Educational/Institutional Establishment (per structure having any of the following characteristics):	Toilet Facilities only, per 28 pupils or fraction thereof	1
	Toilet facilities and cafeteria, per 22 pupils or fraction thereof	1
	Toilet facilities and gymnasium, per 15 pupils or fraction thereof	1
	Toilet facilities, cafeteria and gymnasium, per 12 pupils or fraction thereof	1
Church	Each property	1
Fire House	Each property	1
Each swimming pool or large Community Hall	Each property	3
Funeral Home	Each property	1
Each Improved Property having a commercial (3/4 horsepower or greater) garbage grinder	Per grinder	1
Industrial Establishment	1 to 10 employees	1
	Each additional 10 employees or fraction thereof	1

The number of Equivalent Dwelling Units applicable to Commercial Establishment and Industrial Establishments shall be computed on the basis of the average daily number of full and part-time employees (including the Owner(s) or employer(s)) for the calendar month preceding the date of the monthly billing. The Owners of such facilities shall be responsible for advising the Authority in writing of the number of employees upon Connection to the Sewer System and upon request of the Authority. The number of Equivalent Dwelling Units applicable to Educational

and Institutional Establishments shall be computed on the highest monthly average daily attendance of pupils (plus faculty, administrators and staff) for the twelve (12) months preceding the date of the monthly billing. The Owners of such facilities shall be responsible for advising the Authority in writing of the number of pupils, faculty, administrators and staff in attendance as an average daily figure upon request of the Authority.

If the use or classification of any Improved Property changes within a billing period, the User Charge for such billing period may be prorated by the Authority. The Owner of the Improved Property shall be responsible for advising the Authority in writing of any such change affecting the User Charge payable hereunder. The appropriate credit or additional charge shall appear on the statement for the next succeeding billing period.

The monthly flat rate User Charge payable per Equivalent Dwelling Unit shall be \$37.00, as may be amended, from time to time.

SECTION 9.04. In the case of a Multiple Use Improved Property sharing a common Building Sewer or a common structure, each such classification of Improved Property shall pay a separate User Charge, as though it was housed in a separate structure and had a direct and separate Connection to the Sewer System.

SECTION 9.05. The Owner of any Improved Property which shall discharge Domestic Sanitary Sewage and/or Industrial Wastes into the Sewer System determined or estimated by the Authority to be in excess of a total flow of 250 gallons per day per Equivalent Dwelling Unit with a peak flow rate in excess of 625 gallons per day for any 10-minute period, per Equivalent Dwelling Unit, as determined or reasonably estimated by the Authority, shall pay a volume surcharge. The Owner of any Improved Property which shall discharge Domestic Sanitary Sewage and/or Industrial Wastes to the Sewer System having a B.O.D. greater than 300 ppm, or a

Suspended Solids content greater than 300 ppm, or a Dissolved Solids content greater than 500 ppm, or a Total Solids content greater than 800 ppm, or a Total Phosphorus as P content greater than 10 ppm or an Ammonia Nitrogen as N content greater than 20 ppm, shall pay a strength of waste surcharge, in addition to the applicable User Chargers.

Surcharges shall be paid in addition to all User Charges computed in accordance with provisions of this Article IX and shall be computed on such basis as the Authority may from time to time adopt. The strength of Domestic Sanitary Sewage and/or Industrial Wastes to be used for establishing the amount of surcharge shall be determined by the Authority periodically in the discretion of the Authority either: (1) by suitable sampling and analysis by the Authority of such wastes for a consecutive three-day period during a time of normal plant operation; or (2) from estimates made by the Authority; or (3) from known relationships of products produced to strengths of such wastes for those industries where such factors have been established. In establishing such waste strengths for surcharge purposes by analysis, analyses shall be made in accordance with procedures outlined in the latest edition to "Standard Methods for Examination of Water and Wastewater" published by the American Public Health Association, Inc.

SECTION 9.06. The Owner of any Improved Property discharging Domestic Sanitary Sewage and/or Industrial Wastes into the Sewer System shall furnish to the Authority, including by way of the Application for permit described in the Connection Ordinance, all information deemed essential or appropriate by the Authority for the determination of all applicable User Charges and surcharges. The costs of obtaining such information shall be borne by such Owner of the Improved Property.

In the event of the failure of the Owner to provide adequate information, the Authority shall estimate the applicable User Charge and surcharges based upon available information, until

such time as adequate information is received. There shall be no rebate or past payments if the Owner's refusal to provide such information results in overpayment.

SECTION 9.07. Nothing herein contained shall be deemed to prohibit this Authority from entering into separate or special agreements with any Owners of Improved Property with respect to the User Charge or surcharge to be imposed in those cases where, due to special or unusual circumstances, the User Charge set forth herein shall be deemed by this Authority, in its sole discretion, to be inequitable, or where it is in the best interests of this Authority to do so.

SECTION 9.08. User Charges and surcharges, as applicable, shall be payable on a monthly basis, on the first day of each month, and shall cover a billing period consisting of the immediately preceding month. Owners of Improved Property shall be first connected to the Sewer System during any monthly period shall pay a pro-rated User Charge for service for the balance of the monthly period, plus any applicable surcharges.

SECTION 9.09. Payments of User Charges and any applicable surcharges shall be due and payable upon the applicable billing date, at the office of the Authority, in the appropriate amount, computed in accordance with this Resolution, which shall constitute the net bill. If any User Charge or any applicable surcharge is not paid within thirty (30) calendar days after the applicable billing date, an additional sum not to exceed an amount permitted by law, shall be added to such net bill, which net bill, plus such additional sum, shall constitute the gross bill. Payment made or mailed and postmarked on or before the last day of such thirty (30) calendar day period shall constitute payment within such period. If the end of such thirty (30) calendar day period shall fall on a legal holiday or on a Sunday, then payment made on or mailed and postmarked on the next succeeding business day which is not a legal holiday shall constitute payment within such period. Interest shall accrue on any delinquent account at the maximum rate permitted by law.

Any and all payments received on account of delinquent accounts shall be applied first to interest accrued on such account, then to the oldest outstanding gross bill, including any accumulated late fee, and each remaining gross bill thereafter in chronological order.

SECTION 9.10. It shall be the responsibility of each Owner of an Improved Property to provide the Authority with, and thereafter keep the Authority continuously advised of, the correct mailing address of such Owner. Failure of any Owner to receive a bill for charges due and payable shall not be considered an excuse for nonpayment, nor shall such failure result in an extension of the period of time during which any bill shall be payable.

SECTION 9.11. No officer or employee of the Authority is authorized to reduce, vary or exempt charges imposed herein or other provisions of this Resolution without official action by the Board of this Authority.

Every Owner of Improved Property shall remain liable for the payment of User Charges and surcharges until the later of: (1) the receipt by the Authority of written notice by such Owner that the property has been sold, containing the correct name and mailing address of the new Owner, or (2) the date on which title to the Improved Property is transferred to a new Owner. Failure to provide notice renders an Owner continuously liable for any charges that may accrue until such time as the Authority has been properly notified of any change in ownership as described above.

SECTION 9.12. Any Owner desiring the discontinuance of service from a Building Sewer must notify the Authority of the intent and schedule in writing. The Owner shall dig on their side of the observation port (within three feet). The Building Sewer shall be cleanly cut, a section removed and a cap installed. The Authority shall be onsite for inspection of the work. A \$25 inspection fee will be required prior to digging. All work is at the Owner's expense. Future

re-connection will require the payment of the appropriate Tap Fee, Capacity Fee and Inspection Fee. Note that the Authority does not reserve capacity. There is not a guarantee that the discontinued Building Sewer can be added back onto the Authority's wastewater system.

SECTION 9.13. Any Owner desiring service from a previously discontinued service and each new Owner of a Building then connected must submit with his Application for service a payment of \$10 for initiating service. No service shall be furnished by the Authority to User until all arrears for wastewater rents, wastewater repairs or other charges then incurred or previously owed with respect to Building shall have been paid, or satisfactory arrangement for payment has been made.

SECTION 9.14. Building Sewer replacements and repairs will be subject to an Inspection Charge of \$25 per visit.

ARTICLE X

UNLAWFUL USE OF SEWER SYSTEM

SECTION 10.01. No Person connected to Sewer System shall discharge or cause to be discharged into the Sewer system any storm water, surface drainage, ground drainage, roof runoff, subsurface drainage, cooling water, spring water, or foundation drainage, or connect or cause to be connected to the Sewer system in any way within or without the Building any pipe, tile, or other conduit which has the capacity or purpose of conveying such waters.

SECTION 10.02. No Person shall connect, cause to be connected, or allow any other Person to connect to the Sewer system any Building or other source of water or waste other than that for which the permit is or has been issued.

SECTION 10.03. No Person shall connect, cause to be connected, or allow any other Person to connect, in any way to the Sewer system any septic tank, cesspool, privy vault, or other depository of sewage or wastes, or cause or allow any discharge from any of said depositories to the Sewer system, unless otherwise approved in writing by the Authority.

SECTION 10.04. No Person shall make, or cause to be made, any cross connection between any pipe, fixture, or other appurtenance connected in any way to the Sewer system and any public or private component of any potable water system or source whereby, in the opinion of the Authority, the potential exists for vacuums or back siphonage which could permit sanitary wastes to enter a potable water system or source.

ARTICLE XI

PROHIBITED WASTES

SECTION 11.01. No Person shall discharge or shall cause to be discharged into the Sewer System any storm water, surface water, spring water, ground water, roof runoff, subsurface drainage, building foundation drainage, cellar drainage, sump pumps or drainage from roof leader Connections.

SECTION 11.02. Except as otherwise provided, no Person shall discharge or cause to be discharged into the Sewer System any matter or substance:

- A. Having a temperature higher than 104 degrees F. (40 degrees C.) or less than 32 degrees F.;
- B. Containing more than 50 mg/l of fat, oil or grease;
- C. Any liquids, solids or gases which by reason of their nature or quantity are, or may be, sufficient either alone or by interaction with other substances to cause fire or explosion or be injurious in any other way to the WWTF or to the operation of the WWTF. At no time, shall two successive readings on an explosion hazard mater, at any point of discharge into the system (or at any point in the system) be more than five percent (5%) nor any single reading over ten percent (10%) of the Lower Explosive Limits (LEL) of the Meter. Prohibited materials include, but are not limited to, gasoline, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides, and sulfides and any other substances which the Authority, the Commonwealth or EPA has notified the User is a fire hazard to the Sewer System or the WWTF;
- D. Containing any solid wastes with particles greater than one-half inch (1/2") in any dimension, resulting from preparation, cooking and dispensing of food and from handling,

storage and sale of produce, which wastes commonly are known as garbage, which have not been ground by household type garbage disposal units or other suitable garbage grinders;

E. Containing any solids or viscous substances which may cause obstruction to flow in the Sewer System or other interference with the proper operation of the WWTF such as, but not limited to: animal guts or tissues, paunch manure, bones, hair, hides or fleshings, feathers, entrails, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, waste paper, strings, wood, plastics, gas, tar, asphalt residues, residues from refining, or processing of fuel or lubricating oil, mud, or glass grinding or polishing wastes, dental floss, wool or other fibers;

F. Having a pH lower than 5.0 or higher than 9.0, or having any other corrosive property capable of causing damage or hazards to structures or equipment of the Sewer System or to any Person engaged in operation and maintenance of the Sewer System;

G. Containing toxic or poisonous substances in sufficient quantity to injure or to interfere with any sewage transmission or treatment process, to constitute hazards to humans or animals or to create any hazards in waters which shall receive treated effluent from the Sewer System;

H. Containing dyes or other materials which are objectionable in color, from any source that will result in WWTF effluent exceeding limits in compliance with applicable State or Federal regulations;

I. Any substance which may cause the WWTF's effluent or any other product of the WWTF such as residues, sludges, or scums, to be unsuitable for reclamation and reuse or to interfere with the reclamation process. In no case, shall a substance discharged to the WWTF cause the WWTF to be in non-compliance with sludge use or disposal criteria, guidelines or

regulations affecting sludge use or disposal developed pursuant to the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act, or Commonwealth criteria applicable to the sludge management method being used;

J. Containing radio-active substances and/or isotopes of such half-life or concentration that will result in a treatment plant effluent exceeding limits in compliance with applicable State or Federal regulations;

K. Having a chlorine demand in excess of 12 mg/l at a detention time of 20 minutes;

L. Prohibited by any permit issued by the Commonwealth of Pennsylvania or the U.S. Environmental Protection Agency;

M. Containing wastes which are not amenable to biological treatment or reduction in existing treatment facilities, specifically non-biodegradable complex carbon compounds;

N. Having a B.O.D. content greater than three hundred (300) ppm;

O. Having a Suspended Solids content greater than three hundred (300) ppm;

P. Having a Total Phosphorus as P content greater than 10 ppm;

Q. Having an Ammonia Nitrogen as N content greater than 20 ppm;

R. Having any waste containing toxic or poisonous substances in excess of the following limits, measured at the point of discharge to the Sewer System:

<u>Substances</u>	<u>Maximum Concentration ppm</u>
Arsenic	0.05
Cadmium (as Cd)	0.05
Chromium (trivalent)	1.0

Chromium (hexavalent)	0.05
Copper (as Cu)	0.5
Cyanides (fee CN)	0.05
Lead	0.1
Mercury	0.002
Nickel (as Ni)	1.0
Phenolic Compounds	0.005
Silver	0.05
Zinc (as Zn)	1.0

S. Containing any substance not mentioned in the foregoing list that will pass through the WWTF or the Sewer System and exceed the maximum permitted levels for such substance under the requirements of the Commonwealth or other governmental agencies having jurisdiction; or

T. Any other substance prohibited by the Treatment Agreement, Ordinance, Resolution, Rule or Regulation of the Township or the Authority hereafter enacted or adopted from time to time.

SECTION 11.03. Under no circumstances shall any Person discharge or cause or permit to be discharged into the Sewer System any of the substances listed in Section 11.02. above, without first securing written permission to do so from the Authority.

SECTION 11.04. Upon the promulgation of the Federal Categorical Pretreatment Standards for a particular industrial subcategory, the Federal Standard, if more stringent than limitations imposed under this Resolution for sources in that subcategory, shall immediately

supersede the limitations imposed under this Resolution. The Authority shall notify all affected Users of the applicable reporting requirements under 40 CFR, Section 403.12.

SECTION 11.05. No User shall ever increase the use of process water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment or pretreatment to achieve compliance with the limitations contained in the Federal Categorical Pretreatment Standards, or in any other pollutant - specific limitation developed by the Authority or the Commonwealth - (Comment: Dilution may be an acceptable means of complying with some of the prohibitions set forth in Section 11.02., e.g. the pH prohibition. Such practices must receive prior written approval from the Authority.)

SECTION 11.06. Whenever a Person is authorized by the Authority and the appropriate governmental agencies to discharge any polluted water, Domestic Sanitary Sewage or Industrial Waste containing any of the substances or possessing any of the characteristics referred to in Section 11.02., such discharge shall be subject to the continuing approval, inspection and review of the Authority. If, in the opinion of the Authority, such discharges are causing or will cause damage to the WWTF or the Sewer System, or may cause the Authority to violate the Treatment Agreement, the Authority shall order the Person causing such discharge to cease doing so forthwith, or to take other appropriate action, including exercising the remedies provided in the Connection Ordinance, to eliminate the harmful discharge.

SECTION 11.07. Nothing contained herein shall be construed as prohibiting any special agreement or arrangement between the Authority and the Owner of an Improved Property allowing Industrial Wastes of unusual strength or character to be admitted into the Sewer System.

SECTION 11.08. Where necessary or appropriate, in the opinion of the Authority, the Owner of an Improved Property shall provide, at the sole expense of the Owner, suitable pretreatment facilities acceptable to the Authority.

Plans, specifications and any other pertinent information relating to proposed facilities for preliminary treatment and handling of Industrial Wastes shall be submitted for approval of the Authority. No construction of any such facility shall commence until approval has been obtained, in writing, from the Authority, and until approval has been obtained from any and all regulatory bodies having jurisdiction.

Such facilities for preliminary treatment and handling of Industrial Wastes shall be continuously maintained, at the sole expense of the Owner, in good operating condition satisfactory to the Authority. The Authority shall have access to such facilities at reasonable times for purposes of inspection and sampling.

ARTICLE XII

ADMISSION OF INDUSTRIAL WASTES INTO THE SEWER SYSTEM

SECTION 12.01. No Person shall discharge or cause to be discharged into the Sewer System and Industrial Wastes without prior Application for and receipt of a written permit from the Authority.

SECTION 12.02. Any Person desiring to make or use a Connection through which Industrial Wastes shall be discharged into the Sewer System shall file with the Authority a completed "Industrial Wastes Questionnaire", furnished by the Authority, which shall supply pertinent data, including estimated quantity of flow, characteristics and constituents of the proposed discharge. The cost of obtaining all such data shall be borne by the Person desiring to make or use the Connection to the Sewer System.

SECTION 12.03.

A. Ten (10) days prior to the first day of January, April, July and October of each year, Major Contributor of Industrial Wastes shall file with the Authority a report on the quality and quantity of their discharge. The report forms shall be supplied by the Authority and shall be similar to EPA 7550-22, page IV-1.

B. Major Contributors shall consist of those whose total discharge exceeds 20,000 gallons per day, have in their waste a toxic pollutant or those which, in the judgment of the Authority, would have a significant impact on the Sewer System or the quality of its effluent.

SECTION 12.04.

A. When required by the Authority, the Owner of any Improved Property from which Industrial Wastes are discharged shall install, at his expense, a suitable control manhole,

together with such necessary Meters and other appurtenances, to facilitate observation, sampling and measurement of the waste flow by the Authority.

B. All measurements, tests, and analysis of the characteristics of water and wastes to which reference is made herein shall be determined in accordance with the latest edition of “Standard Methods for Examination of Water and Wastewater”, published by the American Public Health Association, Inc. and shall be determined by or under the direct supervision of a “qualified analyst” at the control manhole provided, or upon suitable samples taken at such control manhole. In the event that no special manhole had been required, the control manhole shall be considered to be the nearest downstream manhole in the Sewer System to the point at which the Industrial Waste is discharged into the Sewer System. Sampling shall be carried out by customarily accepted methods to reflect the effect of constituents upon the Sewer System and to determine the existence of hazards to life, limb, and property. (The particular analyses involved will determine whether a twenty-four (24) hour composite of all outfalls of a premises is appropriate or whether a grab sample or samples must be taken).

SECTION 12.05. Any Industrial Establishment discharging Domestic Sanitary Sewage and/or Industrial Wastes into the Sewer System and contemplating a change in the method of operation which will alter the characteristics and/or volume of such wastes being discharged shall notify the Authority, in writing, at least thirty (30) days prior to institution of such change.

SECTION 12.06. Grease, oil and sand interceptors shall be provided by the Owner of any Industrial, Commercial or Institutional Establishment, at his or its sole cost, when required by the Authority, for the proper handling of liquid wastes containing excessive grease, inflammable wastes, sand or other harmful substances. All interceptors shall be of a type and capacity

approved by the Authority and constructed or installed at a satisfactory location in accordance with plans approved by the Authority prior to installation or commencement of construction.

SECTION 12.07. The use of mechanical garbage grinders in an Industrial Establishment or a Commercial Establishment shall not be permitted without prior approval from the Authority.

SECTION 12.08. The Authority may require Industrial Establishments having large variations in rates of waste discharge to install suitable regulating devices for equalizing waste flows to the Sewer System.

ARTICLE XIII

WATER METERS

SECTION 13.01. Water Meter Installation - The Authority may require non-residential Users to install at the User's expense water Meters to monitor the User's use of water in order to determine the User's actual sewage use. If the water Meter readings indicate that the User's Sewer use is greater than what it is being billed for pursuant to Section 9.03, then the Authority shall bill the User for its use based on actual use subject to the one (1) EDU minimum charge. This provision shall apply to current and future Users.

SECTION 13.02. The Owner of the non-residential property will provide, free of charge and expense to the Authority, a location for installation of a water Meter. Generally, this location is to be a readily accessible spot inside the Building near the entrance of the Service Line. The Owner will also provide an exterior location for the remote readout portion of the water Meter.

The Authority's Inspector shall signify his approval of the water Meter Connection by endorsing his name and the date of approval on the Meter information sheet turned into the Authority.

The Owner shall install isolation ball valves on both sides of the water Meter and a dual check backflow preventer on the outlet side of the Meter in case of a faulty foot valve in a well allowing back flow of water.

The Authority by its duly authorized representatives and employees, bearing proper credentials and identification, shall be permitted to enter upon the Owners' property for the purpose of inspection, observation, testing and retesting of the water Meter and Connection; at all reasonable hours.

The Authority reserves the sole right to remove a water Meter from its setting. Should it be necessary to remove a water Meter from its setting, notice shall immediately be given to the Authority.

SECTION 13.03. All water Meters are the property of the Authority and will be maintained and repaired by the Authority. The Authority will assume the cost associated with ordinary wear and tear. However, should damage to the water Meter occur due to freezing, hot water, carelessness or negligence by the Owner, the repairs shall be at the expense of the Owner.

The Owner shall notify the Authority of any damage to or any cessation in registration of the water Meter, as it comes to his/her knowledge or the knowledge of any User of his/her Connection.

No seal placed on the water Meter by the Authority shall be tampered with or defaced. It shall not be broken except upon authorization from the Authority. Where the seal is broken, the Authority reserves the right to remove the Meter for test at the expense of the Owner. It is a violation of Clause 6, Section 34, Act of 1974 of the Laws of Pennsylvania to break or deface the seal of, or otherwise damage the water Meter.

A bill for repairs or replacement of a damaged water Meter will be submitted to the Owner and shall be due within thirty (30) days after the billing date.

SECTION 13.04. Water Meter Reading and Billing - All water Meters shall be read monthly, by the Authority, insofar as possible. The quantities recorded by the water Meter shall be considered conclusive on both the Owner and the Authority, except when the water Meter has been found to register incorrectly or has ceased to register.

In this event, the Authority will estimate the bill; taking into consideration average past registrations, or by another fair or reasonable method. The finding thus determined shall be final and binding upon both parties.

In any instance where a Building has not had a water Meter installed, the Authority will estimate the bill; taking into consideration usage by other Buildings having similar characteristics, or by another fair or reasonable method. The finding of the Authority in this regard shall be conclusive upon both parties. However, if the absence of a water Meter is a result of refusal or failure of the Owner of the Building to have a water Meter installed, the bill for service during such period shall be established by the Authority at an amount equal to the maximum bill for any Building of similar characteristics. The determination of the Authority in this regard shall be conclusive upon both parties.

SECTION 13.05. Water Meter Testing - Any complaints by the customer concerning water Meter accuracy will require a \$75.00 bond to be posted with the Authority. If upon testing the water Meter is found defective the Authority will reimburse the customer the \$75.00 paid and will credit the customer the difference in billing costs between the old and new Meter for the previous three (3) month period. If the Meter is found to be accurate by AWWA standards, the customer will forfeit the \$75.00 bond to the Authority for the cost of the testing.

ARTICLE XIV

MISCELLANEOUS

SECTION 14.01. The Authority shall have the right of access, at all reasonable times, to any part of any Improved Property as necessary for purposes of inspection, observation, measurement, sampling and testing and for performance of other functions relating to service rendered by the Authority.

SECTION 14.02. The Owner of any Improved Property, upon direction of the Authority, shall acquire, install, and maintain at such Owner's cost and expense, a grinder pump or similar apparatus satisfactory to the Authority in the manner and at the location directed by the Authority. Such grinder pump shall be installed at the time such Improved Property is connected to the Sewer System and shall be subject to inspection and approval together with the remainder of the Building Sewer.

SECTION 14.03. The Owner of any Improved Property shall be held liable for all acts of Tenants or other occupants of such Improved Property, as may be permitted by law, insofar as such acts shall be governed by the provisions of this Resolution.

SECTION 14.04. The Authority shall adopt, from time to time, such additional rules and regulations as it shall deem necessary and proper in Connection with the use and operation of the Sewer System, which rules and regulations shall be, shall become and shall be construed as part of this Resolution.

SECTION 14.05. In the event any provision, section, sentence, clause or part of this Resolution shall be held by any Court or Administrative tribunal of competent jurisdiction to be invalid, such invalidity shall not affect or impair any remaining provisions, section, sentence, clause

or part of this Resolution, it being the intent of the Authority that such remainder shall be and shall remaining in full force and effect.

SECTION 14.06. All resolutions or parts of resolutions of this Authority which are inconsistent herewith expressly shall be and are repealed.

