

**MANTUA TOWNSHIP  
MUNICIPAL UTILITIES AUTHORITY**

**RULES AND REGULATIONS**

**Mantua Township MUA  
397 Main Street  
Mantua, New Jersey 08051  
Phone (856) 468-1111**

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## **SECTION 1 INTRODUCTION & DEFINITIONS**

### **A. Purpose**

The purpose of the Authority is to implement the Municipal Utilities Authorities Law, N.J. Law of L. 1957, c. 183, s.1, c.40:14B- 2 et seq. 1, in the public interest for the Township of Mantua in the County of Gloucester and in the State of New Jersey, in order to foster and promote relief of waters from pollution and abate the menace to public health. These Rates, Rules and Regulations are established for the conduct of the Authority's business, to cover the use of sanitary sewers, pump stations and sewage treatment plants, water distribution systems, wells, reservoirs, standpipes, elevated tanks and all items related to public sewer systems and water works, to provide a schedule of fees and rates, and to outline allowable procedures to whatever else is deemed proper within the sphere of the Authority's activity.

### **B. Office of Authority and Hours of Business**

The principal office of the Authority, place of business and mailing address is 397 Main Street, Mantua, New Jersey 08051.

The office of the Authority will be open for the purpose of the transaction of regular business between the hours of 8:30 A.M. and 4:30 P.M., prevailing time, each weekday, Monday through Friday, except holidays.

### **DEFINITIONS:**

**Unless the context specifically indicates otherwise, the meaning of the terms used in these Rates, Rules and Regulations shall be as follows:**

#### **1.1 Authority**

Shall mean the Mantua Township Municipal Utilities Authority.

#### **1.2 Apartment**

Shall mean one of the series of attached one family dwelling units each having a common or party wall or walls between it and neighboring units, and which shares with its attached neighboring dwelling units such facilities as pedestrian walks, gardens, lawns, utilities, sanitary systems and recreation area.

#### **1.3 Biochemical Oxygen Demand (BOD)**

Shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days of 20 degrees C, expressed in milligrams per liter.

#### **1.4 Building drain**

Shall mean that part of the lowest horizontal piping of a drainage system which receives the discharge from soil, waste, and other wastewater drainage pipes inside the walls of the building and conveys it to the building sewer, beginning five (5) feet (1.5 meters) outside the inner face of the building wall.

#### **1.5 Building sewer**

Shall mean the extension from the building drain to the public sewer or other place of disposal, also called house connection or lateral. (See Lateral 1.13).

#### **1.6 Customer**

Shall mean the applicant for water and/or sewer service at one household or business, whether owner or tenant, and who enters into an agreement therefore.

#### **1.7 Domestic Consumer Unit**

Shall mean a single dwelling or structure normally occupied by a single family.

#### **1.8 Domestic Sewage**

Shall mean the normal waterborne fluid wastes from residences, commercial establishments, institutions and industrial establishments, limited to the wastes from kitchens, bathrooms, water closets, lavatories and laundries.

#### **1.9 Easement**

Shall mean an acquired legal right for the specific use of land owned by others.

#### **1.10 Floatable oil**

If oil, fat or grease in a physical state such that it will separate by gravity from wastewater by treatment in an approved pretreatment facility. The wastewater shall be considered free of floatable fat if it is properly pretreated and the wastewater does not interfere with the collection system.

#### **1.11 Garbage**

Shall mean the animal and vegetable waste resulting from the handling, preparation, cooking and serving of foods.

#### **1.12 Industrial wastes**

Shall mean the wastewater from industrial processes, trade, or business as distinct from domestic or sanitary wastes or sewage.

**1.13 Lateral**

Shall mean the service line owned by the customer and extending from the dwelling or establishment to the curb.

**1.14 Main**

Shall mean the Authority owned or leased piping and appurtenances, in or along public highways and streets, or along privately owned right-of-way, used for the transmission or distribution of water to or for the collection of domestic sewage or industrial wastes from its customer.

**1.15 Person**

Shall mean any individual, firm, company, association, society, corporation, or group.

**1.16 pH**

Shall mean the logarithm of the reciprocal of the hydrogen ion concentration. The concentration is the weight of hydrogen ions, in grams, per liter of solution. Neutral water, for example, has a pH value of 7.0.

**1.17 Properly shredded garbage**

Shall mean the wastes from the preparation, cooking and dispensing of food that have been shredded to such a degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than 1/2 inch (1.27 centimeters) in any dimension.

**1.18 Public sewer**

Shall mean a common sewer controlled by a governmental agency or public utility.

**1.19 Sanitary sewer**

Shall mean a sewer that carries liquid and water-carried wastes from residences, commercial buildings, industrial plants, and institutions together with minor quantities of ground, storm and surface water that are not admitted intentionally.

**1.20 Sewage**

Is the spent water of a community. The preferred term is "wastewater".

**1.21 Sewer**

Shall mean a pipe or conduit that carries wastewater or drainage water.

**1.22 Shall**

Is mandatory.

**1.23 Single Family Dwelling**

Shall mean a building on a lot designed and occupied exclusively as a resident for one family.

**1.24 Slug**

Shall mean any discharge of water or wastewater which, in concentration of any given constituent or in quantity of flow, exceeds for any period or duration longer than fifteen (15) minutes more than five (5) times the average twenty-four (24) hour concentration of flows during normal operation and shall adversely affect the collection system and/or performance of the wastewater treatment works.

**1.25 Storm drain** (sometimes termed "storm sewer")

Shall mean a drain or sewer for conveying water, groundwater, subsurface water or unpolluted water from any source.

**1.26 Superintendent**

Shall mean the person in charge of potable water and wastewater facilities; and/or of the Township of Mantua, or his/her authorized representative.

**1.27 Suspended solids**

Shall mean total suspended matter that either floats on the surface of, or is in suspension in, water, wastewater, or other liquids, and that is removable by laboratory filtering as prescribed in "Standard Methods for the Examination of Water and Wastewater", 13th edition of the American Public Health Association, Washington, D.C., 1971, and referred to as nonfilterable residue.

**1.28 Townhouse**

Shall mean one of a series of attached one family dwelling units each having common or party wall or walls between it and neighboring dwelling units and having an individual rear yard contiguous to the dwelling unit designed as an integral part of each one family dwelling unit and from which the occupants of the dwelling unit shall have the right to exclude the public. Each townhouse shall have separate and individual utility systems.

**1.29 Unpolluted water**

Is water of quality equal to or better than the effluent criteria in effect for the receiving water, or water that would not cause violation of receiving water quality standards.

### **1.30 Wastewater**

Shall mean the spent water of a community. It may be a combination of the liquid and water-carried wastes from residences, commercial buildings, industrial plants, institutions and any groundwater, surface water and storm water that may be present.

### **1.31 Wastewater facilities**

Shall mean the structures, equipment, and processes required to collect, carry away, and treat domestic and industrial wastes and dispose of the effluent.