SECTION 14.07. The Resolution shall become effective immediately.

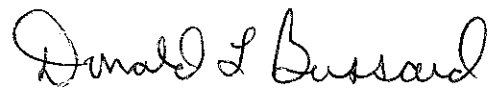
SECTION 14.08. It is declared that enactment of this Resolution is necessary for the protection, benefit and preservation of health, safety and welfare of the inhabitants of the Township.

DULY ADOPTED, this 15 day of Aug, 2005, by the Board of the West Providence Township Municipal Authority, in lawful session duly assembled.

WEST PROVIDENCE TOWNSHIP
MUNICIPAL Authority

By: 
Chairman

ATTEST:


Secretary

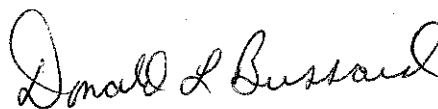
(SEAL)

CERTIFICATE

I, the undersigned, Secretary of the West Providence Township Municipal Authority (the "Authority"), certify: that the foregoing is a true and correct copy of a Resolution which duly was adopted by affirmative vote of a majority of all members of the Board of the Authority at a meeting of said Board duly convened and held according to law on **AUGUST 15, 2005**, at which meeting a quorum was present; said Resolution duly has been recorded in the minutes of the Authority; and that said Resolution is in full force and effect, without amendment, alteration or repeal, as of the date of this Certificate.

I further certify that the Board of the Authority met the advance notice requirements of the Sunshine Act No. 1986-84 of the General Assembly of the Commonwealth of Pennsylvania, by advertising said meeting and by posting prominently a notice of said meeting at the principal office of the Authority or at the public Building in which said meeting was held, all in accordance with such Act.

IN WITNESS WHEREOF, I set my hand and affix the official seal of the Authority, this 15th day of August, 2005.



Secretary

(SEAL)

ARTICLE XV

Section 15.01. Lateral Testing by Authority. The Authority and its employees and are authorized to initiate Lateral testing or other testing or inspection for purposes of discovering or locating the inflow of prohibited sources of water to the Sewer System. The Authority is authorized to retain the services of a qualified contractor to perform the Lateral testing or other testing or inspection. Persons owning Improved Property connected to the Sewer System are required to grant access to the Authority and its employees and/or the Lateral testing contractor and to permit Lateral testing or other testing or inspection. No person shall refuse access to property for purposes of lateral testing or other testing or inspection.

Section 15.02 Testing by Owner. The Owner of every Improved Property connected to the Sewer System shall hydrostatically or pneumatically test, in accordance with the standards and procedures set forth herein, all buried and under-slab portions of each Lateral from the Point of Connection to the plumbing fixtures within the structure. The testing required by this Section must be completed on or before May 15, 2013.

Section 15.03 Installation of Observation Port and Clean Out. Each Owner of Improved Property shall install (if not already present) an observation port and cleanout as shown on the specifications attached hereto as Exhibit "A" prior to conducting the testing required by this Article XV.

Section 15.04 Testing Standards. An Improved Property shall be deemed to have passed the testing required by Section 15.02 when it has been tested as required herein, the test has been witnessed by an Authority representative, and it has been properly documented on an Inspection Record that the Improved Property is in compliance with the following standards:

- A. Testing by water wherein all buried and under-slab piping (both inside and outside the foundation) is filled with water and a temporary water column is introduced to a minimum of ten (10) feet of head to the highest portion of the buried and under-slab piping, with no water loss observed during a fifteen (15) minute period; and
- B. Testing by air wherein all buried and under-slab piping is pressurized with air to a minimum of five pounds per square inch (5 psi) and thereafter held for a period of five (5) minutes with no noticeable pressure drop.

Section 15.05 Required Repairs and Remediation. In the event the testing reveals that the Improved Property does not meet the standards set forth in Section 15.04, or in the event the Authority representative witnessing the test identifies any illegal connections, the illegal connections shall be eliminated and/or Lateral be repaired, replaced, or rehabilitated at the Owner's expense, and the Improved Property shall be retested within sixty (60) days. If the condition does not create a health hazard, and the original test was conducted on or before May 15, 2013, the Authority, upon request of the Owner, may extend the deadline for the elimination of illegal connections and completion of repairs, replacements and rehabilitation until August 15, 2014.

Section 15.06 Inspection Fees and Procedures. The Owner at its sole cost, shall be responsible for insuring that the observation port and cleanout required by Section 15.03 above are installed prior to scheduling a test and shall have the testing contractor present and prepared to begin the test at the time scheduled. Requests for inspection or witnessing of the testing must be made a minimum of twenty four (24) hours in advance of

the requested time. The Authority will allow a maximum of one (1) hour per test and the witnessing shall be for the actual test itself, not for preliminary hook up or other work which precedes the actual test. (NOTE: It is the intent of this Regulation that the Authority Inspector is scheduled only to witness a passing Air/Water Test.) The Authority representative shall make the sole determination as to when the actual testing period commences and thereafter when the duration of the test has expired. Upon successful completion of the testing required by this Article XV, the Authority representative shall signify his/her approval by affixing his/her signature and dating the completed "Inspection Record". The Owner shall pay an inspection fee to the Authority of twenty five dollars (\$25.00) for each and every test and/or retest. The Authority will waive the inspection fee for the first test for each Improved Property provided that such test is conducted prior to May 15, 2013.

Section 15.07 Enforcement. Any violation of this Article XV of the Rules and Regulations is hereby declared to be a summary offense in accordance with §5607(d)(17) of the Municipal Authorities Act and shall be punishable for a fine of up to Three Hundred (\$300.00) Dollars for each offense. Each and every day that a violation of the Regulation exists shall be a separate and distinct offense. The requirements of this Regulation may also be enforced by the Authority in an action in Equity brought in the Court of Common Pleas of Bedford County, Pennsylvania.

Section 15.07 Definitions. Capitalized terms not otherwise defined herein shall have the meanings set forth in Article I of the Rules and Regulations.

CERTIFICATE

I, the undersigned, Secretary of the West Providence Township Municipal Authority (the "Authority"), certify: that the foregoing is a true and correct copy of a Resolution which duly was adopted by affirmative vote of a majority of all members of the Board of the Authority at a meeting of said Board duly convened and held according to law on June 18th, 2012, at which meeting a quorum was present; said Resolution duly has been recorded in the minutes of the Authority; and that said Resolution is in full force and effect, without amendment, alteration or repeal, as of the date of this Certificate.

I further certify that the Board of the Authority met the advance notice requirements of the Sunshine Act No. 1986-84 of the General Assembly of the Commonwealth of Pennsylvania, by advertising said meeting and by posting prominently a notice of said meeting at the principal office of the Authority or at the public Building in which said meeting was held, all in accordance with such Act.

IN WITNESS WHEREOF, I set my hand and affix the official seal of the Authority, this 18th day of June, 2012.

Randy L. Bush
Secretary

(SEAL)

BACKFILL AND BEDDING AGGREGATE

PART 1 GENERAL

1.01 SUBMITTALS

- A. Delivery tickets.

PART 2 PRODUCTS

2.01 BEDDING AGGREGATE - PENNDOT 2B

- A. Comply with requirements of Pennsylvania Department of Transportation Publication 408 Specifications.
- B. Natural lime stone (and/ or sand stone if permitted by project engineer) composed of hard, tough, durable, uncoated particles cleaned by washing, free from harmful amounts of clay, silt, vegetation, or other substances determined to be deleterious.

2.02 BACKFILL AGGREGATE - PENNDOT 2A

- A. Comply with requirements of Pennsylvania Department of Transportation Publication 408 Specifications.
- B. Natural lime stone (and/ or sand stone if permitted by project engineer) composed of hard, tough, durable, uncoated particles, free from harmful amounts of clay, silt, vegetation, or other substance determined to be deleterious.

END OF SECTION

UTILITY EXCAVATION, BEDDING, BACKFILL, AND COMPACTION

PART 1 GENERAL

1.01 DESCRIPTION

- A. This section includes, but is not limited to:
 - 1. Cutting of paved surfaces.
 - 2. Trench excavation and backfill.
 - 3. Pipe bedding.
 - 4. Excavation and backfill for manholes and inlets.

1.02 SUBMITTALS

- A. Certificates: Delivery tickets.
- B. Compaction equipment list with lift thickness limitations.

1.03 JOB CONDITIONS

- A. Provide dewatering and drainage as required to accomplish work.
 - 1. Conduct discharge from any trench dewatering pumps to natural drainage channels or storm sewers. Discharge must be in accordance with proper erosion and sedimentation control measures.
- B. Comply with applicable codes and permits.
- C. All excavation is unclassified and includes excavation and removal of all materials encountered of whatever nature.
- D. Maintain and provide for wastewater lines, water lines, and utility lines encountered.
 - 1. Make temporary repair as soon as possible.
 - 2. Report damage to utility.
 - a. If utility elects to repair damaged line, cooperate with utility company.
 - b. If utility authorizes repair, repair damaged line and restore service in compliance with regulations of utility company.
 - 3. Responsible for all costs associated with repairing existing utilities damaged by operations.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Stone backfill material: PENNDOT No. 2RC aggregate.
- B. Pipe bedding materials: PENNDOT No. 2RC aggregate.
- C. Suitable backfill material:
 - 1. Material removed from trench excavation which is free of cinders, ashes, refuse, vegetable or organic material, boulders, rocks or stones 6" or larger.
 - 2. Material which can be placed in specific layers.
 - 3. Material that is not wet, saturated, or frozen.
 - a. Moisture content is within 3 percent of optimum moisture content determined by PTM NO. 106, Method B.
 - 4. Material that, in the opinion of the owner, is acceptable.

PART 3 EXECUTION

3.01 EXECUTION

- A. Topsoil
 - 1. Topsoil is to be removed and stockpiled on the property from which it was removed in advance of the excavation work.
- B. Pavement removal:
 - 1. Pavement removal is part of the trench excavation.
 - 2. Dimensions of pavement removal is shown on the drawings.
 - 3. Saw cut pavement.
 - a. Straight lines parallel with centerline of trench. Cut offsets at right angles to the centerline of trench.
 - b. In state roadways saw cut to dimension required to facilitate excavation. Prior to restoring roadway saw cut one foot back from edge of trench and remove detached pavement.
- C. Excavate trench to depth and grade for pipe invert plus additional 3 inch depth for bedding material.
 - 1. Rock, hard shale, or unyielding material encountered in trench.
 - a. Excavate for full width of trench below proposed elevation of bottom of pipe for a depth of 3 inches in addition to depth specified for bedding material.
 - 2. Unstable material encountered in trench bottom.
 - a. Remove from under pipe for full width of trench to a depth of 3 inches into suitable material.
 - 3. Replace with suitable bedding material.
 - a. Compact to satisfactory density.
- D. Place excavated material in a manner that will not obstruct the work, sidewalks, driveways or other structures.
- E. Trench width:
 - 1. State roadways.
 - a. 48 inch and less outside pipe diameter:
 - 1. Outside diameter of pipe, measured at bell, plus 12 inches on each side of pipe.
 - b. Over 48 inch inside pipe diameter:
 - 1. Outside diameter of pipe, measured at bell, plus 15 inches on each of pipe.
 - 2. Other areas.
 - a. Maximum width equal to nominal size of pipe plus 16 inches.
 - 3. Shape trench walls vertical from trench bottom to minimum one foot above pipe.
- F. Support and maintain all underground and surface structures, drains, sewers, and other obstructions encountered during construction.
- G. Blasting for excavation permitted only after securing written approval from owner.
- H. Protect all trees, shrubs, fences, and other property and surface structures during construction unless their removal is shown on drawings or approved by owner.
 - 1. Cutting of trees roots or branches: As approved by owner.
- I. Support trench walls to comply with all codes.
- J. Maximum length of trench opened: 100 feet.
- K. Rock excavation: 20 feet in advance of pipe.

3.02 BEDDING

- A. Install required depth of bedding material.
- B. Provide holes for bell or couplings at each joint large enough for joint assembly so that pipe barrel will lie flat on trench bottom.

3.03 BACKFILL AND COMPACTION

- A. Install stone backfill material in 4 inch layer to 6 inches above pipe, hand tamp each layer.
- B. Backfill and compact remainder of trench as shown on drawings.
 - 1. Place material in uniform layers as indicated on drawings. Layer depths shown are maximum depths allowed when using compaction equipment as approved by PENNDOT Project Office Manual, Publication.
 - 2. If required compaction is not achieved, depth of layers shall be reduced.
- C. Maximum allowable height for backfill material to be dropped into trench when pipe covered with at least 12 inches of stone backfill: Five feet from top of existing backfill in trench.
- D. Compact backfill materials to percent of maximum dry weight density determined by PTM No. 106.
 - 1. State roadways - 100%.
 - 2. Borough and Township roadways, paved areas, driveways, and sidewalks - 100%.
 - 3. Stabilized areas - 90%.
 - 4. Other area - 85%.
- E. Compaction tests may be performed at owners and/or engineers option at a frequency not to exceed one per 200 feet of trench.
 - 1. Testing to be PENNDOT PTM No. 112 (sand cone method) or PENNDOT PTM No. 402 (Nuclear method), as determined by the engineer.
- F. Spread topsoil.

END OF SECTION

HIGHWAY BORING AND CASING

PART 1 GENERAL

1.01 DESCRIPTION

- A. Contractor shall furnish and install subsurface pipe crossing in highway right-of-way, including all boring, casing pipe, premanufactured mechanical seal, and related appurtenances.

1.02 QUALITY ASSURANCE

- A. Install subsurface pipe crossing in accordance with Section 01061, PENNDOT Chapter 459 Regulations; applicable provisions of PENNDOT Design Manual, Part 5, Section 12.40; and the Highway Occupancy Permit.

1.03 SUBMITTALS

- A. Boring, drilling or jacking method.
- B. Method of line and grade control.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Steel casing: Section 02618.
- B. Mechanical Seal: Section 07900.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install to line and grade as shown on drawings.
- B. Boring, drilling or jacking opening shall be on a horizontal plane.
- C. Method of boring, drilling or jacking shall include ample means to prevent loss of soil outside of or in front of the pipe and provide adequate provision to assure that no voids will be left outside the pipe during the work or after the work has been completed.
- D. Blasting within the limits of boring, drilling or jacking operation will not be allowed.
- E. Provide adequate control of elevation and direction of the pipe.
- F. Do not cause interruption to use of highway.
 - 1. Use of open trench method within the limits of boring, drilling or jacking will not be allowed.
- G. No opening for placing casing under PENNDOT highway shall be made closer than three feet to the edge of the roadway, unless the Highway Occupancy Permit authorizes a lesser clearance.
- H. Where practicable, crossings should be made at right angles, but in no case less than a 45 degree angle.
- I. Block both ends of casing with a mechanical seal.

END OF SECTION

WASTEWATER LATERAL BORING

PART 1 GENERAL

1.01 DESCRIPTION

- A. Install a wastewater lateral crossing under a highway right-of-way, including boring, casing pipe, lateral pipe and related appurtenances.

1.02 QUALITY ASSURANCE

- A. Comply with applicable requirements of Pennsylvania Department of Transportation Regulations, 67 Pennsylvania Code, Chapter 459; applicable provisions of Pennsylvania Department of Transportation Design Manual, Part 5, Section 12.40 and Highway Occupancy Permit.

1.03 SUBMITTALS

- A. Proposed boring method.
- B. Proposed method of line and grade control.
- C. Manufacturer's literature, and installation instructions:
 - 1. Polyethylene pipe.
 - 2. Heat fusion connection.
 - 3. Pipe adapters.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Casing pipe:
 - 1. High density polyethylene plastic with uniform exterior diameter for the length of the boring.
 - 2. ASTM D3035.
 - 3. Size: 8".
- B. Pipe adapters: HPDE to PVC, FERNCO or equal.

PART 3 EXECUTION

3.01 LOCATION

- A. As shown on drawings.

3.02 INSTALLATION

- A. Install to line and grade as shown on drawings.
- B. Minimum slope 1/4" per foot.
- C. Do not cause interruption to traffic.
 - 1. Use of open trench method within the limits of boring will not be allowed.
- D. No opening for placing line under PENNDOT highway shall be made closer than three feet to the edge of the roadway, unless the Highway Occupancy Permit authorizes a lesser clearance.
- E. Where practicable, cross at right angles, but in no case less than 45 degrees.
- F. Insert high density polyethylene pipe into boring.
 - 1. Couple to lateral with flexible adapter.

END OF SECTION

02226-1

SECTION 02290

CLAY DIKE

PART 1 GENERAL

1.01 DESCRIPTION

- A. Install clay dike where shown on drawings.

PART 2 PRODUCTS

2.01 CLAY DIKE

- A. Clay shall contain less than 15% (by volume) stone.
 - 1. Stone to be not larger than two inch diameter.
- B. 4" rolled corrugated unperforated drain pipe.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Clay dike shall extend from the undisturbed ground at bottom of the trench to one foot below finished grade, and 12" into undisturbed ground on the trench sides for a ten foot length of trench.
- B. Place the clay in four inch layers and compact by mechanical tamper to 95% maximum dry weight density determined by PTM No. 106.
- C. Drain pipe shall extend from the front of the clay dike to drainage way.
- D. Engineer's Representative shall be present when clay dikes are constructed.

END OF SECTION

PAVING RESTORATION

PART 1 GENERAL

1.01 QUALITY ASSURANCE

- A. Requirements of Pennsylvania Department of Transportation:
 - 1. Operation within state highway right-of-way: Conform to Pennsylvania Department of Transportation Regulations, 67 Pennsylvania Code, Chapter 459.

1.02 JOB CONDITIONS

- A. Existing conditions: Do not place stone on soft, muddy, or frozen areas, nor until all irregularities in roadway or shoulder has been corrected.

1.03 SUBMITTALS

- A. Certificates: Delivery tickets.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Coarse aggregate for shoulders and subbase: PENNDOT No. 2A aggregate.
- B. Bituminous concrete base course: PENNDOT Publication 408.
- C. Bituminous binder course ID-2: PENNDOT Publication 408.
- D. Bituminous wearing course ID-2: PENNDOT Publication 408.
- E. Joint sealer: Asphalt cement, Class AC-20.
- F. Concrete:
 - 1. State highway repair: PENNDOT Class H.E.S. 3750PSI.
 - 2. Other locations: PENNDOT Class A, 3300PSI.

PART 3 EXECUTION

3.01 PREPARATION

- A. Saw cut openings in pavement along neat lines.
- B. Paint exposed edges with joint sealer before paving is placed.
- C. Surface seal final joints with joint sealer.

3.02 STATE ROADWAYS

- A. Install as required by PENNDOT Regulations, 67 Pennsylvania Code Chapter 459.
- B. Place in accordance with PENNDOT Publication 408 Specifications.
- C. Restore pavement in accordance with Section 459.8(h) PENNDOT Chapter 459 Regulations.
- D. Temporary pavement must be placed immediately after trench is backfilled and before the contractor leaves the site at the end of the day.

3.03 BOROUGH AND TOWNSHIP ROADWAYS

- A. Temporary restoration:
 - 1. Place and compact PENNDOT No. 2RC aggregate on backfilled area level with roadway surface.
 - a. Maintain aggregate level with surface for 60 to 180 days before final repair is made.

- B. Permanent paving repair:
 - 1. Remove temporary restoration measures.
 - 2. Materials and depths: As shown on drawings.
 - 3. Place in accordance with PENNDOT Publication 408 Specifications.

3.04 DRIVEWAYS AND PAVED AREAS

- A. Bituminous surface:
 - 1. Restore surface in kind or with minimum 2 ½ BCBC and 2 ½" BCBC and 1 ½" ID-2 wearing course over compacted PENNDOT No. 2RC aggregate.
 - 2. Place in accordance with PENNDOT Publication 408 Specifications.
- B. Concrete surface:
 - 1. Restore surface in kind or with 8" concrete reinforced with 6x6x10 wire mesh over compacted PENNDOT No. 2RC aggregate.
- C. Brick surface:
 - 1. Restore with like bricks on a 4" wet sand bed.

3.05 SIDEWALKS AND CURBS

- A. Reconstruct curbs and sidewalks a minimum of one foot on each side of damaged area. Install ¾" expansion joint at end of days work or where new sidewalk abuts existing sidewalk.
- B. Restore concrete surfaces with 4" concrete on bed of compacted PENNDOT No. 2A aggregate.
- C. Restore bituminous and brick surfaces to original thickness and/or pattern.
- D. Seal joints as per PENNDOT Pub 408, Section 676.

3.06 UNPAVED AREAS

- A. Restore all disturbed properties as nearly as practical to their original condition.

END OF SECTION

PRECAST REINFORCED CONCRETE MANHOLE

PART 1 GENERAL

1.01 SUBMITTALS

- A. Manufacturer's product data and installation instructions.
- B. Shop drawings.
 - 1. Precast reinforced concrete manhole.
 - 2. Grade rings.
 - 3. Flexible gasket-type sealant.
 - 4. Manhole frame and cover.
 - 5. Manhole steps.
 - 6. Manhole pipe gasket.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Precast reinforced concrete manhole: ASTM C478.
 - 1. Manhole opening: 27 inch diameter.
 - 2. Inside diameter: 48 inch standard.
 - 3. Flanged base section.
 - 4. Perform openings in manhole base to accommodate service pipes at time of manufacture. Pipe gaskets to be cast in place.
 - 5. Provide a bituminous, waterproof, sunlight resistant, coating on exterior of manhole, minimum dry film thickness 8 mils.
 - 6. Provide eccentric top section or flat top as required.
 - 7. Provide grade rings as required.
 - 8. Acceptable for use in PENNDOT right-of-way.
- B. Manhole frame and cover.
 - 1. Cast iron, ASTM A48, class 30.
 - 2. Standard
 - a. Frame: Pattern number 109 as manufactured by Allegheny Foundry Co. or equal.
 - b. Cover: Pattern number 110 as manufactured by Allegheny Foundry Co. or equal.
 - 3. Watertight
 - a. Frame: Pattern number 109W as manufactured by Allegheny Foundry Co. or equal.
 - b. Cover: Pattern number 110 as manufactured by Allegheny Foundry Co. or equal.
 - c. Seal: Pattern number 300 as manufactured by Allegheny Foundry Co. or equal.
 - 4. Acceptable for use in PENNDOT right-of-way.
- C. Manhole steps:
 - 1. Polypropylene plastic manhole step, type PS4 as manufactured by M.A. Industries, Inc., or equal.
 - 2. 9-1/2" long x 12" wide.
 - 3. Conform to ASTM C478 Section 11.
 - 4. Steps grouted 3" to 4" into manhole wall during manufacture.

- D. Manhole pipe gasket:
 - 1. Dura-Seal III manhole gasket as manufactured by Dura Tech Inc., or equal.
- E. RUB' R-NEK butyl rubber flexible gasket type sealant or equal.
 - 1. Conform to Federal Specification SS-S-210A.
- F. Ready mixed cement concrete for channel shall be 3,300 psi, equivalent to Pennsylvania Department of Transportation Class A cement concrete.
- G. Grout shall be ASTM C270, Type M.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Construct manholes as sections of service between manholes are completed.
- B. Set manhole base on compacted aggregate at depth required to achieve the required pipe inverts.
- C. Join manhole sections, grade rings, and frame with flexible gasket-type sealant.
- D. Set manhole frame to grade using grade rings.
 - 1. Maximum height of combined grade rings is 12 inches.
 - 2. Use flat top section when manhole depth is 5'-0" or less or as shown on drawings.
- E. If field cutting of openings in manhole is necessary, install flexible pipe seal gasket, grout in place, and apply waterproofing.
- F. Concrete flow channels must be cast or poured in place.
- G. The castings of manholes located on slopes are to be set to approximately match the slope.
- H. All incoming and outgoing piping shall have a bell end or approved flexible coupling 2'-0" from outside wall of manhole.
- I. In pavement, shoulder or lawn areas, or within state right-of-way, manholes shall be installed so elevation at top of manhole cover is a flush with finished pavement or grade elevation.
- J. Top of manhole covers to be set six inches above grade with frame exposed in wooded areas or fields.
- K. Seal all lift holes in manhole walls with non-shrink grout.
- L. Install manhole pipe gasket in accordance with manufacturer's instructions.
- M. Pipe shall extend inside manhole a maximum of 2 inches.
- N. Invert channels shall be smooth, semi-circular in shape conforming to inside of adjacent sewer section where a change in direction of flow occurs, a smooth curve of as large a radius as size of manhole will permit shall be constructed. Special care shall be taken to keep concrete from running down in pipes when flow lines are poured.
- O. Fasten manhole frame to flat top or cone section and all grade rings of manhole with two 3/4 inch high strength low alloy steel all threads.