### **1.32 Wastewater treatment works**

Shall mean an arrangement of devices and structures for treating wastewater, industrial wastes and sludge. Sometimes used as synonymous with "waste treatment plant" or "wastewater treatment plant" or "water pollution control plant".

### **1.33 Existing Residential Properties**

Shall mean a building, structure or house now erected, which may be occupied or used by human beings, on a lot designed and occupied exclusively as a residence for one or more families.

## **SECTION 2 DOMESTIC SERVICE**

### **2.1 Service to New Customers Through Existing Connections**

**2.1.1.** No new service will be extended by the Authority until the applicant has paid all charges due by the applicant at any premises now or heretofore occupied by him.

As water and sewer charges are municipal liens, all charges will be submitted by the Authority prior to the date of settlement and verified in written form to the title company or whatever authorized agent is processing the transfer of property. The title company shall be obligated to clear all water and/or sewer charges outstanding on the property. In the event that charges are not paid at settlement, those charges shall remain on the account as a lien against the property.

**2.1.2** The Authority shall charge a search fee (Schedule 2, Section 21) for water and sewer on each account. Search fees are due upon presentation. Failure on the part of the title company or the proper authorized agent to pay the search within 20 days of presentation shall result in the discontinuance of Authority lien information.

**2.1.3** Search Fees will be charged for information in areas in which there is no existing water or sewer service.

**2.1.4** No Authority approval will be given to the Building Inspector for issuance of a Certificate of Occupancy until the Authority has certified that the meter and water and sewer lateral systems have been installed in accordance with the Authority Rates, Rules and Regulations.

**2.1.5** Under no circumstances shall any fixture be installed in a building or dwelling at an elevation lower than the front curb elevation or the street centerline elevation, whichever is higher, unless special precautions are incorporated into the new fixture installation to prevent surcharging of the fixture installation from the sanitary sewer main because of high flow or blockage. Owners of houses where the Authority has deemed it necessary that such precautions had to be installed, will be notified by certified mail of the requirement for the installation of that check valve system and they will be advised that they own the system and its maintenance is their responsibility and that the Authority cannot be held responsible for any damage as a result of its malfunctioning.

**2.1.6** The initial billing date of a newly constructed home will be the date of the Certificate of Occupancy or the date of settlement, whichever is first.

### **2.2 Landlord-Tenant Responsibility**

All charges for sewer and water are a lien against the property and therefore the responsibility of the owner.

### **2.3 Discontinuation of Customer Service**

In the event that a sewer lateral service will be permanently discontinued, the Authority shall be notified in writing that the service billing shall be terminated. The sewer lateral shall be permanently sealed watertight in a manner subject to the approval of the Engineer or Superintendent.

## **2.4 Tampering with the Meter**

Where the meter has been inspected and found to have been removed, damaged or tampered with, the customer will be notified by letter that a service charge will be required to repair the meter (See Schedule 4, Section 21). If the customer refuses entry to the premises, service will be discontinued and an additional fee will be charged to restore the service.

**See Section 9.13 for Policy on Blockages.**

## **SECTION 3 PUBLIC FIRE SERVICE**

### **3.1 Hydrant Locations**

Hydrants in new projects to be constructed shall be within 400 feet radius of each other and the distance between hydrants, as measured by the curb length shall be no more than 700 feet. Distance requirements shall be consistent with section 5:21-5.4 of the Residential Site Improvements Standards (RSIS).

Subdivision plans, as approved by the Mantua Township M.U.A., shall be submitted to the Fire Marshal for his approval of hydrant locations. The written and dated signature of the Fire Marshal or his duly authorized representative from the municipality, on each set of plans submitted by the Mantua Township M.U.A., shall constitute authorization from the Municipality as to the location of the fire hydrants.

### **3.2 Maintenance**

All fire hydrants will be maintained by the Authority.

### **3.3 Allowable Uses**

Only persons authorized by the Authority shall take water from any public fire hydrant, except for fire purposes, by the Fire Department. No public fire hydrant shall be used for any use other than fire purposes, except with the written approval and consent of the Authority.

### **3.4 Change of Location**

Whenever the municipal governing body desires a change in the location of any fire hydrant, the Authority, upon written request, will grant or deny the change and all expense will be charged to the municipality.

### **3.5 Inspection**

Routine inspections of each hydrant shall be made semi- annually according to the time schedule set by the Authority Superintendent. Upon written request from a duly authorized representative of the municipality, the Authority, when it determines that the request is reasonable, will authorize that such inspection be made by an authorized representative of the Authority, accompanied by an authorized representative of the municipality.

### **3.6 Notification**

The Police Department Dispatcher shall notify the Authority when the Fire Companies will be using a hydrant.

### **3.7 Hydrant Rental Fee Policy**

Fees shall be based on:

- (a) Direct annual hydrant costs; repairs, maintenance, inspection and replacement of old or deficient hydrants.
- (b) Four (4) year projection of the offsite hydrants to be constructed (total number X average cost per hydrant divided by the same number of years equals the annual allotted cost for installations).

Projected costs are divided by the number of hydrants. Policy will then be reviewed after four years.

### **3.8 Offsite Hydrant Installation**

New hydrant installation costs within a tract are borne by the tract developer because it benefits the tract directly. This policy is consistent with the Mantua Township M.U.A. policy regarding onsite improvements. However, occasionally, new hydrants are installed outside a developed tract and do not generally benefit the tract but rather benefit the broad fire protection capabilities of the Township. Costs for installation of these offsite hydrants may be offset by the Mantua Township Municipal Utilities Authority provided they are more than 700 feet from the nearest point of the project. The method of offsetting the cost is to be determined by the Authority at the time application.

## **SECTION 4 PRIVATE FIRE SERVICE**

### **4.1 Automatic Devices and Hydrants**

For automatic sprinklers or other automatic fire service devices located inside a building or buildings, a separate service line will be required, to be used exclusively for fire service. At the option of the customer, fire hydrants located outside of the buildings may be connected to the fire service line. Each such separate service line shall be subject to the charges shown in the rate schedule. The Authority reserves the right to refuse approval for an application for automatic fire service where, in the judgment of the Authority, such service is not practical.

### **4.2 Ownership and Location**

All meters for private fire service shall be approved by the Authority, but shall be furnished and installed by the customer. Meters will be set in an approved type of brick or concrete masonry meter vaults, adequately drained, located on the premises of the customer. The meter vaults are to be constructed and maintained at the expense of the customer. Meters and vaults shall at all times be accessible to the Authority, its officers and employees.

### **4.3 Private Unmetered Fire Service**

When, in the judgment of the Authority, it is practical, private unmetered fire service lines may be permitted to be installed at the expense of the Owner, and shall be subject to the charges shown in the rate schedule.

### **4.4 Bills Rendered and Due**

Bills will be rendered quarterly on the date shown on the Authority Voucher. All bills are due and payable on presentation.

## **SECTION 5 USE OF WATER FOR BUILDING PURPOSES**

### **Special Application**

A supply of water for building or other special purposes, except on a lot or premises already supplied with a metered water connection, must be specially applied for and fees paid as specified in the Schedule of Rates. All applications for water for building purposes must be signed by the Owner or his duly authorized agent, and shall be interpreted to mean that the water is to be used from a builder's hydrant, temporarily adapted with a meter.

## **SECTION 6 INDUSTRIAL & COMMERCIAL SERVICES**

Industrial and commercial establishments, making application for water/or sanitary sewer service in addition to making written application for such services, shall furnish a detailed description of the type and size of buildings, and nature of the business to be conducted in each structure, the number and type of fixtures to be served, the type, volume and chemical characteristics of the waste to be discharged. Such applicants shall also furnish the Authority two (2) copies of 24" x 36" or 36" x 42" plans showing at a scale no less than 1" = 100', the following:

- a) The boundaries of the property.
- (b) The location within the property of the structures to be served.
- (c) The location and profile, with respect to finished grade of the services.
- (d) Details of the proposed connections to the sewerage system, and arrangement and details of meter and sampler installation, should they be required.

### **6.1 Agreement Required**

The Authority will accept industrial wastes into the sanitary sewage system, upon execution of a formal, written agreement, and under and subject to the provisions appearing in said agreement, and the rules stated hereinafter. The agreement will set out in detail the characteristics of the wastes, the flow conditions which shall govern, the conditions and costs with respect to the physical connection or connections, and the annual service charges. It will be the policy of the Authority to consider each application on its merits, and to establish specific conditions applicable to the particular situation, for each agreement. No connection shall be made prior to execution of the agreement. Each agreement shall have stipulated time limits for connection after which it shall become null and void at the discretion of the Authority.

### **6.2 Application for Construction Approval for Commercial or Industrial Applicants - Form F**

#### **6.2.1 Purpose of Application**

This application and supporting data specifying the engineering details of the proposed project will be analyzed for compliance with the Authority engineering standards including the provision for orderly growth. The final condition of approval will be a mutual agreement between the applicant and the Authority regarding the terms and conditions for providing water and sewer service.

## **6.2.2 Forms and Supporting Data**

### **FORM F: SITE PLAN - COMMERCIAL OR INDUSTRIAL - APPLICATION FOR REVIEW OF PLANS FOR PUBLIC SEWER AND/OR WATER.**

Supporting data shall consist of two (2) sets of drawings, reports, and other pertinent data describing details of the sanitary sewer system and water distribution systems, including fire hydrants, private fire service and sprinkler systems as approved by the Fire Marshal. If additional data is required after the initial review, the applicant will be contacted to submit same to the Authority.

## **6.2.3 Fees**

Filing Fee: \$50.00 Sewer and \$50.00 Water.

Review Fee: \$750.00 for water and \$750.00 for sewer for the first 5,000 square feet or any portion thereof and \$300.00 for each additional 5,000 square feet or any portion thereof for both water and sewer.

Minimum amount to be placed in escrow fund necessary to initiate professional review of sewer and/or water systems will be \$1,500.00.

It is the policy of the Authority to charge review fees for connection to its water and sewer system following the attached rates of schedules. An offset to the review fee may be considered, at the discretion of the Authority, for uses where excessive water distribution and sewer collection is not required by the permitted use of the facility.

Inspection Fee: 5% of the total sewer construction cost, as verified by the Authority Engineer. (Minimum of \$750.00.)

## **6.2.4 Action by the Authority**

The application and supporting data will be reviewed by the Authority. If it is determined that it is feasible to extend service and that the plans are in compliance with Mantua Township M.U.A. Rates, Rules and Regulations, the applicant will be notified of the Authority approval and the connection fee. Upon receipt of the fee, the sewer and water permits will be issued to the applicant and to the Building Inspector.

The actual amounts of review and inspection fees shall be based on vouchers and all surpluses shall be returned to the applicant when the respective phases are completed. In the event that the costs of review are more than deposited, the applicant shall pay the additional cost prior to final approval by the Authority.

Six (6) sets of completed constructions will be required prior to the preconstruction meeting. The Authority Superintendent will stamp these plans for distribution prior to construction. All bond estimates shall be approved and escrow fees paid prior to the pre-construction meeting.

### **6.2.5 Failures to Tie In**

Should the applicant fail to tie-in or connect to the sanitary sewerage or potable water system within the time period specified in the agreement or if not specified in the agreement, within two (2) years of the issuance of the Permit to do so. The Authority reserves the right to inform the applicant that the Permit will be considered void within thirty (30) days of said notice. If the Applicant fails to complete the connection within that thirty (30) days period, the Authority will notify the Applicant that the Permit is void and return the appropriate funds.

Reactivation of the Permit will subject the Applicant to compliance with the rates and connection fees applicable at the time of reactivation.

Prior to approving an application for a connection involving the acceptance of industrial wastes, the applicant shall submit complete data with respect to the following:

- (a) Completed Industrial Sewer Connection Application, Form F (See sample of Form F in back portion of Section 7).
- (b) Average, maximum and minimum rates of flow to be expected daily and seasonally.
- (c) Flow diagram, showing points of application of chemicals, type and quantity of each chemical used per day and per shift, a schedule of operations, expected chemical characteristics of the untreated wastes, and the point or points of connection to the sewerage system. The normal situation will require the separation of, and separate points of connection for domestic sewage and industrial wastes for each industrial establishments.

### **6.3 Prohibited Wastes**

Waste containing the following substances or possessing the characteristics listed below, will not be accepted:

- (a) Any vapors or steam.
- (b) Any fluids with temperature in excess of 110 degrees Fahrenheit.
- (c) Any fluid wastes which contain in excess of 40 Mg/L of fat, oil or grease, either vegetable or mineral.
- (d) Any volatile, explosive, or flammable substances such as benzene, gasoline, naphtha, fuel oil or similar substances, hydrocarbons.
- (e) Any solids or viscous matter which may cause any interference with the flow of wastes; such as ashes, cinders, concrete, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch manure, hair or similar substances. Equipment or trucks carrying such materials shall not be washed and this water discharged into the system.

- (f) Any fluid wastes having a pH value less than 6.0 or in excess of 9.0 or possessing other properties capable of causing damage or creating a hazard to sewers, structures, treatment process, equipment or operating personnel.
- (g) Any wastes containing toxic or poisonous substances in sufficient concentration to interfere with the sewage treatment process or cause injury to animals or persons, or to create an unacceptable condition in receiving streams.
- (h) Any noxious or malodorous gas or substance, which is capable of causing a public nuisance.
- (i) Any radioactive substances.
- (j) Any wastes containing components which exceed limits set forth by the county, state or federal regulatory agencies.

#### **6.4 Grease, Oil and Sand Separators**

When, in the reasonable opinion of the Authority Engineer, grease, oil and sand interceptors or oil reclaimers are required, they shall be provided and maintained at the expense of the owner, in continuously efficient operating condition. Grease and oil interceptors shall be constructed of impervious materials, capable of withstanding abrupt and extreme changes in temperature. They shall be watertight, substantially constructed and equipped with readily removable access covers. Where deemed necessary, cold water sprays shall be installed. The design and pertinent data, including maintenance schedule, shall be submitted to the Authority for review and approval, prior to construction or installation. Separators must be constructed entirely on the property of the owner.