END OF SECTION

SECTION 02602

CLEANOUT

PART 1 GENERAL

1.01 SUBMITTALS

- A. Manufacturer's literature, illustrations, and installation instructions.
- B. Shop drawings.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Traffic load areas.
 - 1. Cast iron frame and cover.
 - 2. Concrete - Pennsylvania Department of Transportation Class A, 3,300 psi.
 - 3. PVC SDR 35 pipe and fittings: Section 02731.

PART 3 EXECUTION

3.01 LOCATION

- A. As shown on drawings.

3.02 INSTALLATION

- A. Set to grade indicated on drawings.
- B. 6" minimum concrete surrounding vertical section of pipe.
- C. Cast iron frame and cover; bed frame in cement mortar.

END OF SECTION

PRESSURE CLEANOUT ASSEMBLY

PART 1 GENERAL

1.01 SUBMITTALS

- A. Manufacturer's literature, illustrations and installation instructions.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Piping - Section 02735.
- B. Fittings - Section 02736.
- C. Plug Valve - Section 15105.
- D. Cast iron frame and cover - Neenah Castings or equal.

PART 3 EXECUTION

3.01 LOCATION

- A. As shown on drawings.

3.02 INSTALLATION

- A. See to grade as indicated on drawings.

END OF SECTION

SECTION 02618

STEEL CASING

PART 1 GENERAL

1.01 SUBMITTALS

- A. Manufacturer's affidavit of compliance for casing pipe.

1.02 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Handle casing pipe with proper equipment and in a careful manner to prevent distortion or damage.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Steel casing:
 - 1. Steel pipe: AWWA C 200-80, ASTM A53.
 - 2. Defects:
 - a. Finished pipe shall be free from injurious defects.
 - b. Defects in seamless pipe or in the parent metal of welded pipe shall be considered injurious when the depth of the defect is greater than 12.5 percent of the nominal wall thickness.
 - c. All cracks, sweats, and leaks in welds shall be considered injurious.
 - 3. Repair defects in accordance with section 1.5.2 of AWWA C200-80.
 - 4. Minimum yield strength: 35,000 psi.
 - 5. Size, length and thickness as shown on drawings.
 - 6. Bolt heads and other metal to be coated with bitumastic material.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install casing pipe in accordance with AWWA No. M11.
 - 1. Weld all casing joints.
- B. Install to line and grade and location as shown on drawings.
- C. Provide skids on carrier pipe to prevent pipe from resting on its joints.
- D. Block both ends of casing with a mechanical seal to prevent the entrance of foreign material.

END OF SECTION

SECTION 02631

COUPLINGS AND ADAPTERS

PART 1 GENERAL

1.01 SUBMITTALS

- A. Manufacturer's product data and installation instructions.

PART 2 PRODUCTS

2.01 COUPLINGS

- A. Manufactured by Dresser Industries, Inc. or equal.
- B. Sizes as shown on drawings.
- C. Style:
 - 1. Joining steel pipe size outside diameter pipe (IPS OD) to steel pipe size outside diameter pipe: Dresser Style 38 couplings for steel pipe.
 - 2. Joining cast iron pipe size outside diameter pipe (CIPS OD) to cast iron pipe size outside diameter pipe: Dresser style 153 cast couplings for cast iron pipe.
 - 3. Joining steel pipe size outside diameter pipe to cast iron pipe size outside diameter pipe; making actual reductions in pipe size; and when changing the class of pipe: Dresser Style 62 reducing coupling.
- D. Gasketed, sleeve-type, with diameter to properly fit pipe.
- E. Coupling shall consist of:
 - 1. Steel or cast iron middle ring or thickness and length specified.
 - 2. One or two steel or cast iron followers as required.
 - 3. Two rubber-compounded wedge section gaskets and sufficient track-head steel bolts to properly compress gaskets.
 - a. Gasket: Dresser plain grade 27 gasket.

2.02 ADAPTERS

- A. As manufactured by Dresser Industries, Inc. or equal.
- B. Size: As shown on drawings.
- C. Style: Dresser Style 127 flanged adapters for joining plain-end pipe to flanged valves, pumps, and fittings.
- D. Gasketed, sleeve-type, with diameter to properly fit pipe.
- E. Adapter shall consist of cast iron adapter of thickness and length specified with rubber-compounded wedge section gaskets and sufficient track-head steel bolts to properly compress gaskets.
 - 1. Gasket: Dresser plain grade 27 gasket.
 - 2. Flange: Class 123, ANSI B16.1.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's installation instructions.
- B. Assemble couplings or adapters to insure permanently tight joints under all reasonable conditions of expansion, contraction, shifting and settlement.
- C. Provide tie rod axial restraint for all flanged adapter application.
- D. Contractor shall verify size of all couplings or adapters before ordering.

END OF SECTION

THRUST RESTRAINTS

PART 1 GENERAL

1.01 DESCRIPTION

- A. Install thrust restraints for the purpose of resisting axial thrusts. Size restraints in accordance with page 3 of this section.

PART 2 PRODUCTS

2.01 CONCRETE

- A. High early strength concrete: 3750 psi after 28 days.

2.02 TIE RODS

- A. High strength low alloy steel.
- B. 3/4 inch.
- C. Threads: ANSI B1.2.
- D. Gray iron nuts, ANSI 21.11.
- E. Asphaltum varnish or bituminous coating in field.

2.03 DUC-LUGS

- A. Stellar Corporation figure S-14 duc-lugs for four inch to 16 inch mechanical joint pipe, valves, fire hydrants and fittings.

PART 3 EXECUTION

3.01 LOCATE THRUST RESTRAINTS AT THE FOLLOWING

- A. Change in pipeline direction: Tees, wyes, bends, and crosses.
- B. Change in pipeline size: Reducers.
- C. Dead end.
- D. Valves.
- E. Hydrants.
- F. Flanged adapters.

3.02 INSTALLATION

- A. Fire hydrant assemblies: Brace bowl of hydrant against a sufficient area of unexcavated earth at the end of the trench with concrete backing or tie to the pipe with metal tie rods.
- B. Fittings:
 - 1. Provide with reaction backing, or suitably restrain by attaching metal rods.
 - 2. Place concrete between solid ground and fitting to be anchored.
 - 3. Minimum area of bearing against undisturbed earth: As shown on page 02665-3.
 - 4. Minimum area of bearing on the fitting: Diameter of pipe times 8 inches.
 - 5. Locate concrete so as to contain the resultant thrust force and so that the pipe and fitting joints will be accessible for repair.

PIPE INSIDE DIA. (IN)	AREA (SQ IN)	FORCES (Pounds)					BEARING AREA OF BLOCK (Square Feet)				
		TOTAL THRUST FORCE	RESULTANT THRUST FORCE				A	B	C	D	E
			90E	45E	222E	113E	PLUG TEE VALVE	90E	45E	222E	113E
2	3	675	954	517	263	150	-	-	-	-	-
3	7	1,580	2,230	1,210	614	350	-	-	-	-	-
4	13	2,930	4,140	2,240	1,140	650	0.7	1.0	0.6	-	-
6	28	6,300	8,990	4,820	2,460	1,400	1.6	2.2	1.2	0.6	-
8	50	11,300	15,900	8,620	4,390	2,500	2.8	4.0	2.2	1.1	0.6
10	79	17,800	25,100	13,600	6,930	3,950	4.4	6.3	3.4	1.7	1.0
12	113	25,400	36,000	19,500	9,920	5,650	6.4	9.0	4.9	2.5	1.4
14	154	34,600	49,000	26,500	13,500	7,700	8.6	12.2	6.6	3.4	1.9
16	201	45,200	64,000	34,600	17,600	10,000	11.3	16.0	8.6	4.4	2.5

* See Construction Details

If Concrete Thrust Blocks are used for thrust restraint, all valves, tees, wyes, crosses, plugs, reducers and beds of 10E or more shall be blocked against firm undisturbed earth.

Earth pressure in the above table is estimated to be 2 tons per square foot. Area of the block must be increased proportionally if the earth encountered will not withstand this pressure.

This table is based on 225 psi test pressure.

Reducer Thrust Force and Block Area Determined as follows: i.e. 16 x 10 Reducer Thrust Force = 45,200 - 17,800 = 27,400 Pounds; Block Area 11.3-4.4 = 6.9 Square Feet (A_L-A_S)

Allowable Thrust Resistance Per 3/4" tie Rod = 8,800 Pounds. Minimum 2 Tie Rods Per Side of Fitting.

GRAVITY WASTEWATER PIPE - PVC

PART 1 GENERAL

1.01 SUBMITTALS

- A. Manufacturer's product data and installation instructions.

1.02 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Exercise care in transporting and handling to avoid damage.
- B. Store materials on site in enclosures or under protective coverings.
- C. Materials are not to be stored directly on the ground.
- D. Only stack pipe to the height recommended by the manufacturer.
- E. Stack bells in opposing directions on alternate rows so the bells do not rest on each other.
- F. Keep interior of pipe free from dirt or foreign material.
- G. Store gaskets for push on joints in a cool location and out of direct sunlight.
- H. Do not store materials in State road Right-of-Way or in clear zones as per PennDOT Publication 203.

PART 2 PRODUCTS

2.01 GRAVITY WASTEWATER PIPE - PVC

- A. PVC gravity wastewater pipe and fittings:
 - 1. ASTM D3034, Type PSM PVC wastewater pipe and fittings, SDR 35.
 - 2. Pipe: PVC plastic having a cell classification of 12454-B or 12454-C or 13364-B (with a minimum tensile modulus of 500,000 psi), ASTM D1784.
 - 3. Push-on joint.
 - 4. Laying length: 13 feet.
- B. Piping shall be identified with the following:
 - 1. Manufacturer's name or trademark.
 - 2. Nominal size.
 - 3. PVC cell classification.
 - 4. PSM.
 - 5. SDR-35.
 - 6. PVC sewer pipe.
 - 7. ASTM D3034.
 - 8. Code number.

2.02 GASKETS AND LUBRICANTS

- A. Gaskets and lubricants shall be made from materials that are compatible with plastic material and with each other when used together.
- B. Elastomeric gaskets: ASTM F477.

2.03 ELEVATIONS

- A. Contractor shall use a laser for setting pipe grades.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine all pipe for cracks and other defects. Defective pipe shall be immediately removed from the job site.

3.02 ALIGNMENT AND GRADE

- A. Grades are shown on the profile and are the inner side of the invert.
- B. When obstructions that are not shown on drawings are encountered during construction and interfere so that an alteration of drawings is required, the owner will alter the drawings or order a deviation in line and grade or arrange for removal, relocation, or reconstruction of obstructions.
- C. Adjust alignments and grades as required and with owner approval when crossing existing pipelines or structures to provide the clearance as required by federal, state or local regulations or as determined by owner to prevent future damage or contamination of either structure.
 - 1. Where clearance is less than 6 inches, the owner shall be notified for a decision regarding realignment or adjustment of grade.
- D. Pipe shall be bedded to line and grade with uniform and continuous support.
 - 1. Blocking shall not be used to bring the pipe to grade.

3.03 INSTALLATION

- A. Pipe and fittings shall be installed in accordance with manufacturer's instruction and trench detail.
- B. Lower pipe into trench in a manner to prevent damage.
- C. Trench shall be dewatered prior to installing pipe.
 - 1. Dewater trench in accordance with the erosion and sedimentation control plan.
- D. Thoroughly clean pipe, inside and out, especially at the joints, before installation.
- E. Pipe installation:
 - 1. Prevent material from entering pipe while it is being placed.
 - 2. Assemble joints as pipe is placed.
 - 3. Place pipe to correct line and grade.
 - 4. Place approved backfill material to secure pipe in place.
- F. Begin laying pipe at bottom of grade and proceed upward with bell ends upgrade.
- G. When pipe laying is not in progress, close open ends of pipe with water tight plug.

3.04 PUSH-ON JOINT ASSEMBLY

- A. Assemble joint in accordance with manufacturer's instructions.
- B. Clean gasket, bell interior and spigot area to remove any dirt or foreign material.
- C. Install gasket and lubricant in accordance with manufacturer's instructions.
- D. Assemble pipe by hand or with use of bar and block.

1. Mechanical equipment, if required, may be used to install pipe eight inches in diameter and larger.
 - a. Be sure pipe is not installed past the depth mark.
- E. Pipe not furnished with depth mark shall be marked before assembly to assure that spigot end is inserted full depth of joint.

3.05 PIPE CUTTING

- A. Cut pipe at right angles to pipe axis.
- B. Pipe shall be cut using a pipe cutter, hacksaw, handsaw, or power handsaw.
- C. Ends of cut pipe shall be beveled to the correct taper.
- D. Round off sharp edges on leading edge of bevel.
- E. Mark pipe to obtain proper depth of insertion.

3.06 WASTEWATER MAINS NEAR WATER MAINS

- A. Horizontal separation:
 1. Place wastewater main at least ten feet from existing or proposed water main.
 2. If conditions prevent separation of ten feet:
 - a. Place the wastewater main in separate trench from water main.
 - b. Place wastewater main in trench with water with wastewater main pipe located at one side on a bench of undisturbed earth.
 - c. The elevation of the crown of the wastewater main shall be at least 18 inches below the invert of the water main for either case.
- B. Vertical separation:
 1. Should the wastewater main cross under a water main, the crown of the wastewater main shall be at least 18 inches below the invert of the water main.
 2. If conditions prevent separation of 18 inches; relocate the water main to provide the required separation or reconstruct water main with water tight joint pipe for a distance of ten feet on each side of wastewater main.
 - a. Center full length of pipe over wastewater main so that both joints are as far from wastewater main as possible.
- C. If conditions prevent both horizontal and vertical separations, construct both water main and wastewater main with water tight joints and pressure test each main to assure water tightness, then concrete encase wastewater main for a distance of ten feet on both sides of water main.

3.07 ANCHORING ON STEEP SLOPES

- A. Wastewater mains on 20 percent or greater slope shall be anchored with concrete. Maximum anchor spacing is as follows:
 1. 20 percent to 35 percent: 36 feet center to center.
 2. 35 percent to 50 percent: 24 feet center to center.
 3. 50 percent or greater: 16 feet center to center.
- B. Anchors are to be placed immediately downstream of pipe bells.

3.08 SERVICE LATERAL INSTALLATION

- A. Wastewater service lateral shall be installed at a minimum slope of 1/4" per foot.
- B. Extend lateral to property line. If main is already on a private property, extend lateral two feet. In public right-of-way, extend lateral to two feet beyond the right-of-way.
- C. Locate end of lateral as conditions permit in area between sidewalk and curb or on building side of sidewalk or in lawn area.
- D. The end of a lateral shall not be installed in a roadway, paved areas, sidewalks, driveways, ditch or wet area, or in a location subject to vehicle travel.
- E. Cap and mark the location of the end of the lateral.
 - 1. Block cap to resist thrust of testing.
 - 2. Mark location with 2"x4" wooden stake.
 - 3. Stake to extend from cap to 1'-0" above ground.
 - 4. Place permanent mark on above ground portion of stake to denote the distance to invert of lateral.
- F. After testing, existing services, if present, shall be connected.
- G. Gravity service connections requiring a grinder pump will be provided with a typical gravity lateral.

3.09 TESTING

- A. Conduct alignment, deflection, and leakage testing of sewer mains.

END OF SECTION

SECTION 02734

WASTEWATER PRESSURE SEWER - PVC

PART 1 GENERAL

1.01 SUBMITTALS

- A. Manufacturer's product data and installation instructions.

1.02 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Exercise care in transporting and handling to avoid damage.
- B. Do not store materials directly on the ground.
- C. Stack pipe only to the height recommended by manufacturer.
- D. Stack bells in opposing directions on alternate rows, to avoid supporting the full load.
- E. Keep interior of all pipe free from dirt or foreign material.
- F. Store gaskets out of direct sunlight.

PART 2 PRODUCTS

2.01 WASTEWATER PRESSURE SEWER

- A. Polyvinyl chloride pressure pipe:
 - 1. AWWA C900.
 - 2. Pipe and coupling materials: ASTM D1784.
 - 3. Joint type: Push-on joint.
 - 4. Laying length: 13 feet.
 - 5. SDR 21.
- B. Markings on pipe:
 - 1. Manufacturer's name or trademark and production record code.
 - 2. Nominal size and OD base.
 - 3. Material code designation.
 - 4. Dimension ratio number.
 - 5. AWWA pressure class.
 - 6. AWWA designation number.
 - 7. National sanitation seal for potable water pipe.
- C. Gaskets and lubricants
 - 1. Gaskets and lubricants intended for use shall be made from materials that are compatible with plastic material and with each other when used together and will not support growth of bacteria.
 - 2. Elastomeric gaskets: ASTM F477.

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine all pipe for cracks and other defects immediately before installation.
 - 1. Remove any damaged material from site.

3.02 ALIGNMENT AND GRADE

- A. As shown on drawings.

- B. When obstructions that are not shown on drawings are encountered during progress of work and interfere so that an alteration of drawings is required, stop work and notify owner.
- C. Adjust alignment and grade as necessary when crossing existing pipelines or structures, with approval of owner, to provide clearance as required by federal, state or local regulations or as deemed necessary by owner to prevent future damage or contamination of either structure.
 - 1. Notify owner in all cases where clearance is less than 6 inches for a decision regarding realignment or adjustment of grade.
- D. Bed pipe to line and grade.
- E. Minimum cover over pipe is 4'-0", unless otherwise shown on drawings or modified due to field conditions.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instruction and details.
- B. Lower pipe into trench to prevent damage material.
- C. Trench shall be dewatered prior to installing pipe.
- D. Remove all dirt, sand, grit or any other foreign material from outside of plain end and inside of bell before laying pipe.
- E. Pipe placement:
 - 1. Prevent material from entering pipe while it is being placed in trench.
 - 2. Assemble joint as each length of pipe is placed.
 - 3. Place pipe to correct line and grade.
 - 4. Secure pipe in place with approved backfill and bedding material.
- F. Direction of placement: Bell ends facing directions of laying.
 - 1. Begin installing pipe at bottom of grade and proceed upward with bell ends upgrade.
- G. Pipe plugs:
 - 1. Pipe laying not in progress: Close open ends of pipe with water tight plug.
 - 2. Keep plug in place until trench is pumped dry.

3.04 PUSH-ON JOINT ASSEMBLY

- A. Assemble in accordance with manufacturer's instructions.
- B. Clean gasket, bell interior and spigot area to remove any dirt or material.
- C. Insert gasket in accordance with manufacturer's instructions.
- D. Apply lubricant in accordance with manufacturer's instructions.
- E. Mark piping, if not furnished, before assembly to assure that spigot end is inserted full depth of joint.

3.05 PIPE CUTTING

- A. Cut pipe at right angles to pipe axis.
- B. Bevel cut end of pipe to correct taper.
- C. Round off sharp edges on leading edge of bevel.
- D. Mark pipe to obtain proper depth of insertion.

3.06 TESTING

- A. Conduct alignment and leakage testing of sewer mains.

END OF SECTION

WASTEWATER FORCE MAIN

PART 1 GENERAL

1.01 SUBMITTALS

- A. Manufacturer's product data and installation instructions.

1.02 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Exercise care in transporting and handling to avoid damage.
- B. Do not store materials directly on the ground.
- C. Stack pipe only to the height recommended by manufacturer.
- D. Stack bells in opposing directions on alternate rows, to avoid supporting the full load.
- E. Keep interior of all pipe free from dirt or foreign material.
- F. Store gaskets out of direct sunlight.

PART 2 PRODUCTS

2.01 WASTEWATER FORCE MAIN (PVC)

- A. Polyvinyl chloride pressure pipe:
 - 1. AWWA C900.
 - 2. Pipe and coupling materials: ASTM D1784.
 - 3. Joint type: Push-on joint.
 - 4. Laying length: 13 feet.
 - 6. SDR-PR, nonthreaded: SDR 18 for diameters 4" or greater.
 - 7. SDR 21 for diameters less than 4".
- B. Markings on pipe:
 - 1. Manufacturer's name or trademark and production record code.
 - 2. Nominal size and OD base.
 - 3. Material code designation.
 - 4. Dimension ratio number.
 - 5. AWWA pressure class.
 - 6. AWWA designation number.
 - 7. National sanitation seal for potable water pipe.
- C. Gaskets and lubricants
 - 1. Gaskets and lubricants intended for use shall be made from materials that are compatible with plastic material and with each other when used together and will not support growth of bacteria.
 - 2. Elastomeric gaskets: ASTM F477.

2.02 WASTEWATER FORCE MAIN (DUCTILE IRON)

- A. Flanged ductile iron pipe with threaded flanges:
 - 1. AWWA C115 (ANSI A21.15).
 - 2. Length: As shown on drawings.

3. Thickness or Class: Class 53.
 4. Working Pressure: 250 psi.
 5. Pipe barrel: AWWA C151.
 6. Bolt circle and bolt holes: ANSI B16.1, Class 125.
 7. Facing: Plain faced without projection or raised face.
 8. Bolt holes: Equally spaced and straddle centerline of pipe.
 9. Bolts: ANSI B18.2.1.
 10. Nuts: ANSI B18.2.2.
- B. Inside coating: Polyethylene lining, manufacturer's standard thickness, Polybond-Plus by American Cast Iron Company or Protecto 401 by U.S. Pipe.
- C. Outside coating: Bituminous coating approximately 1 mil. thick.
- D. Markings on pipe:
1. Manufacturer's name
 2. Pipe weight.
 3. Pipe length.
 4. Class or nominal thickness.
 5. Casting period.
 6. Year in which pipe was produced.
 7. Letter "DIP" or "DUCTILE" shall be cast or stamped on pipe.
- B. Rubber gaskets and lubricant. AWWA C111 (ANSI A21.11).

PART 3 EXECUTION

3.01 INSPECTION

- A. Examine all pipe for cracks and other defects immediately before installation.
1. Remove any damaged material from site.

3.02 ALIGNMENT AND GRADE

- A. As shown on drawings.
- B. When obstructions that are not shown on drawings are encountered during progress of work and interfere so that an alteration of drawings is required, stop work and notify owner.
- C. Adjust alignment and grade as necessary when crossing existing pipelines or structures, with approval of owner, to provide clearance as required by federal, state or local regulations or as deemed necessary by owner to prevent future damage or contamination of either structure.
1. Notify owner in all cases where clearance is less than 6 inches for a decision regarding realignment or adjustment of grade.
- D. Bed pipe to line and grade.
- E. Minimum cover over pipe is 4'-0", unless otherwise shown on drawings or modified due to field conditions.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instruction and details.
- B. Lower pipe into trench to prevent damage material.
- C. Trench shall be dewatered prior to installing pipe.

- D. Remove all dirt, sand, grit or any other foreign material from outside of plain end and inside of bell before laying pipe.
- E. Pipe placement:
 - 1. Prevent material from entering pipe while it is being placed in trench.
 - 2. Assemble joint as each length of pipe is placed.
 - 3. Place pipe to correct line and grade.
 - 4. Secure pipe in place with approved backfill and bedding material.
- F. Direction of placement: Bell ends facing directions of laying.
 - 1. Begin installing pipe at bottom of grade and proceed upward with bell ends upgrade.
- G. Pipe plugs:
 - 1. Pipe laying not in progress: Close open ends of pipe with water tight plug.
 - 2. Keep plug in place until trench is pumped dry.

3.04 PUSH-ON JOINT ASSEMBLY

- A. Assemble in accordance with manufacturer's instructions.
- B. Clean gasket, bell interior and spigot area to remove any dirt or material.
- C. Insert gasket in accordance with manufacturer's instructions.
- D. Apply lubricant in accordance with manufacturer's instructions.
- E. Mark piping, if not furnished, before assembly to assure that spigot end is inserted full depth of joint.

3.05 PIPE CUTTING

- A. Cut pipe at right angles to pipe axis.
- B. Bevel cut end of pipe to correct taper.
- C. Round off sharp edges on leading edge of bevel.
- D. Mark pipe to obtain proper depth of insertion.

3.06 TESTING

- A. Conduct alignment and leakage testing of sewer mains.

END OF SECTION

WASTEWATER FORCE MAIN FITTINGS

PART 1 GENERAL

1.01 SUBMITTALS

- A. Manufacturer's product data and installation instructions.
- B. Statement of net weight of each size of fitting furnished.
- C. Shop Drawings:
 - 1. Dimensions.
 - 2. Construction details.
 - 3. Materials.

1.02 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Examine all fittings and accessories and reject defective material.
- B. Exercise care during loading, transporting, and unloading to prevent damage to materials.
- C. Do not store directly on the ground, in State Road Right-of-Way or in clear zones as per PennDOT Publication 203.

PART 2 PRODUCTS

2.01 FITTINGS

- A. AWWA C110.
- B. Fittings shall be cast from gray iron or ductile iron.
- C. Mechanical joint end connection: Including glands, gaskets, and bolts.
 - 1. AWWA C153 (ANSI 21.53).
 - 2. Gland: Gray iron, ANSI 21.11.
 - 1. Bolts and gaskets: ANSI 21.11.
 - 2. Cement Lined and seal-coated: ANSI/AWWA C104/A21.4
- D. Flanged joint end connection: Including gaskets and bolts.
 - 1. Bolt circle and bolt holes: ANSI B16.1, Class 125.
 - 2. Facing: Plain faced without projection or raised face.
 - 3. Bolt holes: Equally spaced and straddle centerline of fitting.
 - 4. Bolts: ANSI B18.2.1.
 - 5. Nuts: ANSI B18.2.2.
- E. Working pressure: 250 psi.
- F. A bituminous coating, approximately 1 mil thick, shall comprise the outside coating.
- G. Inside coating: Polyethylene lining, manufacturer's standard thickness, Polybond-Plus by American Cast Iron Company or Protecto 401 by U.S. Pipe.
- H. Markings on fittings:
 - 1. Manufacturer's identification.
 - 2. Pressure rating.
 - 3. Nominal diameters of openings.
 - 4. Number of degrees or fractions of the circle on all bends.
 - 5. Ductile iron fittings shall have the letters "DI" or "Ductile" cast on them.

PART 3 EXECUTION

3.01 GENERAL

- A. Unless otherwise shown on drawings, mechanical joint fittings shall be used for all buried applications and flanged joint fittings shall be used for all non-buried applications.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Mechanical joint:
 - 1. Provide adequate anchorage against thrust restraint where abrupt changes in direction occur.
 - 2. Keep joint straight during assembly.
 - 3. Make deflection after joint assembly but before tightening bolts.
 - 4. Align bolt holes and insert bolts, with bolt holes behind bell flange and tighten opposite nuts to keep gland square with socket.
- C. Flanged fittings:
 - 1. Flanged faces should bear uniformly on the gasket and bolts should be tightened uniformly.
 - 2. Anchor, support or restrain fittings to prevent bending to torsional strains from being applied to cast flanges or flanged fittings.

END OF SECTION

SECTION 02738

WASTEWATER FORCE MAIN CLEANOUT ASSEMBLY

PART 1 GENERAL

1.01 DESCRIPTION

- A. Furnish and install all materials required for wastewater force main cleanout assembly.

1.02 SUBMITTALS

- A. Manufacturer's product data and installation information.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Precast manhole: Section 02601.
 - 1. Dimensions as shown on details.
- B. Plug valve.
 - 1. Non-lubricated, tapered plug style.
 - 2. Flanged end - bolt circle and holes ANSI B16.1.
 - 3. ANSI Class 150.
 - 4. Handwheel actuator.
 - 5. Size as shown on details.
- C. Flanged ductile iron fittings.

PART 3 EXECUTION

3.01 LOCATION

- A. Where shown on drawings.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

END OF SECTION

SECTION 02739

WASTEWATER FORCE MAIN CLEANOUT/AIR VALVE ASSEMBLY

PART 1 GENERAL

1.01 DESCRIPTION

- A. Furnish and install all materials required for wastewater force main cleanout/air valve assembly.

1.02 SUBMITTALS

- A. Manufacturer's product data and installation information.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Precast manhole: Section 02601.
 - 1. Dimensions as shown on details.
- B. Plug valve.
 - 1. Non-lubricated, tapered plug style.
 - 2. Flanged end - bolt circle and holes ANSI B16.1.
 - 3. ANSI Class 150.
 - 4. Handwheel actuator.
 - 5. Size as shown on details.
- C. Flanged ductile iron fittings: Section: 02736.
- D. Air valve assembly: Combination air release and air/vacuum valves as manufactured by Valmatic Valve and Manufacturing Corporation or Equal.
 - 1. See Section 15127

PART 3 EXECUTION

3.01 LOCATION

- A. Where shown on drawings.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

END OF SECTION

SECTION 02755

TESTING OF WASTEWATER COLLECTION SYSTEM

PART 1 GENERAL

1.01 DESCRIPTION

- A. Alignment testing of pipe shall be performed after backfilling has been completed.
- B. Deflection testing of pipe shall be performed at least 30 days after backfilling.
- C. Leakage testing of pipe shall be performed after laterals have been installed to property line and have been plugged adequately and braced to withstand the test pressure, and the trenches have been backfilled for a minimum of seven days as to generate a reasonable portion of the ultimate trench load upon the pipe.
- D. Manhole leakage testing shall be performed after assembly of manhole, grade rings and frame, but before backfilling. The alternate manhole leakage test using water will be performed prior to backfilling if this test is the chosen method.

1.02 SUBMITTALS

- A. Contractors certification that wastewater mains and laterals meet testing specification requirements.

PART 2 PRODUCTS

2.01 EQUIPMENT

- A. Light source and accessories.
- B. Air compressor.
- C. Portable air control equipment.
 - 1. Consists of valves and pressure gages used to control the air entry rate to the test section and to monitor air pressure in the test section.
 - 2. Air control equipment shall include:
 - a. Shut-off valve.
 - b. Pressure regulating valve.
 - c. Pressure reduction valve.
 - d. Monitoring pressure gage.
 - 1. Pressure range: 0 to 10 psi.
 - 2. Minimum divisions: 0.10 psi.
 - 3. Accuracy: ± 0.10 psi.
- D. Portable vacuum testing equipment.
 - 1. Consists of valves and vacuum gages used to control and monitor vacuum in manhole.
 - 2. Gage: ± 1 percent accuracy.
 - 3. Vacuum pump.

PART 3 EXECUTION

3.01 ALIGNMENT TEST

- A. Conduct testing throughout the entire collection system between consecutive manholes.

- B. Place source of light at center of pipe in the manhole at the end of pipe length being tested.
- C. A full circle of light must be seen in the manhole opposite where the light source is placed.
 - 1. If alignment test fails, make adequate repairs and retest.
 - 2. All repairs and retesting is to be performed at the contractor's expense.

3.02 DEFLECTION TEST

- A. Conduct testing throughout entire collection system.
- B. Test is to be performed using rigid balls or mandrels with diameters equal to 95 percent of the inside diameter of the pipe.
- C. Mechanical pulling devices are not acceptable.
- D. Maximum pipe deflection permissible is five percent.
- E. All repairs and retesting is to be performed at the contractor's expense.

3.03 PIPE LEAKAGE TEST

- A. Conduct testing throughout entire collection system, between consecutive manholes.
- B. Plug ends of the section of line to be tested and equipped for the air inlet connection for filling line.
- C. Brace all service laterals, plugs, stubs and fittings in the test section against internal pressure to prevent air leakage by slippage and blowouts.
- D. Connect air hose from tapped plug to portable air control equipment.
- E. Connect another air hose between air compressor and air control equipment.
- F. Slowly introduce air pressure to approximately 4.0 psig.
 - 1. If ground water is present, determine its elevation above the spring line, (the point at the center of the pipe at which the arch starts upward), of the pipe by means of a piezometric tube.
 - a. For every foot of ground water above the spring line of the pipe, increase the starting air test pressure reading by 0.43 psig.
 - 1. Do not increase test pressure above 10.0 psig.
- G. Allow pressure to stabilize for at least five minutes.
- H. Adjust pressure to 3.5 psig or the increase test pressure as determined above if ground water is present.
- I. Minimum acceptable time in seconds for a pressure drop from 3.5 psig to 3.0 psig is calculated by the following equation:
 - 1. $T = 38.2 \times Dw$ where:
 - a. T = Elapsed time in seconds.
 - b. Dw = Weighted average pipe diameter.
- J. If the time for air pressure to drop from 3.5 to 3.0 psig is greater than that calculated by the above equation, the section undergoing test will pass.
- K. If the time for the 0.5 psig drop is less than that calculated, the section of pipe undergoing the test fails.
 - 1. All repairs and retesting is to be performed at the contractor's expense.

3.04 MANHOLE LEAKAGE TEST

- A. Plugs and brace pipe openings in manhole.
- B. Set vacuum tester in frame.
- C. Connect vacuum pump to outlet port of vacuum tester with valve open.
- D. Draw a vacuum to 10 inch of mercury and close valve.
- E. If the vacuum drops below 9 inches of mercury in one minute, the manhole fails the test.
 - 1. Make repairs and retest at contractor's expense.

3.05 ALTERNATE MANHOLE LEAKAGE TEST

- A. Plug and brace pipe openings in manhole.
- B. Fill manhole with water and leave overnight to allow for concrete absorption.
 - 1. Contractor is responsible for securing water for test.
 - 2. The following morning, fill the manhole to top of frame.
 - 3. Groundwater level shall be maintained below bottom of manhole during test.
- C. Test for leakage for one hour.
 - 1. At end of test period add sufficient water to bring water back to top of frame.
 - 2. Water shall be added from known size contained (ie 1 gallon graduated bucket).
 - 3. If the loss of water exceeds 0.20 gallons per foot of depth of manhole, in the one hour test period, the manhole fails the test.
- D. Disposal of test water shall not be via the sanitary sewer system. The contractor is responsible for disposing of the test water without causing a nuisance of excessive erosion.

3.06 LATERAL LEAKAGE TEST

- A. Acceptable tests include air test as stated above in section 3.03 and a water column test which includes a 10 foot column of water with no measurable water loss over a period of fifteen minutes.
 - 1. Water column test to be performed at foundation wall.
 - 2. Water being used for testing to fill the entire length of the lateral from foundation wall to observation port.
 - a. Water to be supplied by property owner.

3.07 OVERALL SYSTEM LEAKAGE TEST

- A. Conduct prior to system final acceptance and customers connecting to system.
- B. Flush system to remove dirt and debris two days prior to overall leakage test.
- C. Dewater collection system.
 - 1. Contractor is responsible for disposing of water without causing a nuisance or excessive erosion.
 - 2. Monitor overall system leakage with weir.
- D. Visual observation at lowest gravity manhole(s) must be dry.
 - 1. The required repairs and retesting shall be at the contractor's expense.

END OF SECTION

SECTION 02756

WASTEWATER FORCE MAIN TESTING

PART 1 GENERAL

1.01 REQUIREMENTS

- A. Allowable leakage: 10 gallons per inch of pipe diameter per mile of pipe per 24 hours.

1.02 SUBMITTALS

- A. Certificates: Contractors certification that wastewater force main meet testing specification requirements.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Water for pressure/leakage test shall be furnished by contractor and approved by owner.
- B. Pump, pipe connection and all necessary apparatus for testing shall be furnished by contractor.
- C. Corporation stops and saddles or other means of connecting test apparatus and expelling air from system shall provide service rating at least equivalent to water main which they are tapping.
- D. Means of measuring total leakage:
 - 1. Open container such as 55 gallon barrel.
 - 2. Metering device not acceptable.

PART 3 EXECUTION

3.01 PREPARATION

- A. Test location shall be determined by owner.
- B. Fill section of main slowly with water to expel air from pipe.
- C. Install corporation stops at high points or dead ends, if permanent air vents or blowoffs are not located at such points so that air can be expelled as main is filled with water.
- D. Close corporation stops after all air is expelled.

3.02 TESTING

- A. Test duration shall be a minimum of two hours.
- B. Test pressure shall be 150 pounds per square inch.
 - 1. Pressure is based on elevation of lowest point of line, or section under test, and corrected to elevation of test gage.
 - 2. The allowable pressure drop during test is five pounds per square inch. Re-pump during test to maintain the specified pressure within the specified tolerance.

3. The pressure at conclusion of testing shall be equal to or greater than pressure at beginning of testing.
- C. The quantity of water supplied into main to maintain specified test pressure after air in main has been expelled and main filled with water is defined as the leakage.

3.03 FIELD QUALITY CONTROL

- A. Do not test any section of main which is provided with concrete thrust blocks until at least five days after concrete was installed. If high-early-strength concrete was used in thrust blocks, do not test until at least two days have elapsed.
- B. If testing of pipe discloses leakage greater than allowable leakage:
 1. Contractor shall, at his own expense, locate and repair defective pipe or joints until, upon retesting, leakage is within allowable leakage.
 2. All repairs to force mains shall be made with new material.
 3. No caulking of threads, cracks, or holes will be accepted.
 4. Replacement of materials shall be with the same material and thickness as the defective unit.

END OF SECTION

SECTION 02758

UTILITY LINE LOCATION MARKERS

PART 1 GENERAL

1.01 SUBMITTALS

- A. Manufacturer's product data and installation instructions.

1.02 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in manufacturer's original packaging and store according to their recommendations.

PART 2 PRODUCTS

2.01 UTILITY LINE LOCATION MARKERS

- A. Utility line location markers shall be manufactured by the Carsonite International Corporation or equal.
- B. Post length is 72 inches.
- C. Post color is white.
- D. Water main decal type: Carsonite catalog no. CW-112.
 - 1. Color: Blue.
 - 2. Type: Caution water main.
- E. Wastewater main decal type: Carsonite catalog no. CS-0225.
 - 1. Color: Green.
 - 2. Type: Caution wastewater main.
- F. Decals to meet REA and Office of Safety Operations specifications.
- G. Color coding for posts and decals to be in accordance with the American Public Works Association and One Call Systems recommendations.
- H. Carsonite barb attachments for permanent anchoring of posts in loose, sandy or marshy soils.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Set marker plumb, a minimum of one foot above center of the water/wastewater main.
- B. Depth of bury shall be three feet.
- C. Place markers where water/wastewater mains are installed in fields or wooded areas.
 - 1. Markers to be located at bends and spacing not greater than 300 feet or as directed by owners representative.
- D. Comply with manufacturer's instructions for installation.

END OF SECTION

SECTION 02780

STREAM CROSSINGS

PART 1 GENERAL

1.01 DESCRIPTION

- A. Installation of concrete encased pipeline or boring beneath a waterway.

1.02 REGULATORY AGENCIES

- A. Work is subject to supervision by representative of Pennsylvania Department of Environmental Protection and the Soil Conservation District.

1.03 REQUIREMENTS OF REGULATORY AGENCIES

- A. Contractor shall be apprised of all the provisions and conditions of the General Permit 5 and Erosion and Sedimentation Control Plan.
 - 1. Contractor will be given a copy of the permits for his files.
- B. A permit must be secured from Pennsylvania Fish Commission if the use of explosives is required.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Encasement concrete: PENNDOT 3750 PSI, H.E.S.

PART 3 EXECUTION

3.01 PERFORMANCE

- A. Comply with rules and regulations of Pennsylvania Department of Environmental Protection and Pennsylvania Fish Commission.
- B. Take sufficient precautions to prevent pollution of streams with fuels, oils, bitumens, calcium chloride, or other harmful materials.
- C. Schedule and conduct construction operations to prevent the pollution of streams with sediment or other deleterious materials.
- D. Remove construction debris, excavation material, brush, rocks, and refuse incidental to the work entirely from stream channel and remove from site.
- E. Utilize coffer dams, levees, diversion trenches, etc., to obtain the required stream diversion and erosion control.
- F. Notify the Department of Environmental Protection prior to the commencement of work.
- G. After stream-bed excavation work is completed, return surface water flow to its original course.
- H. Riprap all disturbed stream banks utilizing the appropriate size material for stream conditions.

END OF SECTION

SECTION 02930

SEEDING

PART 1 GENERAL

1.01 DESCRIPTION

- A. Seed and mulch areas disturbed by project construction activity.
- B. Lawn seeding: PENNDOT Formula B seed mixture on regularly mowed grass covered areas.
- C. Slope seeding: PENNDOT Formula C seed mixture on slopes 3:1 or greater.
- D. Ditch seeding: PENNDOT Formula D.
- E. Temporary seeding: PENNDOT Formula E.
- F. Wetland area seeding: PENNDOT Formula E.

1.02 QUALITY ASSURANCE

- A. Source quality control: Seed producer's tests for purity and germination of seed, dated within nine months of sowing.

1.03 SUBMITTAL

- A. Test reports:
 - 1. Submit seed vendor's certified statement for grass seed mixture required, stating botanical and common name, percentage by weight and percentages of purity, germination and weed seed.
 - 2. Results of soil test.
- B. Manufacturer's product data.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Deliver grass seed in original containers showing analysis of seed mixture, percentage of pure seed, year of production, net weight, date of packaging and location of packaging.
 - 1. Damaged packages are not acceptable.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

1.05 JOB CONDITIONS

- A. Existing conditions: perform seeding only after preceding work affecting ground surface is completed.
- B. Environmental requirements:
 - 1. Do not perform seeding when wind exceeds 15 miles per hour.
 - 2. Seed between following dates:
 - a. Formula B and D: March 15 to June 1, August 1 to October 15.
 - b. Formula C: Ryegrass portion - March 1 to October 15, Crownvetch portion - anytime except September and October.
 - c. Formula E: March 15 to October 15.

- C. Protection: Restrict foot and vehicular traffic from seeded areas after planting to end of the established period.
- D. Do not deliver or spread topsoil in a frozen or muddy condition.

PART 2 PRODUCTS

2.01 SEED

A.	PDT Formula B	<u>% by weight</u>	<u>% purity</u>
	1. Species:		
	a. Perennial Ryegrass Mixture	20	98
	b. Creeping Red Fescue or Chewings Fescue	30	98
	c. Kentucky Bluegrass Mixture	50	98
B.	PDT Formula C	<u>% by weight</u>	<u>% purity</u>
	1. Species:		
	a. Crownvetch	45	99
	b. Annual Ryegrass	55	98
C.	PDT Formula D	<u>% by weight</u>	<u>% purity</u>
	1. Species:		
	a. Tall Fescue	70	98
	b. Creeping Red Fescue or Chewings Fescue	30	98
D.	PDT Formula E	<u>% by weight</u>	<u>% purity</u>
	1. Species:		
	a. Annual Ryegrass	100	98

- E. Shipment: Accompanied by a certified weight slip, and an analysis of the composition, purity and germination of the seed mixture certified by the seed house.
- F. Packaging: Furnished and delivered in sealed containers or bags sewn tight or sealed.
- G. Labeling: In accordance with prevailing State Law, Rules and Regulations.
- H. Guarantee: Meeting the minimum specified requirements on the date of sowing regardless of the guarantee of qualities on dates of testing.
 - 1. Seed that has become wet, moldy or otherwise damaged in transit or storage will not be acceptable.

2.02 FERTILIZER

- A. Commercial type, conforming to the requirements of the Pennsylvania Soil Conditioner and Plant Growth Substance Law.
 - 1. Use dry formulations of 10-20-20 analysis for seeded areas.

B. NOTE: Fertilizer not to be used in wetland areas.

2.03 LIME

- A. Delivered to the site, stored in a dry area in the original containers which bear the manufacturer's guaranteed statement of analysis.
1. Lime: Raw, ground agricultural limestone containing not less than 90% calcium carbonate and ground to such a fineness that 50% will pass through a 100 mesh sieve and 90% will pass through a 20 mesh sieve.
 2. Maintain a record of all tonnage of lime applied.
- B. NOTE: Lime not to be used in wetland areas.

2.04 WATER

- A. Water used in the work will be suitable for irrigation and free from ingredients harmful to plant life.
1. Hose and other water equipment required for the work furnished by the contractor.

2.05 TOPSOIL

- A. Existing topsoil to be respread over disturbed area.
- B. A minimum of 4 inches of topsoil must be placed.
- C. If sufficient topsoil does not exist on the property, supply topsoil in accordance with PENNDOT Publication 408, Section 802.2.
- D. If excess topsoil is available, property owner approval is required for removal.

2.06 ACCESSORIES

- A. Mulching material: In accordance with PENNDOT Publication 408, Section 805.

PART 3 EXECUTION

3.01 INSPECTION

- A. Check that preceding work affecting ground surface is completed.
- B. Verify that soil is unfrozen.

3.02 PREPARATION

- A. Scarify undisturbed subsoil to a depth of two inches prior to placement of topsoil. Remove rocks and other objects over two inches in diameter.
- B. Furnish and/or spread topsoil as needed to obtain depth required. Do not compact.
- C. Cultivate topsoil until surface is smooth.
- D. Remove from site, foreign materials collected during cultivation.
- E. Grade to eliminate rough spots and low areas where ponding may occur.
1. Maintain smooth, uniform grade.
- F. Assure positive drainage away from buildings.
- H. Finish ground level firm and sufficient to prevent sinkage pockets when irrigation is applied.

3.03 FERTILIZING

- A. Apply after fine grading and mix thoroughly into upper two inches of topsoil.
- B. If a soil-test is not utilized, apply 800 pounds of agricultural-grade limestone and 140 pounds of 10-20-20 analysis commercial fertilizer for 1,000 square yards.
- C. Apply after fine grade and mix thoroughly into upper two inches of topsoil.
- D. Do not apply grass seed and fertilizer at same time, in same machine.
- E. Lightly water to aid breakdown of fertilizer and to provide moist soil for seed.

3.04 SEEDING

- A. Broadcast half of seed with mechanical seeder or by hand.
- B. Broadcast remaining half of seed at right angles to first seeding pattern, using same broadcast method.
- C. Seeding rate:
 - 1. Formula B: 21 pounds per 1,000 square yards.
 - 2. Formula C: 9 pounds per 1,000 square yards.
 - 3. Formula D: 21 pounds per 1,000 square yards.
 - 4. Formula E: 10 pounds per 1,000 square yards.
- D. Do not sow immediately following rain, when ground is too dry, or during windy periods.
- E. Cover seed to a depth of 2 inch by raking, harrowing or cultipacking.
- F. Roll seeded area with roller not exceeding 65 pounds per foot of width.
- G. Apply water with fine spray immediately after each area has been sown.
- H. Apply mulch in accordance with PENNDOT 408 Specifications.

3.05 HYDROSEEDING

- A. Apply slurry evenly at rate recommended by manufacturer, in tow intersecting directions and with hydraulic seeder.
- B. Immediately following hydroseeding, mulch areas by means of mulch blower at rate of 1,200 pounds per 1,000 square yards on level grades, 2,000 pounds on slopes.
- C. Do not seed area in excess of that which can be mulched on same day.

3.06 SEED PROTECTION ON SLOPES

- A. Cover seeded slopes where grade is 3:1 or greater with jute matting.
 - 1. Role matting down over slopes without stretching or pulling.
- B. Lay matting smoothly on soil surface, burying top end of each section in narrow six inch trench.
 - 1. Leave 12 inch overlap from top roll over bottom roll.
 - 2. Leave four inch overlap over adjacent section.
- C. Staple outside edges and overlaps at 36 inch intervals.

3.07 PROTECTION

- A. Immediately after seeding, protect seeded areas from traffic until grass is established.

3.08 MAINTENANCE

- A. Maintain seeded area immediately after placement for ten week period or until grass is well established and exhibits a vigorous growing condition.
- B. Maintain surfaces and supply additional topsoil where necessary, including areas affected by erosion.
- C. Water to ensure uniform seed germination and to keep surfaces of soil damp.
- D. Apply water slowly so that surface of soil will not puddle and crust.

3.09 CLEAN UP

- A. Dispose of excess materials and debris, including, but not limited to, branches, paper and rubbish resulting from this work.
- B. All areas shall be kept neat and clean and upon completion of work, the site shall be left in an orderly condition.

END OF SECTION

CONCRETE ENCASEMENT

PART 1 GENERAL

1.01 SUBMITTALS

- A. Delivery tickets.

1.02 PRODUCT DELIVERY AND HANDLING

- A. Vehicles for transporting plant-mixed cement concrete shall be capable of maintaining concrete in a thoroughly mixed and uniform state and be capable of discharging without segregation.
- B. Concrete to be discharged from mixers within 1-1/2 hours after the completion of mixing.
- C. Time between completion of mixing and discharge not to exceed one hour when hot weather or conditions contributing to quick stiffening or when temperature of concrete is 85 degrees F or above.
- D. After mixing, time between agitating shall not exceed 30 consecutive minutes each.
- E. Concrete shall be agitated for at least 20 revolutions at the end of any dormant period.
- F. Maximum time interval between placing succeeding batches is 30 minutes.
- G. Interior surfaces of conveying equipment, including chutes and tremies, shall be kept free from hardened concrete, debris, water and other deleterious materials.