The Owner must maintain a regular maintenance schedule. Maintenance records shall be available to be reviewed by the Authority upon request.

#### **6.5 Pretreatment**

The Authority reserves the right to require pretreatment and/or flow equalization where the chemical or flow characteristics of the proposed industrial wastes, in the opinion of the Authority Engineer, or in the opinion of state or federal agencies, make such pretreatment or flow equalization desirable or mandatory. Some of the characteristics which may indicate pretreatment are listed below:

- (a) Five (5) day B.O.D. in excess of G.C.U.A. maximum limits.
- (b) Suspended solids in excess of G.C.U.A. maximum limits.
- (c) Quantities of flow, concentrations or both which constitute a "slug" as defined herein.
- (d) Presence of arsenic, barium, cadmium, chloride, chromium, copper, cyanide, fluoride, iron, lead, magnesium, manganese, nickel, nitrate, selenium, sulfate or zinc or pH values outside the acceptable limits as described in Section 6.3 (f). The following criteria shall apply.

(i) The substances listed below shall not exceed the following specified limits.

	Limit Mg/L
Arsenic	0.1
Barium	2.0
Cadmium	0.02
Chromium (hexavalent)	0.10
Copper	0.20
Lead	0.10
Mercury	0.01
Selenium	0.02
Zinc	0.60

(ii) Persistent pesticides - not to exceed one one- hundredth of the TL 50 value at 96 hours as determined by appropriate bioassay. (Persistent pesticides are defined as natural and synthetic materials having a half-life of greater than 96 hours, which are used to control unwanted or noxious animals or plants. They include Fungicides, herbicides, insecticides, fumigants and rodenticides.)

- (e) Dissolved solids in excess of G.C.U.A. maximum limits.
- (f) Ammonia (NH<sub>3</sub>) in excess of G.C.U.A. maximum limits.
- (g) Phenol in excess of G.C.U.A. maximum limits.

In such instances where it is agreed that the industrial waste will be received following pretreatment, drawings and specifications shall be submitted for approval of the Authority Engineer showing all pertinent details of the indicator recorder- register type of flow meter, wastewater sampler and housing to be used, to meter and sample the flow of industrial wastes, and also details of the control manhole to be constructed on the industrial waste connection.

The manhole shall be provided with adequate access manhole covers of approved type, through which access shall be possible to Authority personnel at all times. Drawings, specifications, reports, etc., shall be submitted in quadruplicate and shall be prepared and sealed by a Professional Engineer registered in the State of New Jersey.

Where pretreatment and/or flow equalization facilities are required, they shall be provided and continuously maintained in an effectively operating condition at all times, at the expense of the industry.

Each industry connected to the Authority sewer system shall be responsible for maintaining a quality of effluent from their premises, which conforms to the provisions established in their agreement with the Authority. Sampling and analysis shall be done to conform with accepted practice, and in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater", of the American Public Health Association, Washington, D.C.

The cost of preparing and submitting this data for consideration by the Authority shall be borne by the industry. Likewise, the cost of sampling and analysis to determine compliance with the terms of the agreement, shall be borne by the industry, although conducted by the Authority or its duly authorized representative.

## **6.6 Control Manhole**

Industries permitted to connect to Authority sewers, even though not initially being required to provide preliminary treatment, may be required to provide a control manhole and/or meter and sampler as described in Section 6.5.

## **6.7 Penalty of Discontinuance**

In the event that any industry fails to conform to these regulations, or fails to comply with the terms and conditions of their agreement with the Authority, which failure causes damage of any sort to the Authority or Authority's employees, the Authority shall determine the extent of the damage and bill the industry accordingly. If such bill is not paid within ten (10) calendar days from the date of the bill, legal action shall be instituted to enforce collection; and the Authority shall terminate the connection after giving twenty- four (24) hours notice.

The Authority reserves the right to deem any agreement, which has been violated, null and void and that notification of the Authority's position be forwarded to the industrial or commercial user by certified mail, advising of the Authority's position.

## **6.8 Industrial Waste Flow meter and Sampler**

Where the industry provides its own water supply, entirely separate from that supplied by the Authority, or provides from its own sources a portion of the water consumed on the premises, which eventually finds its way into the sewerage system of the Authority the provisions of the Schedule of Rates will apply.

This does not relieve the industry from the requirement to furnish, install and maintain a flow meter of the indicator- register- recorder type, to measure the discharge of industrial wastes, and a wastewater sampler to periodically take and preserve a portion of the wastewater stream, as described in Section 6.5. The flow meter and wastewater sampler will be approved by the Authority, but supplied by the customer with the cost of said equipment and installation to be borne by the industry. All cost of furnishing, installing and maintaining the industrial waste flow and sampling equipment will be borne by the industry and shall be readily accessible to Authority personnel.

## **6.9 Industrial Service Revisions**

The industrial wastewater parameters and the criteria for industrial waste limits are subject to future revision or modification as may be required by the New Jersey Department of Environmental Protection, United States Environmental Protection Agency, the Gloucester County Utilities Authority, The Delaware River Basin Commission and/or the Mantua Township Municipal Utilities Authority.

THE MANTUA TOWNSHIP MUNICIPAL UTILITIES AUTHORITY  
397 Main Street, Mantua, New Jersey 08051  
Telephone: (856) 468-4111

SAMPLE OF LETTER OF CREDIT THAT MAY BE SUBMITTED IN LIEU OF 120%

**PERFORMANCE BOND**

(Bank Letterhead)

RE: (Irrevocable Letter of Credit #)

Re: (Name of Tract)

Gentlemen:

You are hereby authorized to draw on us at sight for the account of (Name of Tract), for sums up to \$\_\_\_\_\_ for water construction costs and \$\_\_\_\_\_ for sewerage construction costs. This letter shall remain in effect until final acceptance by adoption of a resolution, by the Mantua Township Municipal Utilities Authority.

The condition of the Irrevocable Letter of Credit is that within two years period of time, (Name of Tract) , shall cause to be installed the improvements mentioned above and if they shall fail to do so we shall honor all drafts upon us for the purpose of paying for such improvements.

The drafts under this letter must contain the clause "Drawn under Irrevocable Letter of Credit" # \_\_\_\_\_ , of (Name of Bank) , dated \_\_\_\_\_.

\_\_\_\_\_  
(Signed)

Position  
Name of Bank

THE MANTUA TOWNSHIP MUNICIPAL UTILITIES AUTHORITY  
397 Main Street, Mantua, New Jersey 08051  
Telephone: (856) 468-1111

**SAMPLE PERFORMANCE UTILITY BOND**

INSURANCE COMPANY LETTERHEAD

PERFORMANCE UTILITY BOND:

KNOW ALL MEN BY THESE PRESENTS: That we, (NAME OF BUILDER), as Principal and (NAME OF INSURANCE COMPANY), a corporation organized under the laws of the State of (NAME) and duly authorized to transact business in the State of New Jersey, as Surety, are held and firmly bound unto MANTUA TOWNSHIP MUNICIPAL UTILITIES AUTHORITY in full and just sum of \$ \_\_\_\_\_, lawful money of the United States of America for payment of which sum, well and truly to be made, we and each of us bind ourselves, our and each of our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents.

THE CONDITIONS of the above obligation are such, that

WHEREAS, the above named Principal (NAME OF BUILDER), is planning to construct underground utilities in a subdivision known as SECTION \_\_\_\_\_ of (NAME OF BUILDER).

AND the further condition that the Principal will complete the proposed sewage system (or water distribution system and appurtenances) in said subdivision within two years after approvals by the Authority and in full compliance with the plans and profiles submitted with the subdivision, as required by the Mantua Township Municipal Utilities Authority.

NOW, THEREFORE, if the above named Principal shall complete said improvements in the said subdivision according to the subdivision regulations of Mantua Township Municipal Authority, then this obligation shall be void; otherwise to remain in full force and effect until acceptance by adoption of a resolution by the Mantua Township Municipal Utilities Authority.

Signed, sealed and delivered this (DATE).

(NAME OF BUILDER)

By: (AUTHORIZED SIGNATURE)  
(TITLE)

(NAME OF INSURANCE COMPANY)

By: (AUTHORIZED SIGNATURE)  
(TITLE)

Countersigned by N.J. Res. Agent:

\_\_\_\_\_

## **6.10 Application to install Communication Antenna on MTMUA Facilities**

### **6.10.1 Purpose of Application**

This application for Review of Plans for the Installation of Communications Antenna and supporting data specifying the engineering details of the proposed project will be analyzed for compliance with Authority engineering standards. The final condition of approval will be a mutual agreement between the Applicant and the Authority regarding the terms and conditions for installation of communication antenna arrays on MUA facilities.

### **6.10.2 Forms and Supporting Data**

#### **APPLICATION FOR REVIEW OF PLANS FOR INSTALLATION OF COMMUNICATIONS ANTENNA ON MTMUA FACILITIES**

Required Supporting Data:

Two (2) sets of drawings, reports and other pertinent data describing details; Structural Support calculations must also be submitted with the plans and specifications. If additional data is required after the initial review, the applicant will be contacted to submit same.

MTMUA Approval by resolution must be obtained prior to submittal to the Mantua Township Zoning Board.

In consideration of reviewing this application, the undersigned agrees:

- (a) To furnish any additional information relating to the installation requested by the Superintendent or Authority Engineer.
- (b) To accept and abide by all provisions of the Ordinances of the Township of Mantua and of all other pertinent ordinances or regulations that may be adopted in the future.
- (c) To cooperate at all times with the Superintendent , Authority Engineer and their representatives.
- (e) To notify the Superintendent immediately in the event of any accident, negligence, or other occurrence not covered by this application.

### **6.10.3 Fees**

**FILING FEE:** \$100.00

**REVIEW FEE:** A review fee of \$2,500.00 shall be deposited in Escrow for review costs.

In the event that the costs of review are more than deposited, the applicant shall pay the additional cost prior to final approval by the Authority. Checks shall be payable to the Associated Escrow Account with MTMUA.

## **SECTION 7 MAIN EXTENSIONS: WATER & SEWER**

### **7.1 General Provisions**

Persons proposing subdivisions or developments requiring a main extension for sewer or water service shall prepare applications described in this section with the necessary supporting documents. The policy of the Authority is to permit extensions only when paid for and installed by the applicant. No facilities for collection, treatment or disposal of sewage or for the distribution of water within the "district" of the Authority (which corresponds with the boundaries of the Township) shall be constructed unless the Authority shall give its consent and the Authority Engineer shall approve Contract plans and specifications therefore.

It is the policy of the Authority to charge connection fees for connection to its water and sewer system following the rates indicated in Section 21, Schedules 3 and 5. The connection fees for water and sewer are based upon each domestic consumer unit. An offset to the connection fee may be considered by the Authority for user installed water supply and storage, water distribution in excess of users needs, for sewer collection in excess of users needs.

Connection fees shall be payable within thirty (30) days of approval of Form C by the Authority unless specific arrangements are agreed upon. If payment is not received within this time period, the connection fee shall be at the prevailing rate at the time of receipt of the check. The Authority will not accept dedication of the systems without receipt of the connection fees. Use of the system will not be permitted until such payment unless deemed by the Authority as a potential health hazard.

Residential subdivisions containing more than four (4) contiguous building sites or lots or any residential structure to be used by three or more families, regardless of volume of flow, and all non-residential developments such as schools, commercial buildings, industrial buildings and all other structures, will be required to install a sanitary sewer system to be connected with the nearest existing sanitary sewer and existing water main in the Township unless deemed to be too remote from existing facilities by the Authority.

Residential subdivisions containing three or less building sites or lots or if the lands are deemed by the Authority to be too remote from any existing facilities, then consideration will be given to an individual sewage system, with a dry sanitary sewer system for future use, in lieu of connection to existing facilities. Individual sewage disposal systems will be permitted only upon specific written permission of the Authority.

Residential subdivisions containing three or less building sites or lots or if the lands are deemed by the Authority to be too remote from an existing water main or if the volume of potable water required is greater than capabilities of the existing facilities, then consideration will be given to a new water supply and/or storage facilities or the installation of dry water mains for future use. Such individual system, plant or expansion and the location thereof shall be subject to approval by the Authority in accordance with the standards and requirements as hereinafter set forth.

Any main extension and related facilities installed under the provisions of this section shall be transferred to the Authority as hereinafter described unless deemed otherwise by the Authority.

During construction, but before final acceptance, the Authority shall have the right to use any completed portion of the system without waiving its right to further inspection or testing or to order correction of any defects.

Use of the sanitary sewer system for the discharge of sump pumps, or drainage from cellar drains, leaders, downspouts, drainage tile, swimming pools, cooling system drains and other similar discharges shall not be permitted.

Unpolluted industrial cooling waters and unpolluted drainage shall be discharged into a storm sewer or natural outlet.

These General Provisions are and shall be subject to the existing contractual obligations outstanding.

## **7.2 Applications - General**

A sequence of applications for sewer and water extensions are required for the Authority's determination of needs, availability of service, effect of proposed extension, and inspection of installed extension. Application forms are available from the Authority. Chart 1 (Page 104) outlines the contents of this Section and describes the sequence of applications, forms, supporting data, fees and Authority action that results in acceptable main extensions for water and sewer. No application will be considered unless a Professional Engineer, registered in the State of New Jersey is in charge of the planning and design of the proposed sewerage and water distribution facilities and has affixed his seal and signature thereto. Each application shall be submitted in duplicate with the designated fee to the Authority not less than thirty (30) days prior to the Authority meeting at which action on the application is desired.

Applications shall be signed by the Owner or Owners, or by a proper official of the company, or, if signed by an authorized agent, a certified copy of authorization of the company shall be attached to the application.