1.03 WEATHER PLACING REQUIREMENTS

- A. Do not place concrete during rain, sleet or snow unless protection is provided.
- B. Allowable concrete temperature:
 - 1. Cold weather:
 - a. Minimum: 50 degrees F.
 - b. Maximum: 80 degrees F.
 - 2. Hot weather: Maximum 90 degrees F.
- C. Minimum air temperature for placing concrete: 40 degrees F.
 - 1. If temperature falls below 40 degrees F, cold weather placement requirements must be followed.
- D. Minimum air temperature for placing joint sealer is 40 degrees F.
- E. Air temperatures to be taken in the shade.
- F. Cold weather placing shall comply with ACI 306 to protect concrete work from physical damage and reduced strength which would be caused by frost, freezing actions or low temperatures.
- G. Hot weather placing:
 - 1. Use chilled mixing water or chopped ice to control temperature.
 - a. Calculate water equivalent of ice to total amount of water.
 - 2. Use set-control admixtures in mix.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Ready mixed cement concrete: 3,750 psi, equivalent to Pennsylvania Department of Transportation high early strength cement concrete.
 - 1. 3 day strength - 3,000 psi.
 - 2. 28 day strength - 3,750 psi.
 - 3. Cement: Type Ia, ASTM C150.
 - a. Approximate amount of entrapped air: 5.5 percent.

2.02 CEMENT-CONCRETE MIXES

- A. Comply with the mix and test requirements of the Pennsylvania Department of Transportation Publication 408 Specifications.

PART 3 EXECUTION

3.01 LOCATION

- A. Place encasement concrete as shown on drawings.
- B. Encase water, wastewater mains and/or stormwater piping where required:
 - 1. Stream crossings.
 - 2. Ditch crossings where mains are susceptible to excessive groundwater or are somewhat shallower than desired.
 - 3. Where proper separation from existing utilities cannot be maintained.

3.02 FLOTATION CONTROL

- A. Provide a suitable anchoring system to prevent movement of the pipe during concrete placement.

3.03 PLACING CONCRETE

- A. Convey concrete from mixer to final position by method which will prevent separation or loss of material.
- B. Maximum height of concrete free fall shall be four feet.
- C. Regulate rate of placement so concrete remains plastic and flows into position.
- D. Deposit concrete in continuous operation until length of pipe to be encased is completed.
- E. Place concrete in horizontal layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes or weakness within the section.
 - 1. Maximum thickness:
 - a. Vibrated: 18 inches.
 - b. Spaded: 8 inches.
- F. Consolidate concrete immediately after placing by hand-spading, rodding, tamping, or vibrating.
 - 1. Vibrators are to be used for consolidation only and not to move concrete.

3.04 CURING

- A. During interval of time after placing concrete until backfilling, water cure concrete using double thickness of burlap conforming to requirements of AASHTO M 182, Class I, for burlap cloth.

3.05 BACKFILLING

- A. Backfill spaces adjacent to encasement after concrete has cured for a period of not less than 12 hours.
- B. Backfilling shall comply with Section 02221.

END OF SECTION

GREASE AND OIL INTERCEPTOR TANK

PART 1 GENERAL

1.01 SUBMITTALS

- A. Manufacturer's literature, illustrations, and installation instructions.
- B. Shop drawings:
 - 1. Precast reinforced concrete tank.
 - 2. Flexible gasket-type sealant.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Precast reinforced concrete tank:
 - 1. Nominal size: 250 gallons
 - 2. Tank to have sealed concrete cover.
 - 3. Provide outlet baffle.
 - 4. Provide inspection port after outlet baffle.
 - 5. Provide access opening.
 - 6. Provide coupling on inlet and outlet pipes.
- B. Pipe gasket:
 - 1. Dura Tech, Inc., Dura Seal III gasket or equal.
 - 2. Conform to physical requirements for ASTM C443.
- C. Flexible gasket-type sealant: RUB'R-NEK butyl rubber sealant or equal.
 - 1. Conform to Federal Specifications SS-S-210A.
 - 2. Size: One inch.
- D. Grout: ASTM C270, Type M.

PART 3 EXECUTION

3.01 LOCATION

- A. As shown on drawings or as required.

3.02 INSTALLATION

- A. Join vault sections with flexible gasket-type sealant in accordance with manufacturer's instructions.
- B. Set vaults to grade required.
- C. Seal lift holes in vault walls with non-shrink grout.
- D. Install pipe gasket in accordance with manufacturer's instructions from gravity flow pipe.
- E. Pipe penetrations shall be caulked between steel sleeve and pipe or conduit.
- F. Extend observation port and access opening to grade.

END OF SECTION

GRINDER PUMP PACKAGE

PART 1 GENERAL

1.01 DESCRIPTION

- A. Furnish and deliver grinder pump packages with all accessories required to obtain a complete and functional installation.

1.02 SUBMITTALS

- A. Manufacturer's product data and installation instructions.
- B. Wiring diagrams.
- C. Operation and maintenance manual and parts list.

1.03 INSTRUCTION OF OWNER'S PERSONNEL

- A. Prior to final inspection or acceptance, fully instruct owner's designated operating and maintenance personnel in operation, adjustment and maintenance of all products, equipment, and systems.

PART 2 PRODUCTS

2.01 GRINDER PUMP PACKAGE

- A. Model: Environment One Corporation Model 2010-93 grinder pump package or equal.
 - 1. Discharge Capacities:
 - a. 9 GPM @ 138 FT TDH, 15 GPM @ 0 FT TDH.
 - 2. Horsepower: 1 HP (Environment One)
 - 3. Pump discharge: 1 1/4", 304 stainless steel
 - 4. Motor: single phase, capacitor - start, induction motor with integral automatic reset thermal overload protection, 1750 RPM, 240 volt, 60 Hertz.
 - 5. Hardened stainless steel cutters and rotor.
 - 6. Semi-positive displacement.
- B. HDPE (high density polyethylene) reinforced exterior tank.
- C. Double check valves and 1-1/4" stainless steel ball valve.
- D. Accessway to grade with watertight molded fiberglass cover.
- E. 2" internal tank vent.
- F. Pump core complete with operating and high water alarm micro-pressure switches with sensing bells, electric quick disconnect and 75 ft. - 6 conductor lead-in cable.
- G. Anti-siphon valve.
- H. Alarm/disconnect panel, NEMA 3R with alarm light and silencing switch.
- I. Complete U.L. listed package.
- J. 2-year warranty includes parts labor.
- K. 5 year minimum experience in the design and manufacture of grinder pumps specifically intended for use in pressure sewage system.
- L. Factory authorized service center located within 100 miles of project.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's installation instructions.

END OF SECTION

PIPE SUPPORT

PART 1 GENERAL

1.01 SUBMITTALS

- A. Manufacturer's product data and installation instructions.
- B. Shop drawings:
 - 1. Dimensions.
 - 2. Construction details.
 - 3. Materials.
 - 4. Maximum load.

1.02 SUPPORT SPACING

- A. Maximum support spacing:
 - 1. Up to two inch pipe: Five feet.
 - 2. 2-1/2 inch to 3-1/2 inch pipe: Seven feet.
 - 3. Four inch to eight inch pipe: Eight feet.

PART 2 PRODUCTS

2.01 FABRICATED CONCRETE AND STEEL SUPPORTS

- A. Field erect cast-in-place concrete supports.
- B. Shop fabricate steel supports.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Locate supports and accessories to support pipelines, valves, and additional concentrated loads and within maximum span lengths.
- B. Adjust supports and place grout for concrete supports to bring pipelines to proper elevations.

END OF SECTION

PLUG VALVE

PART 1 GENERAL

1.01 SUBMITTALS

- A. Manufacturer's product data and installation instructions.
- B. Shop drawings:
 - 1. Dimensions.
 - 2. Construction Details.
 - 3. Materials.
- C. Maintenance data:
 - 1. Maintenance instructions.
 - 2. Parts lists.

1.02 PRODUCT DELIVERY, STORAGE , AND HANDLING

- A. Seal valve ends to prevent entry of foreign material into valve body.
- B. Box, crate, completely enclose, and protect valves and accessories from accumulations of foreign material.
- C. Store valves and accessories in area protected from weather, moisture, or possible damage.

PART 2 PRODUCTS

2.01 PLUG VALVE

- A. Non-lubricated, quarter-turn type, suitable for raw sewage service.
- B. Sizes; 2 ½ inch through 12 inch:
 - 1. Flanged both ends: Val-Matic Model 5800R, or equal.
 - 1. Mechanical joint both ends: Val-Matic style 5900R, or equal.Sizes; one inch through two inch:
 - 1. Threaded both ends: Val-Matic Model 5800R or equal.
- C. Iron body with rotating ductile iron disc which provides bidirectional sealing at 175 psi.
- D. Actuator:
 - 1. 90 degree operation on low pressure applications.
 - 2. 4 to 8 inch valves: Maximum static differential pressure is 40 psi.
 - 3. Positive stops accepting 300 foot pounds of input torque at full open and close positions.
- E. Maximum Headloss:
 - 1. 4 inch: 1 psi at 400 gpm.
 - 2. 6 inch: 1 psi at 1200 gpm.
 - 3. 8 inch: 1 psi at 2000 gpm.
- F. Opening and closing torque shall not be dependent on field adjustable stops.
- G. Resilient seating seal shall be field replaceable.
- H. All inside and outside surfaces shall be Epoxy coated.
- I. End Connections:
 - 1. Mechanical joint, AWWA C111.
 - 2. Flanged joint, ANSI B16.1.
- J. Wrench Nuts:
 - 1. Top: 1-15/16 inch square.
 - 2. Base: 2 inch square.
 - 3. Height: 1-3/4 inch.

- K. Operators:
 - 1. Direction of rotation to open: Left (counter-clockwise) with operator marked to show direction to open.
 - 2. Handwheels: Valves in exposed accessible locations.
 - 3. Wrench nuts without extension stems and valve box with lid in buried applications.

PART 3 EXECUTION

3.01 INSPECTION PRIOR TO INSTALLATION

- A. Verify:
 - 1. Compliance with specifications.
 - 2. Direction of opening.
 - 3. Size and shape of operating nut or handwheel.
 - 4. Number of turns.
 - 5. Type of end connections.
- B. Inspect coatings and seating seal to determine any damage in shipment.
- C. Cycle valve through one complete opening-and-closing cycle.

3.02 APPLICATION

- A. Unless otherwise shown on drawings, mechanical joint end connections shall be used for all buried applications and flanged joint end connections shall be used for all non-buried applications.

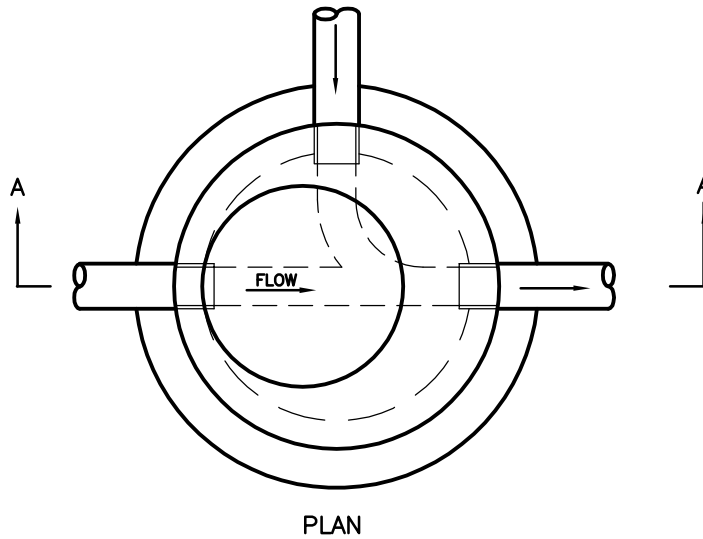
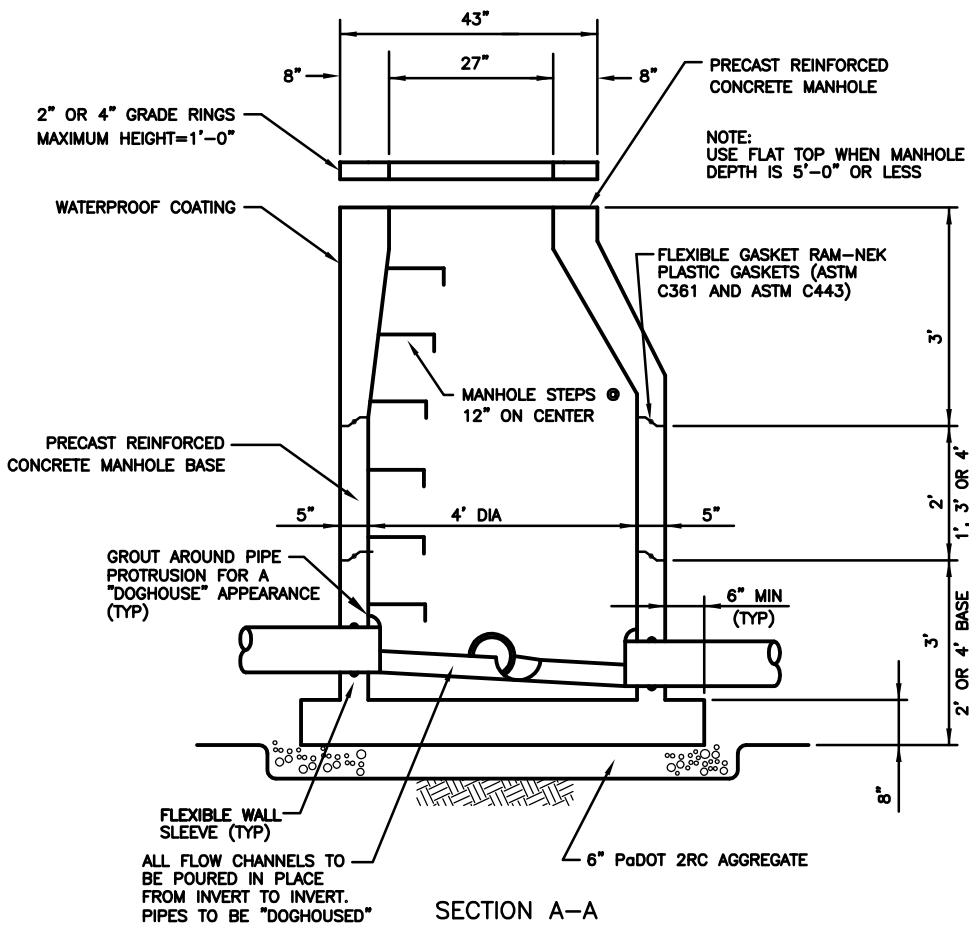
3.03 INSTALLATION

- A. Install valves and accessories in accordance with manufacturer's instructions.
- B. Locate valves as shown on drawings.
- C. Install valves in closed position.

3.04 ADJUSTMENT

- A. Check and adjust valves and accessories for smooth operation.

END OF SECTION



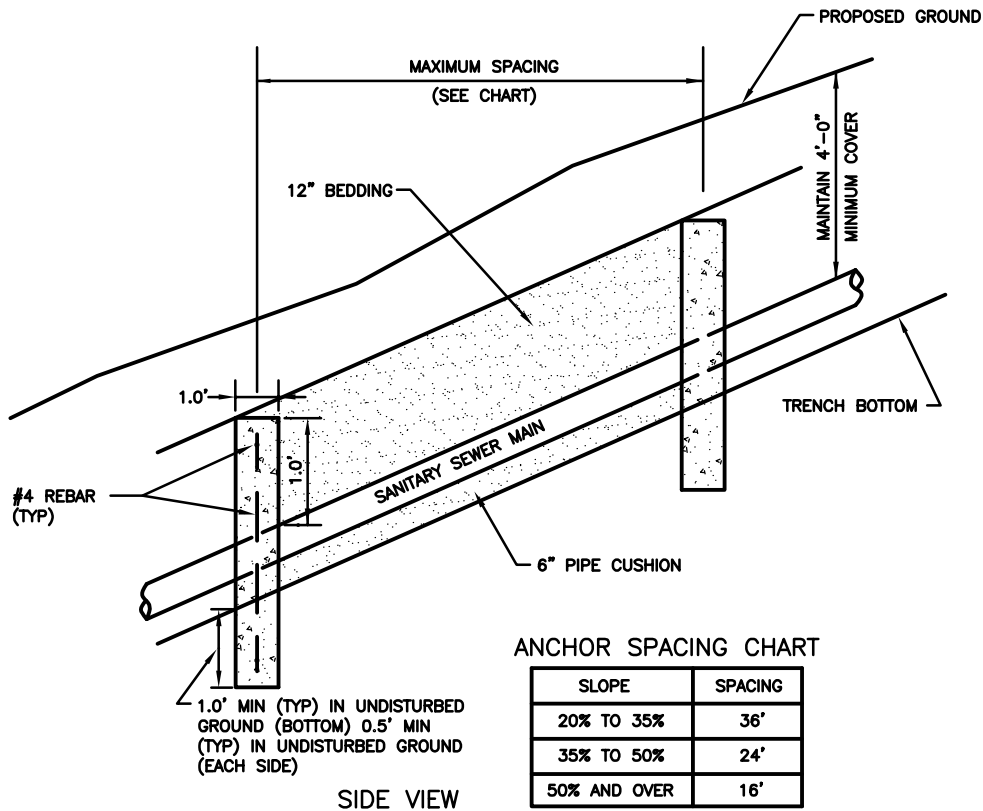
STANDARD DETAILS MANHOLE

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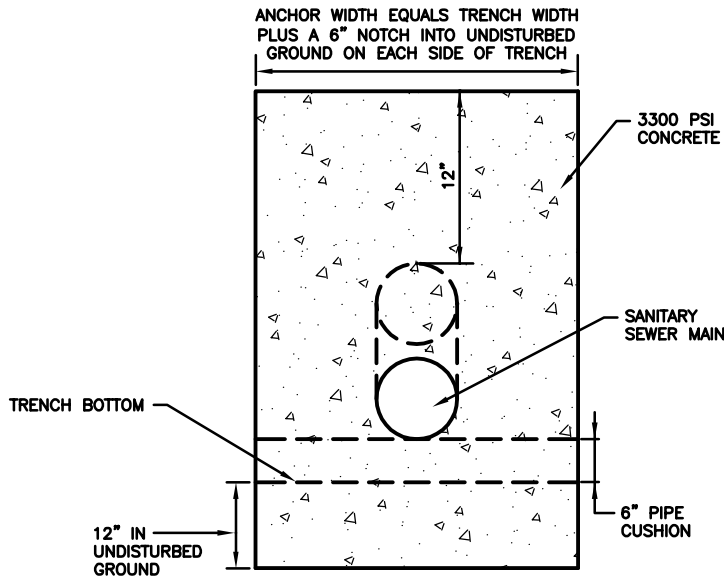
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ANCHOR SPACING CHART

SLOPE	SPACING
20% TO 35%	36'
35% TO 50%	24'
50% AND OVER	16'

SIDE VIEW



END VIEW

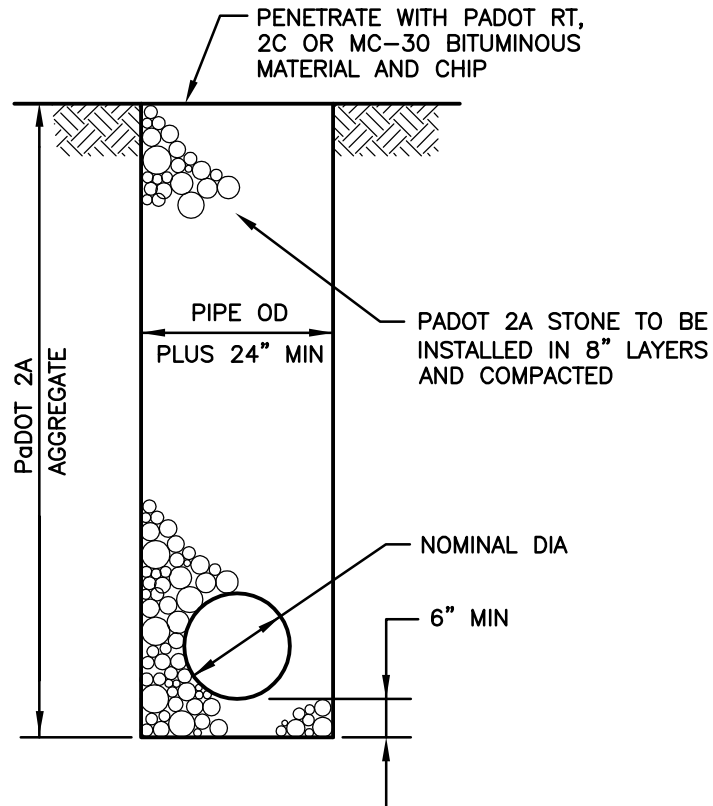
STANDARD DETAILS CONCRETE PIPE ANCHOR

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NOTE:

1. TRENCH WALLS TO BE VERTICAL TO A DEPTH OF AT LEAST 12" ABOVE TOP OF PIPE.
2. PIPE OD PLUS 30" MIN ON PIPE LARGER THAN 48"

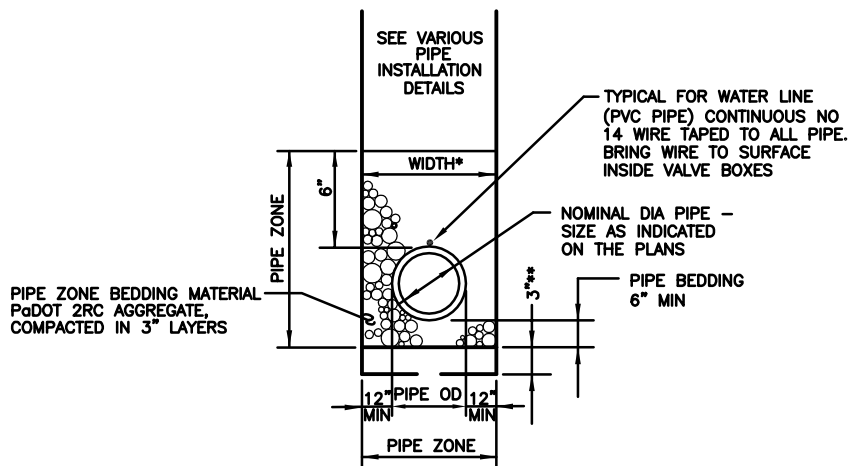
**STANDARD DETAILS
PIPE INSTALLATION IN
STATE ROADWAY SHOULDER**

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NOTES:

1. TRENCH WALLS TO BE VERTICAL TO A DEPTH OF AT LEAST 12" ABOVE TOP OF PIPE.
2. * WIDTH DETERMINED BY PIPE INSTALLATION APPLICATION.
3. ** OVER-EXCAVATE TRENCH ADDITIONAL 3" IF ROCK, HARD SHALE, OR UN-YIELDING MATERIAL ENCOUNTERED BACKFILL WITH SPECIFIED BEDDING MATERIAL.

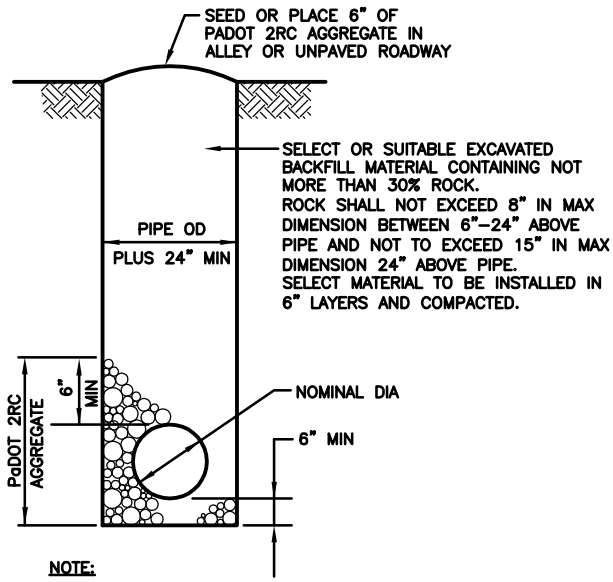
STANDARD DETAILS PIPE BEDDING

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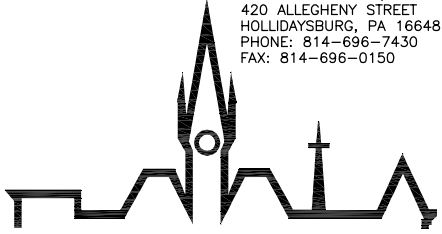
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NOTE:
 1. TRENCH WALLS TO BE VERTICAL TO A DEPTH OF AT LEAST 12" ABOVE TOP OF PIPE.