All fees accompanying applications shall be cash, certified check or acceptable other draft at the option of the Authority.

## **7.3 Application for Feasibility - Form A**

### **7.3.1. - Purpose of Application**

An application describing the proposed subdivision of development (residential, commercial, industrial or other) shall be submitted to the Authority with supporting data to determine the technical feasibility of extending sewer and/or water service. The Authority may defer or waive certain parts of this supporting data at its discretion where the cost of data preparation is not commensurate with the development or project planning and approvals.

### **7.3.2 - Forms and Supporting Data**

#### **FORM A: APPLICATION FOR REPORT ON FEASIBILITY OF PUBLIC SEWER AND/OR WATER RECOMMENDATIONS AND CONDITIONS**

In addition to preparation and submission of the application, the applicant shall furnish a general location plan showing streams, streets, blocks, lots and tax map numbers, copy of application submitted to the Planning Board, if required, location of any existing water distribution and/or sanitary systems in the area, proposed system outline, existing topography and route of construction, and estimated volume of flow.

### **7.3.3. - Fee**

Application Fee: \$50.00 Sewer and \$50.00 Water.

Review Fee: \$500.00 for water and \$500 for sewer.

In the event that the costs of review are more than deposited, the applicant shall pay the additional costs prior to approval. Any excess moneys shall be returned to the applicant.

### **7.3.4. - Action by Authority**

The Authority shall analyze the submitted application and supporting data and report to the applicant the Authority's recommendations and/or findings.

#### **7.3.4.1 - Subdivisions**

On all subdivisions, the Authority shall issue a letter REPORT ON FEASIBILITY to the applicant for his submittal to the Planning Board for their classification of sketch plat for his project.

If the project is shown to be technically feasible, the applicant shall also receive a letter of recommendations and conditions from the Authority along with FORM B of FORM F, as appropriate, "APPLICATION FOR PRELIMINARY REVIEW OF PLANS FOR PUBLIC SEWER AND/OR WATER" for the applicant's submittal.

If the Authority determines that the proposed subdivision or development is too remote for extending sewer and/or water service, or contains three or less building sites or there are other circumstances peculiar to this application, the Authority may do the following:

- (a) Waive the application and fee.
- (b) Send a letter of APPROVAL TO INSTALL ONSITE DISPOSAL SYSTEMS AND/OR POTABLE WATER SYSTEM AS APPROVED BY THE BOARD OF HEALTH to the Applicant, Building Inspector, and Board of Health.
- (c) Approve the application and waive all subsequent applications.

### **7.3.4.2. Zoning Changes**

On all zoning changes the Authority shall issue a letter to REPORT ON REZONING directly to the Planning Board with a copy to the applicant. This report shall include the general engineering and technical conditions which would be required of the applicant by the Authority for the extension of the water and/or sewer service to the proposed project.

## **7.4 Application for Preliminary Approval - Form B**

### **7.4.1 Purpose of Application**

An application and supporting data specifying the engineering details of the proposed project will be analyzed for compliance with Authority engineering standards including provisions for orderly growth. This form is filed as an initial request after approval of FORM A on all subdivisions. All plans, specifications and applications shall be provided and meet the technical requirements of the Authority and other agencies having jurisdiction over the same.

### **7.4.2 Forms and Supporting Data**

FORM B - "APPLICATION FOR PRELIMINARY REVIEW OF PLANS FOR PUBLIC SEWER AND/OR WATER". The application shall be accompanied by two (2) copies of the Engineer's Report as described in Section 12.7 and 13.4 five (5) original copies of Form TWA-1, two (2) original copies of Form WQM-003, two (2) original copies of Plans and Profiles, two (2) copies of Construction Specifications and two (2) copies of all documents required by The Gloucester County Utilities Authority, and any and all other forms and data required by the New Jersey Department of Environmental Protection.

### **7.4.3 Fee**

The application fee shall be determined as follows:

- (a) Filing Fee - \$50.00 - Sewer \$50.00 - Water
- (b) Review Fee - \$10.00 per domestic consumer unit for the first 100 units, additionally \$7.50 per domestic consumer unit for the next 100 units (101-200), and additionally \$5.00 per domestic consumer unit for all in excess of 200 units.

Separate fees, calculated in this manner, shall be paid for each sewer and for water application. Minimum amount to be placed in escrow fund for this application shall be \$2,000.00 In the event that the costs of review are more than deposited, the applicant shall pay the additional costs prior to approval. Any excess moneys shall be returned to the applicant. Projects defined as a minor subdivision shall deposit a minimum escrow amount of \$1,500.00.

#### **7.4.4. Action by Authority**

The application and supporting data will be reviewed by the Authority to determine compliance with the Authority's comprehensive water and sewer distribution plan, these Rates, Rules and Regulations, applicable statutes, and projected growth patterns.

Upon approval, the Authority shall adopt a resolution indicating same and authorizing the applicant to submit the project to the Gloucester County Utilities Authority and the New Jersey Department of Environmental Protection for a permit to construct.

Upon notification by the Authority that Preliminary Approval has been given to the proposed project, the applicant may file an application or series of applications for Construction Approval (Form "C") (see paragraph 7.5) within a period not to exceed two (2) years from date of Preliminary Approval by the Authority, unless otherwise waived or extended by the Authority.

### **7.5 Application for Construction Approval - Form C**

#### **7.5.1 Purpose of Application**

Following Preliminary Approval (Form B) for a period not to exceed two (2) years, the applicant may apply for construction approval. This application may be submitted as a sequence of applications as each segment of the total approved project is scheduled for construction. This application provides a control on the extent and schedule of planned sewer and water facilities installation and establishes a schedule for Authority inspection of completed installation.

#### **7.5.2 Forms and Supporting Data**

The application shall be accompanied by two (2) sets of final data as approved in the Preliminary Approval, as per Paragraph 7.4.2. This data will be the basis of construction approval, inspection and testing. Requested major revisions will be treated as resubmissions of Preliminary Approval requiring review and approval. Such revisions are subject to the requirements of Paragraph 7.4 in its entirety.

The following supporting data will be required prior to approval:

1. List of Tax Lot and Blocks cross-indexed with street addresses.
2. Operating permit must be received from the N.J.D.E.P.
3. Legal descriptions of all easements must be reviewed and approved.
4. Easement Agreement documents prepared by Developer's attorney based on approved legal descriptions, reviewed approved by the Solicitor and Authority Engineer.
5. Final Plan of Lots and All easement agreements must be recorded with the County and four (4) recorded copies provided.

6. Where plans of final sections are not identical to those approved by the MUA and the NJDEP, revised plans (4 sets) and a letter, signed and sealed, (4 copies), from the Professional Engineer explaining each revision with the basis and justification for each revision must be received by the Authority.
7. A complete set of utility plans and profiles for the project on a CD in AutoCAD format.
8. This application shall also include fire hydrant plans as approved by the Fire Marshal. A letter, by the Fire Marshal, certifying the fire hydrant locations shall be provided.
9. All backflow prevention equipment shall be noted on the plans. Backflow prevention equipment required by reviewing agencies having jurisdiction shall be approved by the same.