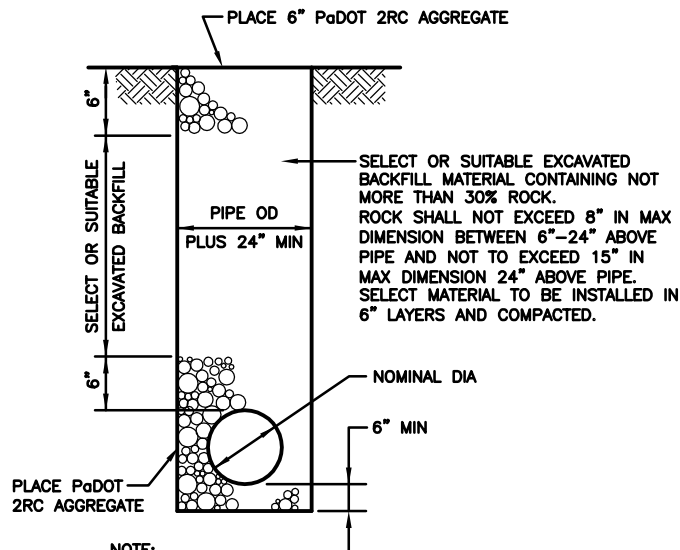
**STANDARD DETAILS
 PIPE INSTALLATION IN
 UNPAVED SURFACE**

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NOTE:

1. TRENCH WALLS TO BE VERTICAL TO A DEPTH OF AT LEAST 12" ABOVE TOP OF PIPE

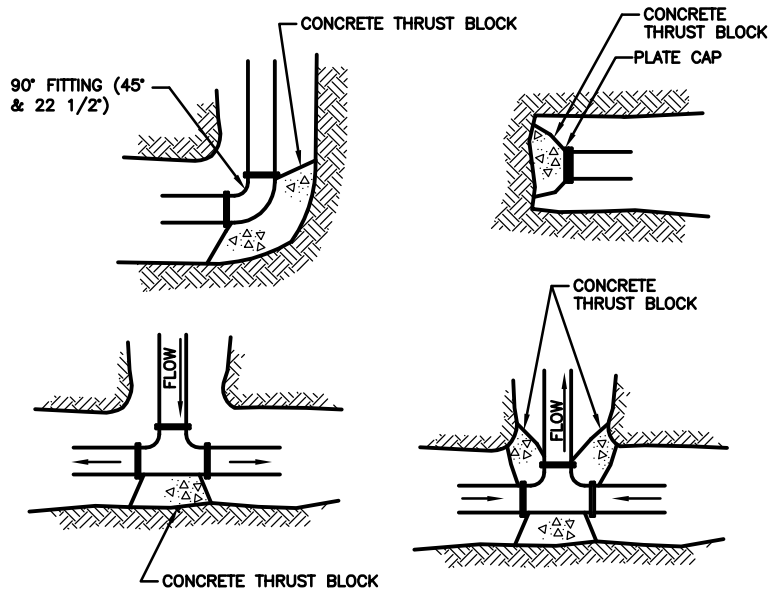
**STANDARD DETAILS
PIPE INSTALLATION IN
MUNICIPAL ROAD SHOULDER**

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NOTE:
 ADDITION TO THE CONCRETE THRUST BLOCKS ON ALL CONNECTIONS TO A WATER MAIN (INCLUDING ALL FIRE HYDRANT CONNECTIONS) SEE SPECIFICATIONS FOR SIZES

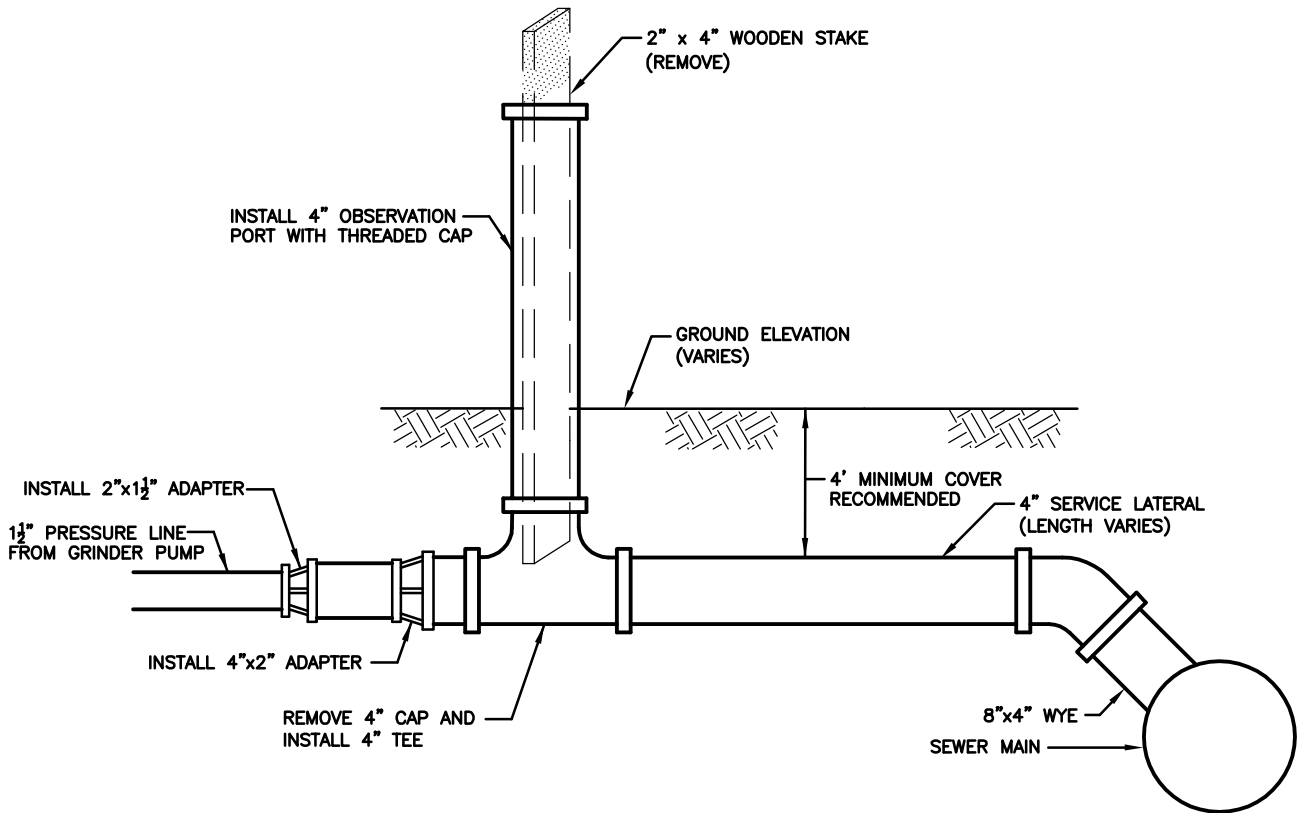
STANDARD DETAILS THRUST BLOCK

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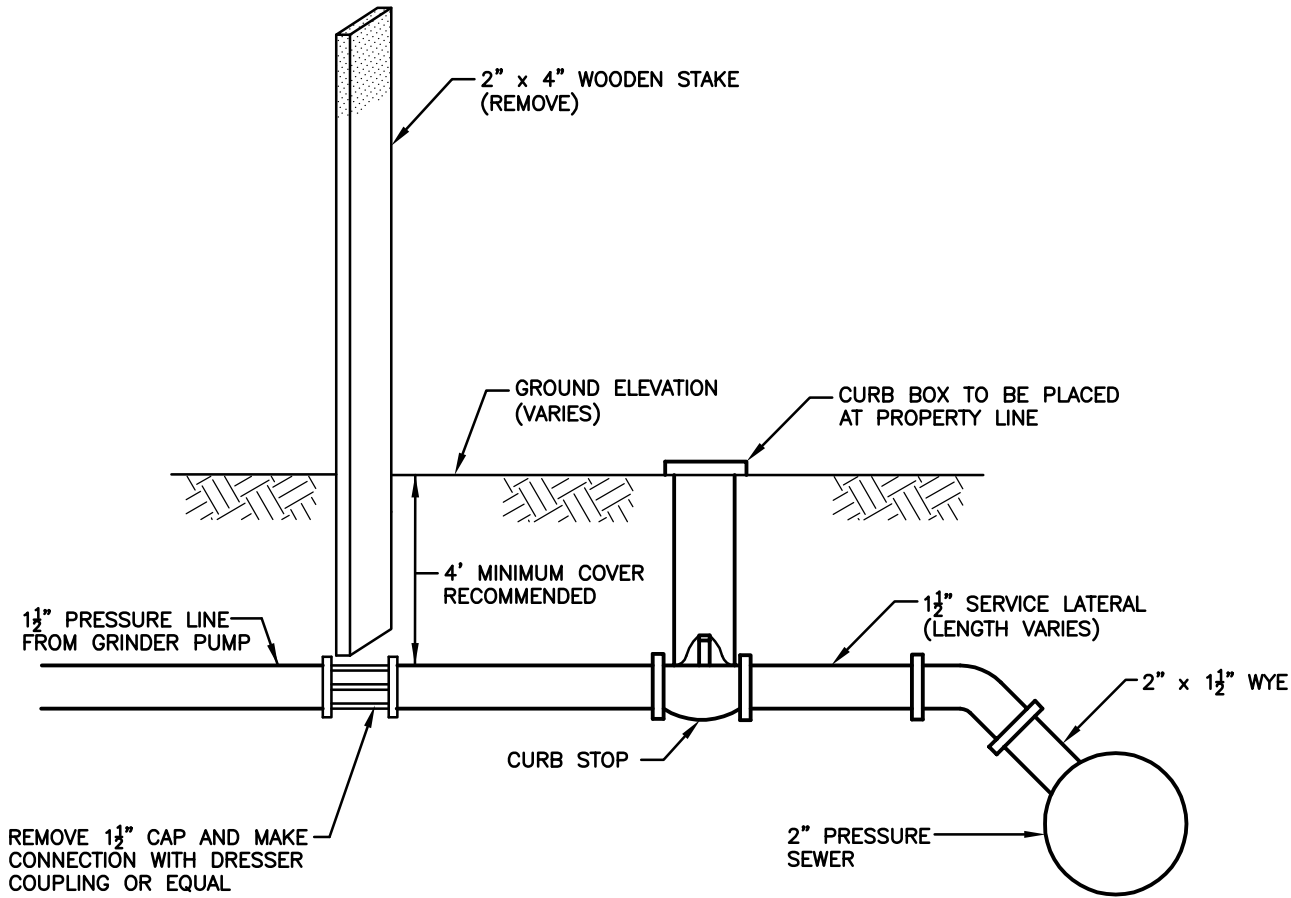
**STANDARD DETAILS
PRESSURE CONNECTION TO
GRAVITY LINE**

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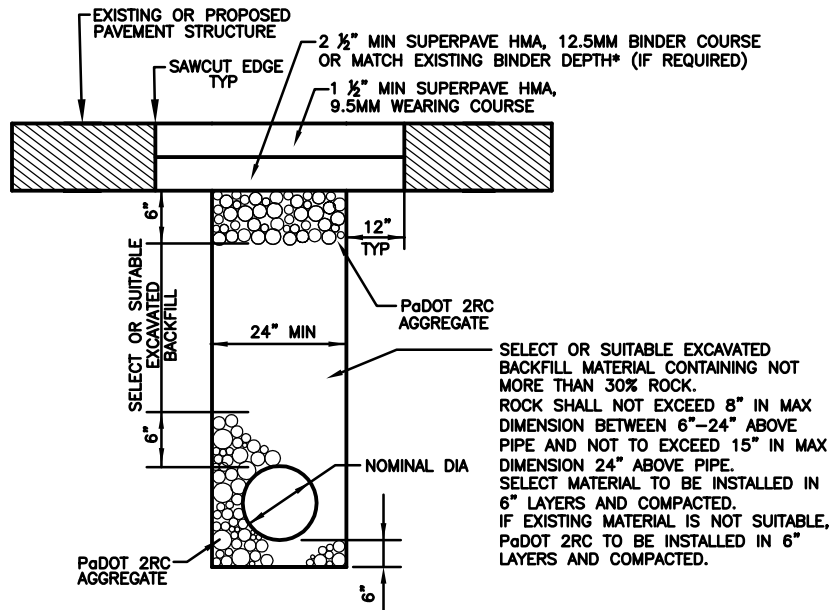
**STANDARD DETAILS
PRESSURE CONNECTION TO
PRESSURE LINE**

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NOTE:

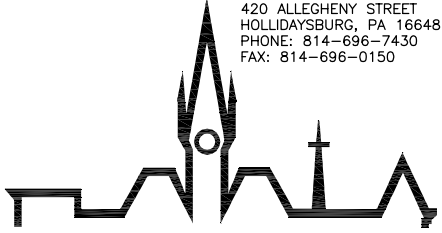
1. TRENCH WALLS TO BE VERTICAL TO A DEPTH OF AT LEAST 12" ABOVE TOP OF PIPE.
2. SUPERPAVE ESAL RATING AND SRL TO BE MINIMUM REQUIRED FOR EACH MUNICIPAL ROAD AS PER PENNDOT STANDARDS.

STANDARD DETAILS PIPE INSTALLATION IN MUNICIPAL ROADWAY

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RULES, REGULATIONS AND POLICY

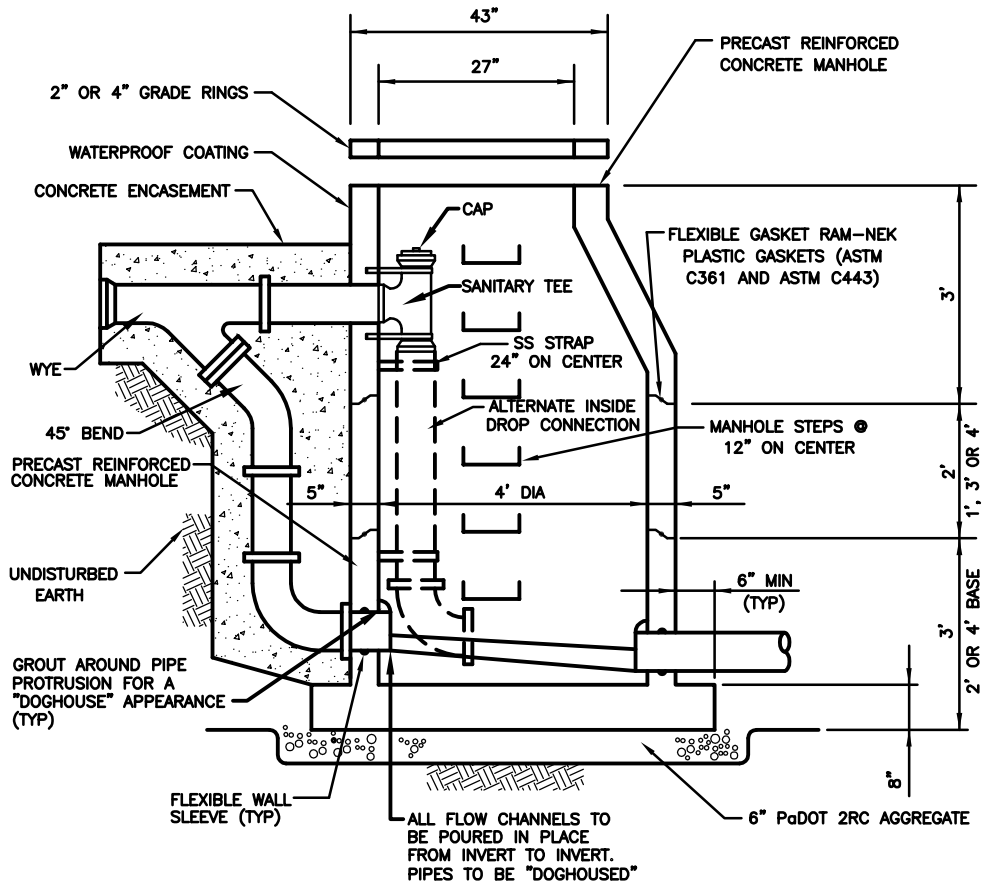
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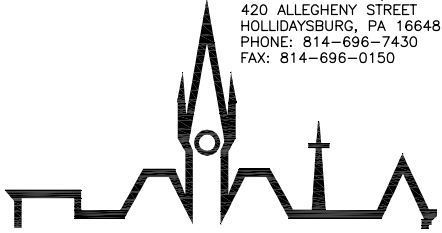


STANDARD DETAILS DROP MANHOLE

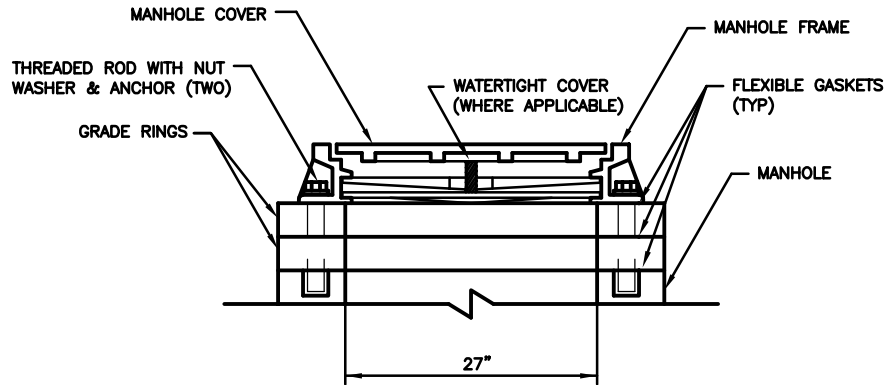
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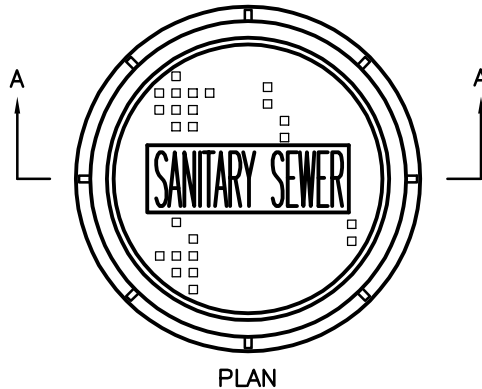
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SECTION A-A



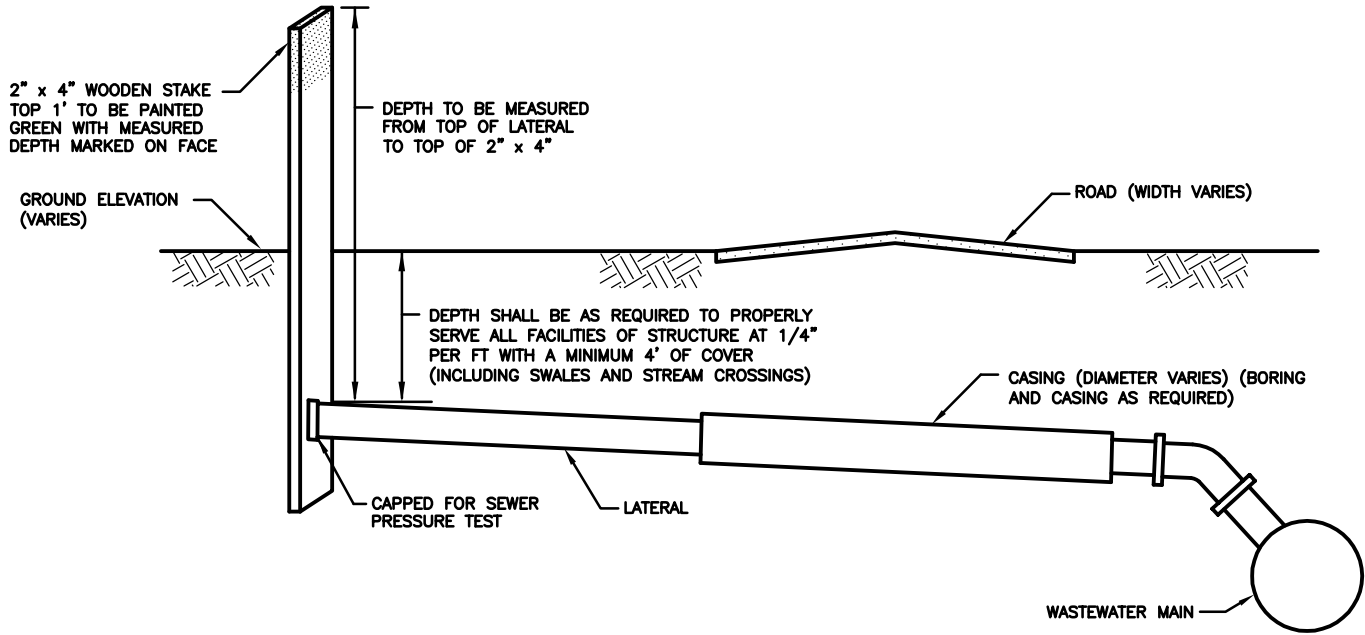
STANDARD DETAILS MANHOLE FRAME AND COVER

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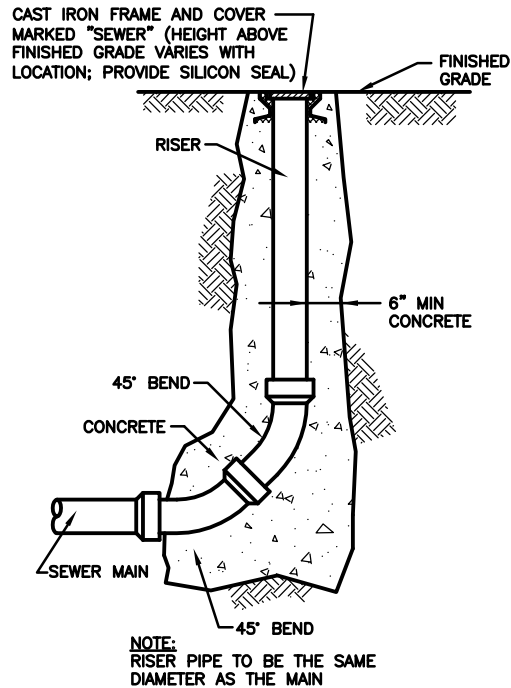
**STANDARD DETAILS
SEWER SERVICE LATERAL**

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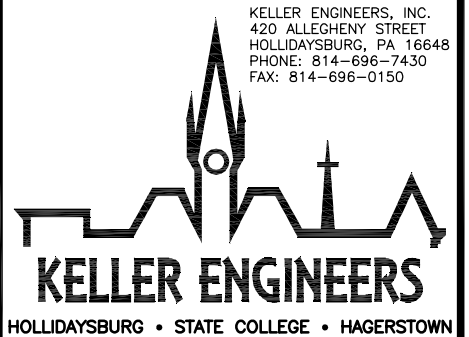
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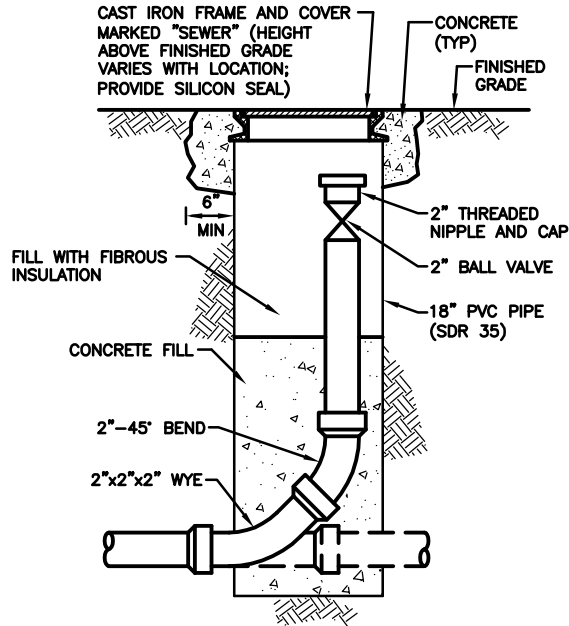


STANDARD DETAILS CLEANOUT

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RULES, REGULATIONS AND POLICY