#### **7.5.2.1. Other Data**

In addition, applicant shall submit all data required by the Rules and Regulations of the New Jersey Department of Environmental Protection, as revised. Permits to construct sewers, water mains and/or other structures within flood plains, wetlands and the right-of-way limits of state, county, municipal roads and all railroads and all other permits must be secured by and paid for by the applicant.

The applicant must inform and secure any necessary clearance and/or approval from any public utility involved. Proof of such notice and/or approvals shall be filed with the Authority.

The applicant shall also submit all offsite water and sewer deeds of easement with legal descriptions from the respective property owners for such easements, prior to Form "C" approval.

### **7.5.3 Performance Bond**

A Performance Bond, Letter of Credit or Surety Documents, satisfactory in form to the Authority, in the amount of at least 120% of the total construction cost of that portion of the project covered by the application shall be furnished with the application guaranteeing complete construction within a time period to be agreed upon by the Authority and the applicant and further guaranteeing that said construction will be in accordance with the Rates, Rules and Regulations of the Authority, the plans and specifications and Engineer's Reports and cost estimate approved by the Authority Engineer. The amount of the required performance bond may be increased for due cause by the Authority.

The Bond, Letter of Credit, or Surety Documents shall remain in effect until the sanitary sewer collection system and related appurtenances and/or the water distribution system and related appurtenances are installed, tested and protected by an adequate layer of flexible bituminous paving or approved equal, and all connection fees for water and sewer have been received. At that time and subject to the recommendation and approval of the Authority Engineer and Executive Director, the Bond, Letter of Credit or Surety Documents may then be reduced to 50% of the original amount bonded.

The Bond, Letter of Credit or Surety Document may be further reduced to 30% of the original amount bonded upon the completion, submission and approval by the Authority Engineer and Executive Director of the following:

1. If required, all access roads must be constructed at the easement locations as per the approved plans.
2. As-Built Plans must be completed as per Form D requirements and video inspection by the Applicant must be submitted and deemed acceptable. A separate copy of the plans shall be provided on a digital format (CD) prepared with AutoCAD in a version acceptable to the Authority Engineer.

The developer shall continue to be completely responsible for this section of the system until it is legally accepted by the Authority Resolution. A section is typically legally accepted after the completion of the final road surfacing when the sewer and water systems receive final inspection and approval from the Authority Engineer and Executive Director.

### **7.5.4 Fee**

Filing Fee: \$50.00 – Sewer, \$50.00 - Water

Review Fee: \$750 for sewer and \$750 for water.

In the event that the costs of review are more than deposited, the applicant shall pay the additional costs prior to approval. Any excess moneys shall be returned to the applicant.

Inspection Fee: 5% of the total water and sewer construction costs, as verified by the Authority Engineer.

The applicant shall periodically escrow portions of the escrow account as required by the Authority. The actual amounts of review and inspection fees shall be based on vouchers and all surpluses shall be returned to the applicant when the respective phases are completed.

### **7.5.5 Action by Authority**

Upon approval of the application, the Authority shall grant approval for construction of the project to the extent requested and subject to the receipt of the necessary permits from the State and all other agencies. At this time, the Authority considers sanitary sewage and potable water capacity allocated to the project. Form "C" approval will be void and invalid after six months, unless construction has commenced. Where construction has commenced within the six month period, the approval is automatically approved for successive six month periods, to a maximum of two (2) years. At the conclusion of this time period the Form "C" Approval shall be considered void and all unused fee refunded. In order to commence construction, a new Form "C" Application will be submitted to the Authority for consideration. The application shall be subject to any and all conditions, fees and rates in place at the time of the reapplication. The Authority may choose to waive the reapplication if substantial construction progress or other extenuating circumstances are demonstrated by the applicant.

Six (6) sets of completed constructions will be required prior to the preconstruction meeting. The Authority Superintendent will stamp these plans for distribution prior to construction. All bond estimates shall be approved by the Authority Engineer and escrow fees paid prior to the preconstruction meeting.

## **7.6 Application for Acceptance - Form D**

### **7.6.1 Purpose of Application**

Upon satisfactory completion of construction, inspection and testing and payment of connection fees, the applicant shall request the Authority to accept the installed system.

Ownership, maintenance and operation of the system shall be the responsibility of the Authority only after specific written acceptance by the Authority for the system, whether it be in whole or in part as issued by the Authority. Until this written acceptance is issued by the Authority, the ownership, maintenance and operation shall remain the responsibility of the applicant.

In the event that construction deficiencies are found (i.e. minimum slopes are insufficient, etc...) and additional remediation measures are required, additional as-built surveys may need to be performed at the Applicants expense.

The Authority reserves the right to field verify as built information upon the completion of remedial measures taken to correct construction deficiencies. All costs associated with the engineering, inspection or surveying tasks performed to verify the completed construction will be at the Applicants expense.

### **7.6.2 Fee**

Filing Fee: \$0.00 – Sewer, \$0.00 - Water

### **7.6.2 Forms and Supporting Data**

#### FORM D "APPLICATION FOR TITLE TRANSFER PUBLIC SEWER AND WATER SYSTEMS:

The application shall be accompanied by:

- (a) All necessary documents, legal descriptions, deed of easement and plans approved by the Authority that will permit the dedication of all necessary property and easements that are inherent and a necessary part of the completed project.
- (b) Payment of all fees and charges required by these Rates, Rules and Regulations up to and including this application shall be verified by the Authority.
- (c) Certification by the Authority Engineer as to the quality and content of the installed system.
- (d) Required application filing fees.
- (e) N.J. Department of Environmental Protection Permit to Operate.
- (f) The applicant shall perform a T.V. video inspection of the condition of the sanitary sewer system. This taping shall be performed after all construction within an individual development has been completed and prior to M.U.A. acceptance of the system. Any defects, debris, slit, etc. within the pipeline shall be corrected prior to Form "D" approval. All connections shall require the lines to be retaped. Notice shall be provided to the MUA and Authority Engineer a minimum of 48 hours prior to the video inspection.
- (g) As-Built Plans must be completed as per Form D requirements and video inspection by the Applicant must be submitted and deemed acceptable. A separate copy of the plans shall be provided on a digital format (CD) prepared with AutoCAD in a version acceptable to the Authority Engineer.
- (g) Letter from the M.U.A. superintendent certifying that a visual inspection of all the M.U.A. improvements has been completed.

### **7.6.3 As-Built Plans**

The "As-Built" Plans will contain all pertinent information such as, but not limited to, manhole to manhole distances, inverts and rim elevations of the manholes, control points, bearings and distances of all easements and properties required, lot and block numbers, sizes and type of pipe material, location of all wyes and tees, valves, blow offs, cleanouts, curb stops, fire hydrants and also certifications as detailed herein.