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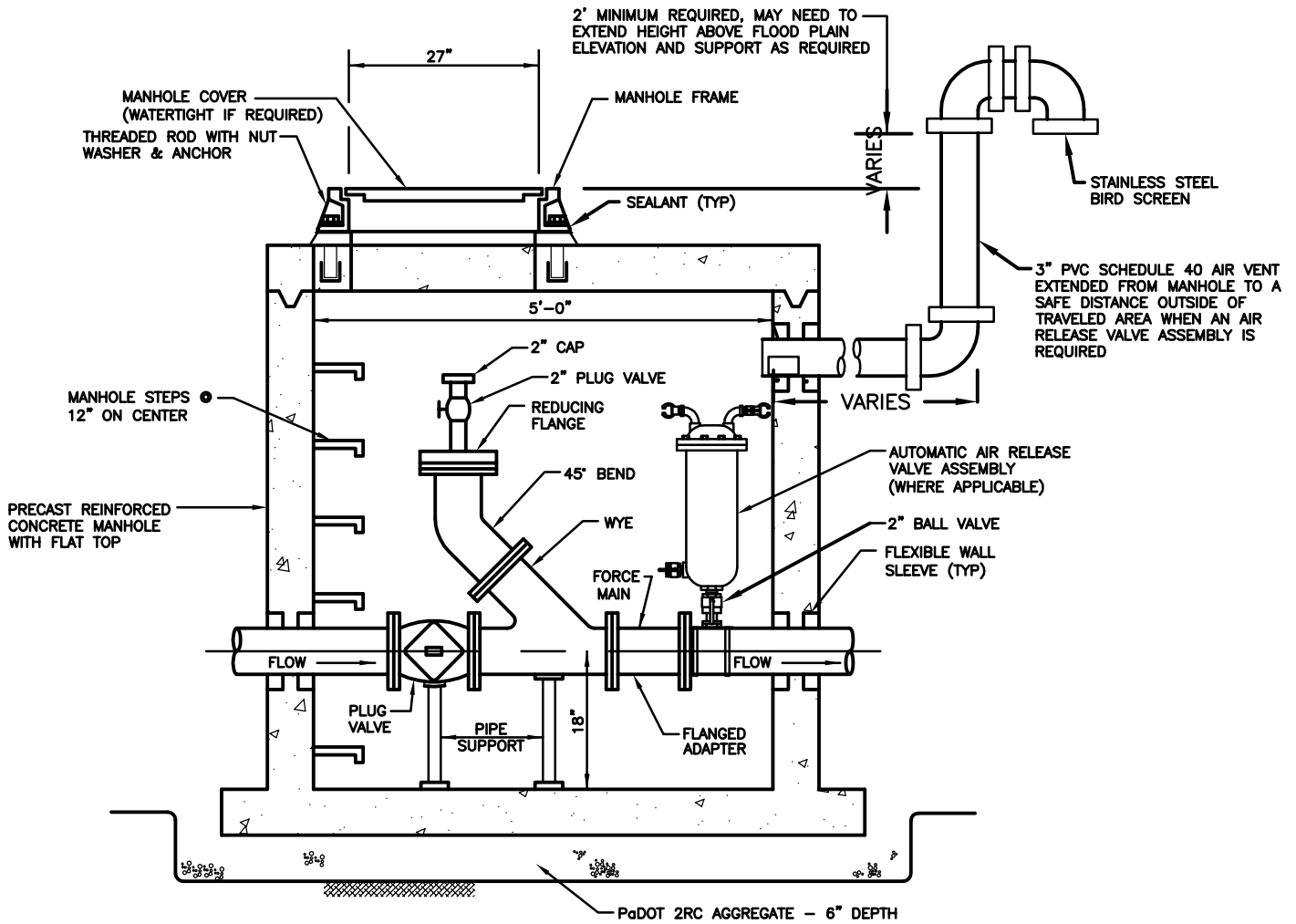
STANDARD DETAILS PRESSURE CLEANOUT

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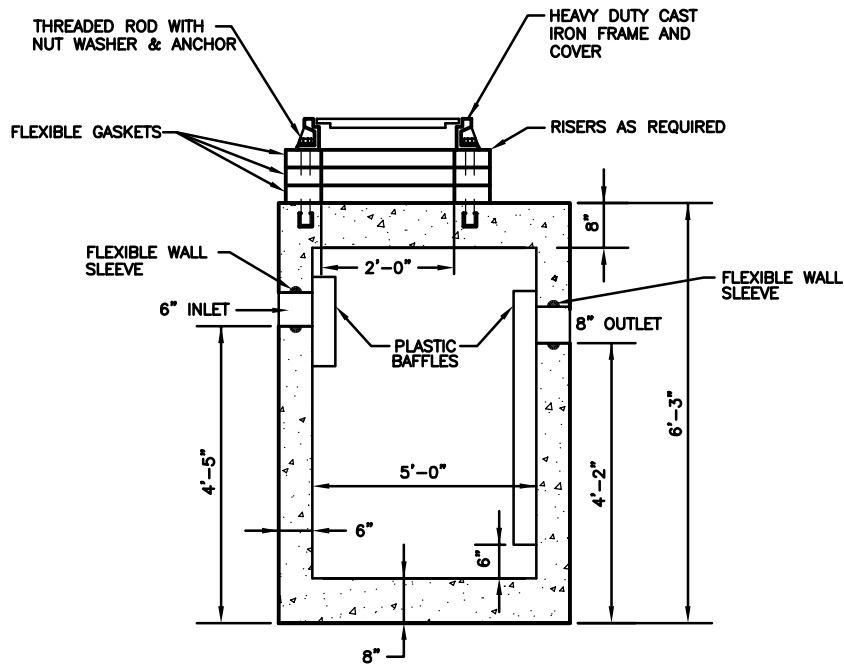
STANDARD DETAILS
FORCE MAIN CLEANOUT

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NOTE:
 CAPACITY - 500 GALLON, MONARCH
 PRODUCTS COMPANY, INC OR EQUAL

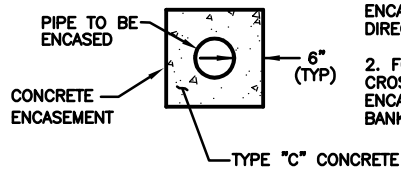
STANDARD DETAILS GREASE AND OIL INTERCEPTOR

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- NOTES:**
1. FOR UTILITY CROSSING WITH LESS THAN 18" OF VERTICAL CLEARING: EXTEND CONCRETE ENCASEMENT 4.5' IN BOTH DIRECTIONS FROM CROSSING
 2. FOR MINOR STREAM CROSSINGS: EXTEND CONCRETE ENCASEMENT TO BOTH STREAM BANKS

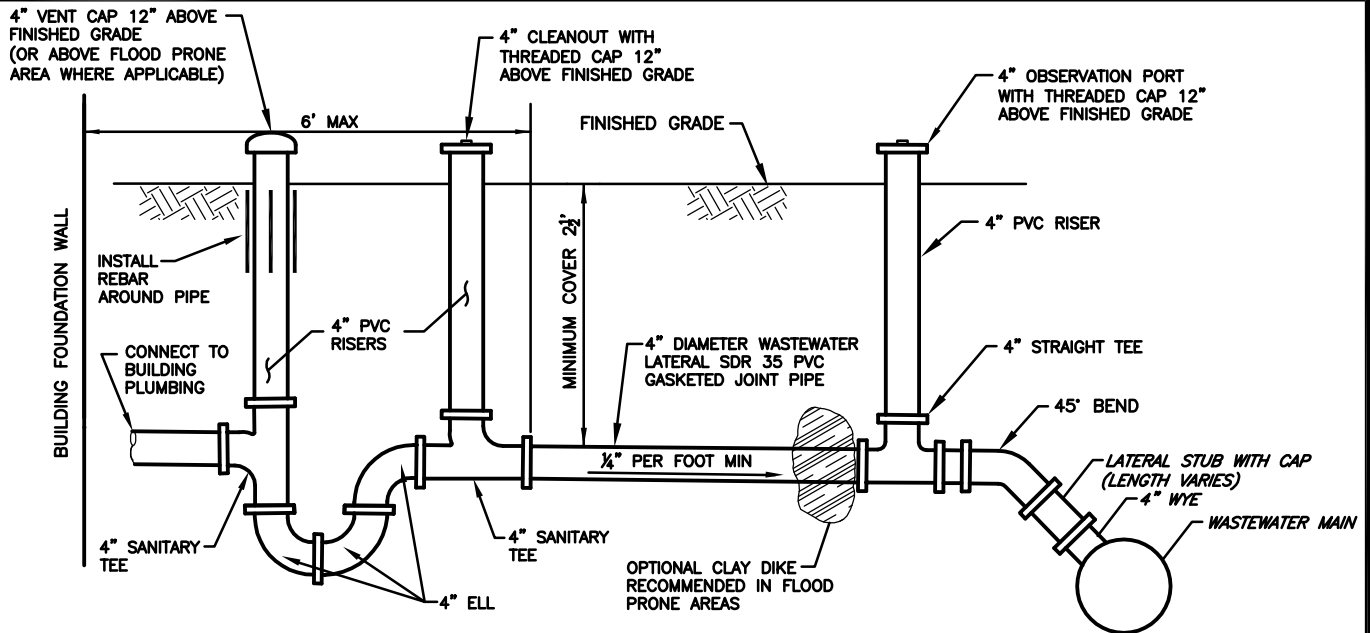
STANDARD DETAILS CONCRETE ENCASEMENT

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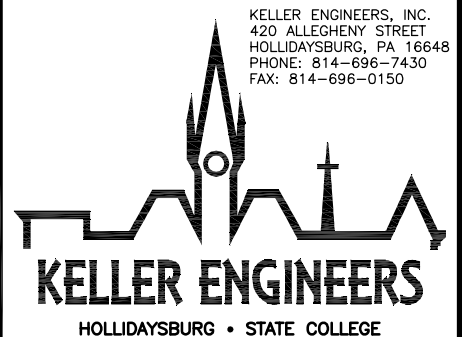


1. THE BUILDING WASTEWATER LATERAL IS REQUIRED TO BE LAID ON A GRADE OF ONE-QUARTER ($\frac{1}{4}$) OF AN INCH OR GREATER PER FOOT FROM BUILDING FOUNDATION WALL TO THE OBSERVATION PORT.
2. THE WASTEWATER LINE, AS COMPLETED, SHALL BE A MINIMUM OF $2\frac{1}{2}$ FEET BELOW THE GROUND SURFACE.
3. A WASTEWATER VENT PIPE WILL BE REQUIRED WITHIN FIVE (5) FEET OF THE BUILDING FOUNDATION AND EXTENDING NO LESS THAN (12) INCHES ABOVE THE GROUND OR HIGH ENOUGH ABOVE A FLOOD PRONE AREA WHERE APPLICABLE. IF NOT IN A WET AREA, HOMEOWNER MAY USE A STEEL CASTING OVER PLASTIC PIPE AND KEEP IT AT GROUND LEVEL. THE STEEL CASTING WILL BE AT HOMEOWNER'S EXPENSE. IT MAY ONLY BE AT GROUND LEVEL IF A STEEL CASTING IS USED.
4. AFTER THE VENT PIPE, A TRAP CONSISTING OF TWO (2) NINETY (90) DEGREE BENDS MUST BE INSTALLED.
5. IMMEDIATELY FOLLOWING THE TRAP, A CLEANOUT IS TO BE INSTALLED AS ILLUSTRATED IN THE DIAGRAM. THE OBSERVATION PORT MUST BE INSTALLED AS ILLUSTRATED IN THE DIAGRAM.
6. IT IS REQUIRED THAT PADOT 2B STONE IS TO BE USED SIX (6) INCHES ABOVE, BELOW AND BESIDE THE LATERAL PIPE—THE ENTIRE LENGTH OF LATERAL FROM THE BUILDING FOUNDATION WALL TO THE CONNECTION AT THE OBSERVATION PORT.
7. NO FOUNDATION, YARD, ROOF DRAIN, SUMP PUMP OR ANY OTHER CONNECTIONS PERMITTING ANYTHING OTHER THAN SANITARY SEWAGE (AS DEFINED BY AUTHORITY REGULATIONS) SHALL BE DISCHARGED TO THE SANITARY SEWER.
8. IT IS RECOMMENDED THAT A CLEANOUT BE INSTALLED AT BENDS IN THE LINE AND REQUIRED EVERY 100'.
9. NO CONNECTIONS TO BE MADE TO CLAY PIPE. SDR 35 OR DUCTILE/CAST IRON TO EXTEND THROUGH ENTIRE FOUNDATION WALL.
10. ENTIRE TRENCH TO REMAIN OPEN FOR INSPECTION. PIPE AND FITTINGS MAY BE CONNECTED AND STONE BEDDING (UNDERNEATH PIPE ONLY) SHALL BE LAID; HOWEVER, BACKFILLING OF TRENCH IS NOT PERMITTED UNTIL PROPER INSPECTION BY THE AUTHORITY'S DESIGNATED INSPECTOR.
11. NO CONNECTIONS TO HOUSE OR THE LATERAL STUB PROVIDED BY THE AUTHORITY ARE TO BE MADE PRIOR TO THE APPROVAL OF THE INSPECTOR.
12. THE AUTHORITY REQUIRES LINE TO BE AIR TESTED AT FIVE (3.5) POUNDS OF PRESSURE FOR A MINIMUM OF FIVE (5) MINUTES.
13. IF YOU WERE USING A SEPTIC TANK, YOU MUST PROVIDE RECEIPT TO THE AUTHORITY THAT IT WAS PUMPED OUT AT TIME OF CONNECTION.

STANDARD DETAILS SEWER BUILDING CONNECTION

WEST PROVIDENCE TOWNSHIP MUNICIPAL AUTHORITY
RULES, REGULATIONS AND POLICY

83 EAST FIFTH AVENUE EVERETT, PA 15537
OFFICE: (814) 652-5943 FAX: (814) 652-5711
WEST PROVIDENCE TOWNSHIP, BEDFORD COUNTY
PENNSYLVANIA



WEST PROVIDENCE TOWNSHIP MUNICIPAL AUTHORITY
DEVELOPERS AGREEMENT

THIS AGREEMENT, made and executed on this _____ day of _____, 20____ by and between the West Providence Township Municipal Authority, a body existing by virtue of the laws of the Commonwealth of Pennsylvania, (hereinafter referred to as "Owner,") and (hereinafter referred to as the "Developer").

WITNESSETH:

WHEREAS, Developer intends and is about to develop for residential, commercial or industrial purposes a certain tract of land to be developed and identified as

, and requests the Owner to furnish sewage service thereto, which tract, the locations and dimensions of the streets, roads and alleys therein, and the location of the existing structures and the structure intended to be erected thereon, is therefore designated and described on a final land development plan of

, and

WHEREAS, Developer has made application to the Owner for permission to construct, at its own cost and expense and by its own contractors, a sanitary sewer system within the above designated and described tract of land shown on the Development Plan and to connect same when completed unto the existing sewage collection system of the Owner. Developer acknowledges that such application is made after having received information from officials of the Owner as to the optional methods by which such construction and connection may be accomplished and the relative costs and expenses thereof under the Rules and Regulations of the Owner; and

WHEREAS, the Owner has informed Developer of the construction requirements as established and set forth in the Owner's specifications and Developer acknowledges that he has read and is familiar with such specifications and does agree to fully and completely comply with all the provisions contained therein which shall not, however, in any event modify, waive, limit or otherwise constrict Developer's obligations contained in this Sewer Extension Agreement; and

NOW, THEREFORE, in consideration of the payments and promises hereinafter made, both parties intending to be legally bound hereby, it is mutually agreed as follows:

1. (a) That Developer, at its own cost and expense, will cause to be prepared, by qualified professional engineering personnel, detailed plans and specifications for the proposed extension to the sewer collection system of the Owner.
- (b) Such plans and specifications shall be drawn or imprinted upon sheets of dimensions 24" x 36", shall be drawn to a scale no less than 1 inch = 50 ft., and shall incorporate, at a minimum, the same data as required by the current Pennsylvania Department of Environmental Protection's Sewerage Manual and the Owner's Rules and Regulations.
- (c) All such plans, specifications, and Pennsylvania Department of Environmental Protection (DEP) permit application and supporting data shall be supplied to the Owner in at least (3) counterparts. The DEP permit application shall be prepared by the Developer in the name of the Owner.
- (d) The Owner will cause such plans, specifications and permit data to be submitted to the Consulting Engineers then representing the Owner. Such plans, specifications and permit data shall be revised or amended, if necessary, until they are unequivocally approved by the Owner as providing for an extension of a type and nature and so planned and to be constructed as to readily become an integral part of the collection system of the Owner. All changes, fees and fines in connection with these requirements shall be the Developer's responsibility.
- (e) Promptly upon the Owner's approval as aforesaid, the approved plans, specifications and permit data will be submitted by the Owner to DEP requesting approval thereof and the issuance of a Water Quality Management Permit, if applicable. Upon receipt of said permit and upon compliance by Developer with all applicable local ordinances and regulations, the Owner will notify the Developer that work may be started. All changes, fees and fines in connection with these requirements shall be the Developer's responsibility.
- (f) Developer shall be responsible for compliance with all DEP soil erosion and sediment pollution control requirements. All charges, fees and fines in connection with these requirements shall be the Developer's responsibility.
- (g) Developer shall be responsible for compliance with Owner's specifications, as herein before stated, shall not waive, limit or otherwise restrict Developer's obligations as contained in this Sewer Extension Agreement or the Owner's Rules and Regulations. Furthermore, this Agreement does not waive, limit or modify the requirements of the Manual or any other appropriate Rules and Regulations of the Owner concerning sewer extensions as may be identified in this Agreement.

WEST PROVIDENCE TOWNSHIP MUNICIPAL AUTHORITY
DEVELOPERS AGREEMENT

2. Developer shall hire and employ and pay its own contractor(s) to construct the extension according to the aforesaid approved plans and specifications, and the Owner, its servants, agents and/or employees shall have no responsibility or liability for payment of any part of the costs or expenses arising out of or relating to said construction or the labor, materials and equipment used therein or thereon or acquiring any rights-of-way for the collection lines and the Owner, its servants, agents and employees, shall have no responsibility or liability whatsoever for any injury or damage to any persons or property occurring upon or associated with the construction of the project. Developer shall be responsible for any and all safety measures or procedures required by statute regulation or good construction practice and Owner, its servants, agents or employees shall have no responsibility therefore. Furthermore, Developer agrees to indemnify and hold harmless Owner, its servants, agents and/or employees from any claim for injury or damage of any nature or kind whatsoever, to include reasonable attorney's fees, brought by any third party, to include Developer's employees or Developer's contractor(s), and their employees, arising from a breach of this Agreement or arising from Developer's breach of the Pennsylvania Department of Environmental Protection Sewerage Manual, or arising from Developer's breach of the Owner's specifications or from Developer's breach of any other statute, regulation or accepted construction practice.
3. Prior to commencement of any construction, the Developer shall furnish the Owner with a performance bond, with corporate surety, to cover all expenses incurred in connection with construction of the system in an amount equal to one hundred ten (110%) percent of the cost of the required improvements, which will be verified by submission of evidence of bona fide bids from any contractor or contractors chosen by the Developer or, in the absence of such, as established by the Owner's Engineer. Such Bond shall be in the form approved by the Owner. However, in lieu of a Bond, the Developer may post alternate financial security in the form of a cash escrow, as specified above, or in an irrevocable letter of credit or restricted escrow agreement in an appropriate lending institution, the amount as specified, provided any such irrevocable letter of credit and escrow agreement is satisfactory to and in the form approved by the Owner. If the construction is not completed within one (1) year from the date of posting of such financial security, the amount may be increased, at the sole discretion of the Owner, by an additional ten (10%) percent for each one-year period beyond the first anniversary date from the posting of the financial security or to one hundred ten (110%) percent of the cost of completing the required improvements as re-established on or about the expiration of the preceding one-year period.
4. Developer will not at any time discharge into the collection system any effluent other than "domestic sewage" (which term is herein defined to mean "sewage" other than "industrial waste", as those two terms are defined in Section 73.1 of Title 25, Part 1, Subpart C, Article 1, Chapter 73 of the Rules and Regulations of the Department of Environmental Protection of the Commonwealth of Pennsylvania (herein called "DEP"), emanating from the Development without the express written consent of the Owner, which consent shall not be unreasonably withheld or delayed, and without complying with such reasonable conditions as the Owner imposes under its "Rates, Rules and Regulations."

**WEST PROVIDENCE TOWNSHIP MUNICIPAL AUTHORITY
DEVELOPERS AGREEMENT**

Should the rules, regulations and orders of any governmental body or agency hereafter come into effect which prohibit the Owner from accepting certain types of sewage from the Development, Developer relieves the Owner from any and all responsibility under this Agreement as to the acceptance of such prohibited sewage.

5. Developer agrees to give the Owner ten (10) days' written notice of Developer's intention to begin construction of the collection system so that its construction may be properly inspected by the Owner. Any work which has begun before the expiration of such ten (10) day period without the consent of the Owner will not be approved, as well as any improperly constructed work, the existence of which the Owner has notified Developer promptly after the inspection which has disclosed such improper construction. At all times, the sewer contractor shall keep on the construction site, available to the Owner one (1) copy of the Approved Plans and Specifications, permits, any shop drawings approved by the Owner and the Owner's specifications.
6. During the course of the construction, all materials, workmanship and compliance with the approved plans and specifications shall be subject to the inspection and approval of the Owner. Upon completion of the construction and prior to connection of any building laterals to the Developer's extension to the collection system of the Owner, the Owner shall certify the satisfactory completion thereof. All inspections shall be at the cost of the Developer. The inspection fee shall be paid before the system is accepted by the Owner.
7. The Owner as well as its servants, agents and employees shall be named as additional insured in the Developer's insurance policies.
8. Promptly upon completion of the extension, the Developer shall:
 - (a) Prior to release of any Performance Bond as may be required under the Rules, Rates and Regulations, cause to be prepared and furnished to the Owner at the expense of the Developer, two (2) sets of "as built" drawings of the completed extension project, including the location and depth of each lateral, together with one (1) complete set for reproducible plans thereof.
 - (b) Prior to release of any Performance Bond as required under the Rates, Rules and Regulations, cause to be prepared, executed, acknowledged and delivered to the Owner ready for recording, at the sole expense of the Developer, a deed of dedication for the said entire extension project and conveyance of all pipes, manholes and all appurtenances, as well as all rights, liberties and privileges appurtenant thereto including rights-of-ways over the streets, roads, alleys, other thoroughfares and private lands necessary to the existence and future maintenance thereof. In the event a deed of dedication is not offered to the Owner, the Owner shall be entitled to specific performance of the Agreement and the costs of enforcing the Agreement,

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including reasonable attorney's fees, which shall be paid by the defaulting party and shall be made a part of the Order of the Court in granting specific performance.

- (c) Prior to making physical connection of any building lateral to the Developer's collection system extension, Developer shall furnish the Owner with a maintenance bond, with corporate surety to cover all maintenance expenses incurred in connection with the Collection System for the period of eighteen (18) months following acceptance by the Owner of the dedication of such system. The Bond shall be in the amount of ten (10%) percent of the cost of construction of such system and shall be in the form approved by the Owner. In lieu of a Bond, the Developer may put up a cash escrow in the amounts, as specified above, or a letter of credit in the amounts as specified above, provided the letter of credit is satisfactory to and in a form approved by the Owner.
 - (d) Prior to the dedication of any streets, the Developer shall convey unto the Owner, by an instrument in a form approved by the Owner and at the Developer's cost, an easement for the laying, relaying, maintenance and repair for the sewer lines in the collection system at their installed locations in the beds of such streets or across the lands of the Development, or both.
9. Upon receipt and recording of said deed of dedication, the extension project and all parts and appurtenances thereof as above described shall be, become and remain the sole, absolute and permanent property of the Owner free and clear of any lien, obligation or other liability in favor of the Developer, its successors or assigns, its contractor or contractors, its and their laborers, and material men and any of their creditors, or in favor of any other person or corporation, to the same end and effect as if the Owner had constructed the extension project with its own labor and at its own expense; and thereafter the Owner shall maintain, repair, rebuild and otherwise act toward said extension as its own property and at its own cost and expense and the Developer shall have no further obligation or responsibility thereto except as hereinafter provided. Nothing herein shall be construed to discharge or dilute the contractual obligations of the contractor or contractors of the Developer to guarantee their workmanship and to maintain their ditches and paving for a certain period of time following completion.
10. The Developer agrees to pay the Owner, pursuant to the Rules and Regulations of the Owner, the then-current tapping or connection fee for each sewer tap in the Development as it is connected into the system. The standard tapping fee for the sewer district involved shall apply.
11. Upon or prior to the date of this Agreement, and prior to the commencement of any construction, in addition to other security required to be posted by Developer, herein before identified and provided in Paragraph 3, the Developer shall deposit with the Owner, the receipt whereof is hereby acknowledged, the sum of One Thousand (\$1,000.00) Dollars

**WEST PROVIDENCE TOWNSHIP MUNICIPAL AUTHORITY
DEVELOPERS AGREEMENT**

which shall be held by the Owner, without interest, for application by the Owner to or toward the following costs chargeable to it in the performance of this Agreement:

- (a) The reasonable charges incurred by the Owner for examination and approval of the plans and specifications as referred to in Paragraph 1(d) hereof and the submission thereof to the Department of Environmental Protection under Paragraph 1(e).
- (b) The fees and charges, if any, paid by the Owner to DEP as referred to in Paragraph 1(e) hereof;
- (c) The expenses and charges of inspection as referred to in Paragraph 5. hereof; and
- (d) All reasonable attorney's fees and the legal fees with regard to the processing and administration of this Agreement and/or enforcing adherence and compliance with the Agreement.

Should the fund above deposited exceed the actual cost to the Owner of said specified charges and fees, the balance remaining upon the completion of the project shall be refunded in full to the Developer, but should said deposit be insufficient in the above respect, Developer shall pay the deficiency unto the Owner upon demand and prior to the connection of the extension to the sewer lines of the Owner.

- 12. This Agreement is binding upon the heirs, successors and assigns of the Parties hereto.
- 13. This Agreement is intended, in part, to further implement the provisions of the Rates, Rules and Regulations adopted by the Owner for the maintenance and operation of the sewer system and the provision of this Agreement shall at all times be subject to said Rules and Regulations.
- 14. Recording of Agreement - The parties hereto shall execute this Agreement before a Notary Public to enable the placement of the same of record at the sole cost of Developer in the Office of the Recorder of Deeds for Bedford County, Pennsylvania.
- 15. This Agreement constitutes the entire contract by the parties hereto and there are no other understandings, oral or written, relating to the subject matter. This Agreement may not be changed, modified or amended in whole or in part except in writing, signed by all the parties hereto.
- 16. Should any ambiguities be found within this Agreement, such ambiguities shall be construed in favor of the Owner.

IN WITNESS WHEREOF, the Owner has caused the within Agreement to be executed in its corporate name over the signature of its Manager, and its corporate seal to be hereunto affixed, duly attested by its Secretary; and Developer has caused same to be executed by its duly authorized representatives all on the day and year first above written.

WEST PROVIDENCE TOWNSHIP MUNICIPAL AUTHORITY
DEVELOPERS AGREEMENT

ATTEST:

WEST PROVIDENCE TOWNSHIP
MUNICIPAL AUTHORITY

Secretary

BY: Chairman

Witness

BY: Developer

July 1969

TOWNSHIP OF WEST PROVIDENCE,

Bedford County, Pennsylvania

ORDINANCE NO. 5-1

AN ORDINANCE

OF THE BOARD OF SUPERVISORS OF THE TOWNSHIP OF WEST PROVIDENCE, BEDFORD COUNTY, PENNSYLVANIA, COMPELLING ALL OWNERS OF IMPROVED PROPERTY LOCATED WITHIN THIS TOWNSHIP AND ACCESSIBLE TO AND WHOSE PRINCIPAL BUILDING IS WITHIN 150 FEET FROM THE SEWER SYSTEM TO BE CONSTRUCTED AND/OR ACQUIRED BY WEST PROVIDENCE TOWNSHIP MUNICIPAL AUTHORITY TO MAKE CONNECTION THEREWITH AND TO USE THE SAME, UPON NOTICE BY THIS TOWNSHIP; REGULATING THE MANNER OF MAKING CONNECTIONS; AUTHORIZING THIS TOWNSHIP TO MAKE CONNECTIONS AT THE COST AND EXPENSE OF ANY OWNER OF IMPROVED PROPERTY FAILING TO MAKE SUCH CONNECTION; ADOPTING CERTAIN RULES AND REGULATIONS AND PROVIDING FOR ADOPTION OF ADDITIONAL RULES AND REGULATIONS; PROHIBITING THE CONNECTION OF PRIVY VAULTS, CESSPOOLS, SINKHOLES, SEPTIC TANKS AND SIMILAR RECEPTACLES TO ANY SEWER; PROHIBITING THE MAINTENANCE OF CERTAIN RECEPTACLES AND REQUIRING ABANDONMENT THEREOF WHERE A SEWER IS AVAILABLE; SETTING FORTH RELATED MATTERS; AND PRESCRIBING PENALTIES FOR VIOLATION.

The Board of Supervisors of the Township of West Providence,
Bedford County, Pennsylvania, enacts and ordains as follows:

ARTICLE I

DEFINITIONS

SECTION 1.01. Unless the context specifically and clearly indicates otherwise, the meaning of terms and phrases used in this Ordinance shall

A. "Authority" shall mean West Providence Township Municipal Authority, a Pennsylvania municipality authority.

B. "Building Sewer" shall mean the extension from the sewage drainage system of any structure to the Lateral of a Sewer.

C. "Improved Property" shall mean any property located within this Township upon which there is erected a structure intended for continuous or periodic habitation, occupancy or use by human beings or animals and from which structure Sanitary Sewage and/or Industrial Wastes shall be or may be discharged.

D. "Industrial Establishment" shall mean any Improved Property used, in whole or in part, for the manufacturing, processing, cleaning, laundering or assembling of any product, commodity or article, or any other Improved Property from which wastes, in addition to or other other than Sanitary Sewage, shall be or may be discharged.

E. "Industrial Wastes" shall mean any and all wastes discharged from any Industrial Establishment, other than Sanitary Sewage.

F. "Lateral" shall mean that part of the Sewer System extending from a Sewer to the curb line or, if there shall be no curb line, to the property line or, if no such Lateral shall be provided, then "Lateral" shall mean that portion of, or place in, a Sewer which is provided for connection of any Building Sewer.

G. "Owner" shall mean any Person vested with ownership, legal or equitable, sole or partial, of any Improved Property.

H. "Person" shall mean any individual, partnership, company, association, society, corporation or other legal entity.

I. "Sanitary Sewage" shall mean normal water-carried household and toilet wastes from any Improved Property, including such ground, surface or storm water as may be present.

J. "Sewer" shall mean any pipe or conduit constituting a part of the Sewer System used or usable for sewage collection purposes.

K. "Sewer System" shall mean all facilities, as of any particular time, for collecting, pumping, transporting, treating and disposing of Sanitary Sewage and Industrial Wastes, situate in or adjacent to the Township and owned, maintained and operated by the Authority.

L. "Township" shall mean the Township of West Providence, Bedford County, Pennsylvania, acting by and through its Board of Supervisors or, in appropriate cases, by and through its authorized representatives.

ARTICLE II

USE OF PUBLIC SEWERS REQUIRED

SECTION 2.01. The Owner of any Improved Property accessible to and whose principal building is within 150 feet from the Sewer System shall connect such Improved Property therewith, in such manner as this Township may require, within 60 days after notice to such Owner from this Township to make such connection, and shall use the Sewer System, for the purpose of discharge of all Sanitary Sewage and Industrial Wastes from such Improved Property, subject to such limitations and restrictions as shall be established herein or otherwise shall be established by this Township or the Authority, from time to time.

SECTION 2.02. All Sanitary Sewage and Industrial Wastes from any Improved Property, after connection of such Improved Property with a Sewer shall be required under Section 2.01, shall be conducted into a Sewer, subject to such limitations and restrictions as shall be established herein or otherwise shall be established by this Township and the Authority, from time to time.

SECTION 2.03. No Person shall place or deposit or permit to be placed or deposited upon public or private property within this Township any Sanitary Sewage or Industrial Wastes in violation of Section 2.01.

No person shall discharge or permit to be discharged to any natural outlet within this Township any Sanitary Sewage or Industrial Wastes in violation of Section 2.01, except where suitable treatment has been provided which is satisfactory to this Township.

Property which has been connected to a Sewer or which shall be required under Section 2.01 to be connected to a Sewer.

Every such privy vault, cesspool, sinkhole, septic tank or similar receptacle in existence shall be abandoned and, at the discretion of this Township, shall be cleansed and filled, at the expense of the Owner of such Improved Property, under the direction and supervision of this Township; and any such privy vault, cesspool, sinkhole, septic tank or similar receptacle not so abandoned and, if required by this Township, cleansed and filled, shall constitute a nuisance and such nuisance may be abated as provided by law, at the expense of the Owner of such Improved Property.

SECTION 2.05. No privy vault, cesspool, sinkhole, septic tank or similar receptacle at any time shall be connected with a Sewer.

SECTION 2.06. The notice by this Township to make a connection to a Sewer, referred to in Section 2.01, shall consist of a written or printed document requiring such connection in accordance with provisions of this Ordinance and specifying that such connection shall be made within 60 days from the date such notice is given. Such notice may be given at any time after a Sewer is in place which can receive and convey Sanitary Sewage and Industrial Wastes for treatment and disposal from the particular Improved Property. Such notice shall be served upon the Owner by such method as shall be in accordance with law.

ARTICLE III

BUILDING SEWERS AND CONNECTIONS

SECTION 3.01. Except as otherwise provided in this Section 3.01, each Improved Property shall be connected separately and independently with a Sewer through a Building Sewer. Grouping of more than 1 Improved Property on 1 Building Sewer shall not be permitted, except under special circumstances and for good sanitary reasons or other good cause shown, and then only after special permission of this Township and of the Authority, in writing, shall have been secured and subject to such rules, regulations and conditions as may be prescribed by this Township and the Authority.

SECTION 3.02. All costs and expenses of construction of a Building Sewer and all costs and expenses of connection of a Building Sewer to a Sewer shall be borne by the Owner of the Improved Property to be connected; and such Owner shall indemnify and save harmless this Township and the Authority from all loss or damage that may be occasioned, directly or indirectly, as a result of construction of a Building Sewer or of connection of a Building Sewer to a Sewer.

SECTION 3.03. A Building Sewer shall be connected to a Sewer at the place designated by this Township or the Authority and where the Lateral is provided.

The invert of a Building Sewer at the point of connection shall be at the same or a higher elevation than the invert of the Sewer. A smooth, neat joint shall be made and the connection of a Building Sewer to the Lateral shall be

SECTION 3.04. If the Owner of any Improved Property located within this Township and accessible to and whose principal building is within 150 feet from the Sewer System, after 60 days' notice from this Township, in accordance with Section 2.01, shall fail to connect such Improved Property, as required, this Township may make such connection and may collect from such Owner the costs and expenses thereof. In such case, this Township forthwith, upon completion of the work, shall send an itemized bill of the cost of construction of such connection to the Owner of the Improved Property to which connection so has been made, which bill shall be payable forthwith. In case of neglect or refusal by the Owner of such Improved Property to pay said bill, this Township shall file a municipal lien for said construction within 6 months of the date of completion of said connection, the same to be subject in all respects to the general law providing for the filing and recovery of municipal liens.

SECTION 3.05. No Person shall uncover, connect with, make any opening into or use, alter or disturb in any manner any Sewer or any part of the Sewer System without first making application for and obtaining a permit, in writing, from the Authority, and paying to the Authority any tapping fee charged and imposed by the Authority against the Owner of each Improved Property who connects such Improved Property to a Sewer.

ARTICLE IV

RULES AND REGULATIONS GOVERNING

BUILDING SEWERS AND CONNECTIONS TO SEWERS

SECTION 4.01. Where an Improved Property, at the time connection to a Sewer is required, shall be served by its own sewage disposal system

or device, the existing house sewer line may be broken on the structure side of such sewage disposal system or device and attachment may be made, with proper fittings, to continue such house sewer line as a Building Sewer.

SECTION 4.02. No Building Sewer shall be covered until it has been inspected and approved by this Township and the Authority. If any part of a Building Sewer is covered before so being inspected and approved, it shall be uncovered for inspection at the cost and expense of the Owner of the Improved Property to be connected to a Sewer.

SECTION 4.03. Every Building Sewer of any Improved Property shall be maintained in a sanitary and safe operating condition by the Owner of such Improved Property.

SECTION 4.04. Every excavation for a Building Sewer 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 installation of a Building Sewer shall be restored, at the cost and expense of the Owner of the Improved Property being connected, in a manner satisfactory to this Township.

SECTION 4.05. If any Person shall fail or refuse, upon receipt of a notice of this Township or the Authority, in writing, to remedy any unsatisfactory condition with respect to a Building Sewer, within 60 days of receipt of such notice, this Township or the Authority may refuse to permit such Person to discharge Sanitary Sewage and Industrial Wastes into the Sewer System until such unsatisfactory condition shall have been remedied to the satisfaction of this

SECTION 4.06. This Township reserves the right to adopt, from time to time, additional rules and regulations as it shall deem necessary and proper relating to connections with a Sewer and the Sewer System, which additional rules and regulations, to the extent appropriate, shall be and shall be construed as part of this Ordinance.

ARTICLE V

ENFORCEMENT

SECTION 5.01. Any Person who shall violate this Ordinance shall be liable, upon summary conviction for a first offense and upon summary conviction for each subsequent offense, to a fine of not less than Fifteen Dollars (\$15) nor more than Twenty-Five Dollars (\$25), together with costs of prosecution in each case. Each day that a violation shall continue shall be deemed and shall be taken to be a separate offense and shall be punishable as such.

SECTION 5.02. Fines and costs imposed under provisions of this Ordinance shall be enforceable and recoverable in the manner at the time provided by applicable law.

ARTICLE VI

EFFECTIVE DATE

SECTION 6.01. This Ordinance shall become effective 5 days after adoption, as provided by law.

ARTICLE VII

SEVERABILITY

of this Ordinance, it being the intent of this Township that such remainder shall be and shall remain in full force and effect.

ARTICLE VIII

DECLARATION OF PURPOSE

SECTION 8.01. It is declared that enactment of this Ordinance is necessary for the protection, benefit and preservation of the health, safety and welfare of inhabitants of this Township.

ARTICLE IX

REPEALER

SECTION 9.01. All ordinances or parts of ordinances inconsistent with this Ordinance shall be and the same expressly are repealed.

DULY ENACTED AND ORDAINED, this 28 day of July, 1969, by the Board of Supervisors of the Township of West Providence, Bedford County, Pennsylvania, in lawful session duly assembled.

TOWNSHIP OF WEST PROVIDENCE,
Bedford County, Pennsylvania

ATTEST:

By: Robert E. Wright
Chairman of the Board of Supervisors

Lydia C. Bloom
Secretary

(SEAL)

CERTIFICATE

We, the undersigned, Chairman of the Board of Supervisors and Secretary, respectively, of the Township of West Providence, Bedford County, Pennsylvania (the "Township"), certify that: the foregoing is a true and correct copy of an Ordinance of the Board of Supervisors of the Township which duly was adopted by affirmative vote of a majority of the members of the Board of Supervisors of the Township at a meeting which duly was held on the 28th day of July, 1969; said Ordinance duly has been recorded in the Ordinance Book of the Township; said Ordinance duly was published as required by law; and said Ordinance remains in full force and effect, unaltered and unamended, as of the date of this Certificate.

IN WITNESS WHEREOF, we set our hands and the Secretary affixes official seal of the Township, this 6th day of August, 1969.

Robert L. Field
Chairman of the Board of Supervisors

Lydia C. Bloom
Secretary

(AL)

CERTIFICATE

I, the undersigned, Secretary of the Township of West Providence, Bedford County, Pennsylvania (the "Township"), certify: that the foregoing is a true and correct copy of an Ordinance of the Board of Supervisors of the Township which duly was adopted by affirmative vote of a majority of all members of the Board of Supervisors of the Township at a meeting of said Board of Supervisors of the Township duly convened and held according to law on ~~June 3~~ ^{July 28}, ~~1991~~ ¹⁹⁶⁹, at which meeting a quorum was present; that said Ordinance duly has been recorded in the Ordinance Book of the Township; said Ordinance duly has been published as required by law; and said Ordinance remains in effect, unaltered and unamended, as of the date of this Certificate.

I further certify that the Board of Supervisors of the Township met the advance notice requirements of the Sunshine Act, Act No. 1986-84 of the General Assembly of the Commonwealth of Pennsylvania, approved July 3, 1986, as amended, by advertising the time and place of said meeting and by posting prominently a notice of said meeting at the principal office of the Township or at the public building in which such meeting was held, all in accordance with such Act.

IN WITNESS WHEREOF, I set my hand and affix the official seal of the Township, this ~~7~~ ¹¹th day of May, 1992.

Carol Clark
Secretary

SEAL)

ORDINANCE

SECTION 1. PROHIBITING OF GROUND WATER DRAINAGE, ROOF DRAINAGE, DOWNSPOUT, SURFACE OR AREAWAY DRAINAGE. The following seepage and water shall be, and is hereby prohibited:

- A. Basement seepage and ground water seepage or any other uncontaminated seepage of water discharged into the West Providence Township Municipal Authority's Sewer System.
- B. Downspout, roof drainage, surface or areaway drainage discharged into the West Providence Township Municipal Authority's Sewer System.
- C. Each property owner whose property is presently connected to the West Providence Township Municipal Authority Sewer System shall immediately remove any connection of the aforesaid type of basement seepage, ground water drainage, downspout, roof drainage, and drainage from surface or areaway, and shall adequately and properly plug his house sewer system to prevent any further entrance of such drainage.
- D. No cross connection shall be made between the West Providence Township Municipal Authority's Sewer System and the potable water system, whereby vacuums or back siphonage could permit sanitary wastes to enter the potable water system. No cross connection shall be made between the Sewer System and storm drains or storm sewers.

No statement contained in this section shall be construed as prohibiting any special agreement or arrangement between the West Providence Township Municipal Authority and any person, whereby any industrial wastes or garbage may be admitted to the Sewer System, either before or after pre-treatment by the producer of such industrial wastes.

SECTION 2. FAILURE, NEGLIGENCE OR REFUSAL TO COMPLY WITH THE PROVISIONS OF THIS ORDINANCE. If the owner or owners of any building or buildings shall neglect or refuse to comply with the provisions of this Ordinance, the Township of West Providence and/or West Providence Township Municipal Authority shall serve a written notice upon the owner of owners, or upon the tenants of the property in possession of the premises if the said owner or owners cannot be found on the said premises, requiring the owners to comply with the provisions of this Ordinance in every respect within ninety (90) days after the service of such notice; and if said owners shall neglect or refuse to comply with said notice, the Township of West Providence and/or West Providence Township Municipal Authority may perform or cause to be performed, such work and labor, and furnish or cause to be furnished such materials as may be necessary to comply with the provisions of this Ordinance, at the cost of expense of such owner or owners together with ten (10%) percent additional thereof, and all service and expenses incidental thereto, including but not limited to fines, penalties or fees imposed on West Providence Township Municipal Authority by the Commonwealth of Pennsylvania's Department of Environmental Protection or any other regulatory agency, which sums shall be collected from said owner or owners for the use of the Township of West Providence and/or the West Providence Township Municipal Authority, as the case may be, as debts

are, by law, collectable. Or, in their discretion, the Township of West Providence and/or the West Providence Township Municipal Authority may have its proper officers file a municipal lien or claim against said premises as provided by the act of the Assembly in such cases made and provided.

SECTION 3. PENALTY FOR VIOLATION. It shall be a summary offense for any person, firm, association or corporation to violate any of the provisions of this Ordinance, which shall upon conviction, be punished by a fine not to exceed One-Hundred (\$100.00) Dollars for each offense for every 10 days the problem remains uncorrected after notice, recoverable with costs; and in default of payment of the fine, and costs, shall be subject to imprisonment in the County Jail for a period not exceeding thirty (30) days; each day that a violation is continued shall constitute a separate offense. In the case of firms or associations, the penalties may be imposed upon the partners or members thereof, and in the case of corporations, upon the officers thereof.

SECTION 4. SEVERABILITY. The provisions of this Ordinance are severable and the invalidity of any section, clause or provision of this Ordinance shall not affect or impair the validity of any other part of the Ordinance, which can be given effect without the invalid part of parts.

SECTION 5. REPEALER. All ordinances or resolutions or parts of ordinances or resolutions not in accord with this Ordinance are hereby repealed insofar as they affect this Ordinance.

SECTION 6. EFFECTIVE DATE. This Ordinance shall become and take effect immediately upon the date of its enactment.

ORDAINED AND ENACTED into law by the Township Supervisors of the
Township of West Providence in lawful session assembled this 3rd day of November,
1997.

Township of West Providence

ATTEST:

By Donald E. Welf
President

SANITARY SEWER SERVICE APPLICATION

The applicant agrees to abide by the Operating Rules and Regulations of the Authority. There is a non-refundable fifteen (\$15.00) application fee payable at the time of application. All applications are on a first come first served basis. The applicant agrees to pay all required fees (Tap and Capacity) as applicable within two (2) weeks of approval of the application. If fees are not paid within two (2) weeks of any approval, the application is voided. The applicant agrees to commence service for the applied usage within one (1) year from the date of approval by the Authority. Unused Tap and Capacity fees will be refunded to the applicant if application is withdrawn by the applicant or if the application becomes void due to service not commencing in one (1) year of the application approval. If service does not commence within one (1) year, the application becomes void and must be re-applied for to be considered for service. If the service is re-applied for, the applicant loses the previously held position on any waiting list for service and will be placed on the waiting list as of the re-approval date.

I (we) the applicant agree to the conditions of this application:

Signature _____

Signature _____

Date approved _____

Date denied _____

By Signature _____ of the Authority

Date of Application _____

Applicant Requesting Service:

Name _____

Address _____

Telephone _____

Contact Person _____

Location of requested service and tax parcel number if known: (Brief description) _____

Service requested for (check one): Residential

Commercial

Industrial

If Commercial Service: Type of Business (be specific) _____

Number of Employees _____ Seating capacity if food service _____

If Commercial Service: Type of Business (be specific) _____

Number of Employees _____ Seating capacity if food service provided for employees _____

NOTE: A listing of chemicals used and Material Safety Data Sheet's may be required

West Providence Township Municipal Authority

Inspection Record

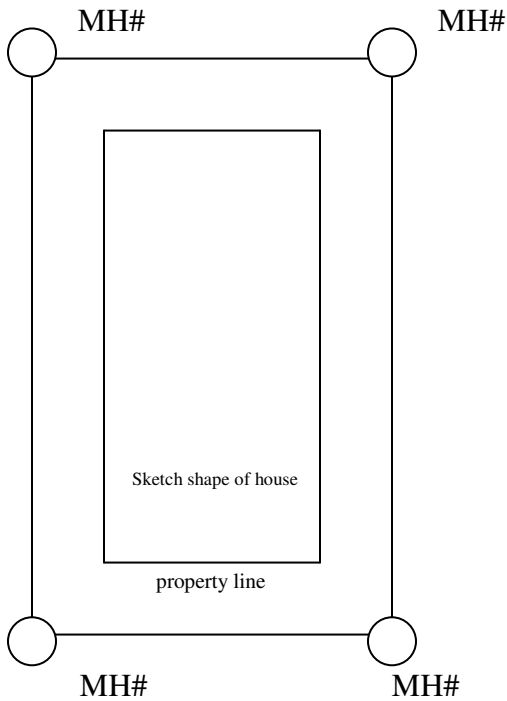
Property Owner: _____ Date _____

Street Address: _____

Telephone: _____

Tax map #: _____ Plan Sheet #: _____

PA One Call Serial #: _____



Depth of pipe at foundation wall _____
 Distance from observation port to main line _____
 Total length of building sewer _____
 Septic tank pumped and filled? _____
 Basement or first floor service? _____
 Notes: _____

Inspectors Check List

- | | | |
|--|--|--|
| <input type="checkbox"/> SDR 35 pipe | <input type="checkbox"/> Bedding 6" around pipe | <input type="checkbox"/> Neat smooth clean joints |
| <input type="checkbox"/> Minimum 1/4" per ft. slope | <input type="checkbox"/> Observation ports installed as per diagram | <input type="checkbox"/> Minimum 4 ft. cover over pipe |
| <input type="checkbox"/> Check for illegal storm water connections | <input type="checkbox"/> PVC or cast iron pipe through building wall | <input type="checkbox"/> Verification if "other" pipe under foundation |

I do hereby certify that the sanitary sewer connection described herein was made in accordance with the Rules and Regulations of the West Providence Township Municipal Authority, and that no roof, floor, foundation, surface, underground drainage or sump pumps are connected to the sanitary sewer system.

Property owner

Contractor

Township Inspector