The "As-Built" Plans must contain a certification by and be sealed by the applicant's Engineer, who must also be a duly licensed engineer in the State of New Jersey worded as follows:

I, \_\_\_\_\_ duly licensed Engineer in the State of New Jersey have made an inspection of the work shown on these drawings as it is proposed for acceptance by the Authority and find good workmanship throughout the entire project, that the sewers and/or water mains exist true and straight to grade, that the free flow conditions exist, that no debris or obstructions are in the lines, and that the infiltration of the completed system does not exceed the limits set forth in the Rates, Rules and Regulations of the Mantua Township Municipal Utilities Authority.

I also certify that the project as offered and as shown on these particular drawings is in substantial compliance with the plans that were approved by the Mantua Township Municipal Utilities Authority on \_\_\_\_\_.

\_\_\_\_\_  
(Signature and Seal) P.E.

Before acceptance by the Authority, the applicant is to furnish to the Authority one (1) set of the As-Built Plans, in ink, on linen or mylar, as approved by the Authority Engineer, and one (1) set of prints of each drawing showing the sewers, water mains, connections, etc., as constructed. All as-built plans shall be drawn on a scale of 1" = 50'.

#### **7.6.4 Acceptance of New Sewers by Authority**

After satisfactory completion of all phases of the proposed project the Authority will accept the facilities upon compliance with this section.

The applicant shall:

- (a) Verify secured title to all lands, easement, legal descriptions, sewer and water structures and appurtenances, obtained with Form C or Form F approval, to the satisfaction of the Authority Solicitor.
- (b) Post a maintenance bond equal to 15% of the Performance Bond guaranteeing the satisfactory performance of the system for a period of two (2) years from the date of the acceptance.

Upon acceptance by the Authority, the Authority will:

- (a) Release the applicant from the Performance Bond and accept the Maintenance Bond.
- (b) Accept the title to all lands, easements, sewer and water main structures and appurtenances.
- (c) Operate and maintain the system(s) thereafter.

### **7.6.5 Sewer and Water Connections**

Approved sewer and/or water connections shall be made to a street main only under the supervision and inspection of the Authority or the Authority Engineer. Connections to the sewer shall be made through an approved wye, saddle, or manhole. Connection shall be made in accordance with the direction of the Authority and/or its Engineer, or any other Authority designee.

House connections are under the jurisdiction of the Construction Code Official and/or Board of Health and approval of the Construction Code Official and/or Health Office will be required before the Authority will accept discharge of sewage into its mains and/or servicing of dwelling with potable water.

## **7.7 Application for Connection of an Individual Dwelling Unit Into The Existing Authority System - Form E**

### **7.7.1 Purpose of Application**

To determine the technical and economic feasibility of extending sewer and/or water to the Authority system and to verify that the systems will be constructed in compliance with these Rates, Rules and Regulations.

### **7.7.2 Forms and Supporting Data**

FORM E "APPLICATION FOR CONSTRUCTION OF PUBLIC SEWER AND/OR WATER SYSTEM FOR AN INDIVIDUAL UNIT INTO AN EXISTING AUTHORITY SYSTEM.

Connections for new sewage and/or water services will be made upon completing the application at the Authority Office by the property owner, or his authorized agent, and filing with the Authority. Water and/or sewage service, through existing connections, will be furnished, upon written application signed by the customer. Blank forms for all applications prepared for their respective service will be furnished by the Authority and all applications must receive the approval of the Authority before connection is made, or any service furnished.

Application shall be accompanied by two (2) sets of plans prepared by a registered plumber showing the proposed line from the dwelling to the Authority main. Plans must include all elevations.

No applications for service will be accepted by the Authority until the applicant has paid, or made satisfactory arrangements to pay, all arrears and charges due by the applicant, at any premises now or heretofore occupied by him.

The accepted application shall constitute a contract between the Authority and the applicant, obliging the applicant to pay the Authority its rates as established from time to time, and to comply with its Rates, Rules and Regulations.

Applications for service connections will be accepted subject to there being existing mains in streets or right-of-way abutting the premises to be served.

When a prospective customer has made application for a new service, or has applied for the reinstatement of an existing service, it shall be presumed that the piping and fixtures on the

applicant's premises are in good condition. The Authority will not be liable, in any event, for any accident, breaks or leakage arising in any way in connection with the pipes or fixtures of the customer, nor for any damage to the property which may result from the usage thereof.

A new application must be made upon any change in the service, from that described in the application, or in ownership of the property when the owner is the customer. The new customer shall be responsible for making application for approval by the Authority, before water and/or sewage service is received or continued. There will be no charge for filing application for change in type or service.

### **7.7.3 Fees**

The Application Fee shall be \$5.00 for Sewer and \$5.00 for Water. Inspection Fees shall be \$15.00 for Sewer and \$15.00 for Water, to be returned if connection to MUA System is not feasible. All Fees payable to the Mantua Township MUA.

Connection charges per Section 21 or as agreed between the Authority and the applicant shall be paid as part of this application.

### **7.7.4 Action by Authority**

The application and supporting data will be reviewed by the Authority. If it is determined that it is feasible to extend service and that the plans are in compliance with these Rates, Rules and Regulations, the applicant will be notified of the Authority approval and the connection fee. Upon receipt of the fee, the sewer and/or water permits will be issued to the applicant and copies forwarded to the Building Inspector.

For Water/Sewer Connections - Street Opening Permit must be obtained from applicable agency (Mantua Township, Gloucester County or State of New Jersey) Copy must be given to MTMUA Office

If it is not feasible to extend service to the dwelling, a letter of APPROVAL TO INSTALL ONSITE SANITARY SEWER AND/OR WATER SYSTEM AS APPROVED BY THE BOARD OF HEALTH will be issued to the applicant, the Gloucester County Board of Health, and the Building Inspector.

## **SECTION 8 CONNECTIONS & SERVICE LINES: WATER**

### **8.1 Authority Service Line**

New connections, as approved by the Authority, to the existing water mains, shall be at the sole expense of the applicant, including taps, fittings, pipe, labor and related materials. In addition, it shall be the responsibility of the applicant to obtain the necessary permits and to restore the sidewalk and/or street paving. The applicant shall pay a connection charge for each connection as stated under these Rates, Rules and Regulation. Upon inspection and approval of the installation by a representative of the Authority and the Township Plumbing Inspector, the new connection and lateral from the main to, and including the curb stop and water box, shall become the property of the Authority and shall be maintained by them.

### **8.2 Size and Kind of Service Line**

The Authority reserves the right to determine the size and kind of service line from the main to the curb stop, and from the curb stop or meter pit to the property to be serviced. The curb stop or meter box shall be placed inside the curb line. Minimum ¾" Type K copper, flared, underground-type, shall be used throughout for services up to and including three (3) inches in diameter. For larger services, ductile iron cement lined pipe meeting A.W.W.A. Standards for Class 52 water pipe shall be used. The pipe from the curb stop, or meter pit, to the property, shall be laid in a straight line at right angles to the curb line, within the building limits of the structure to be served, and shall be at least four (4) feet below the surface of the ground, when final grading of the property has been completed.

### **8.3 Separate Trench**

No service pipe shall be laid in the same trench with gas pipe, drain sewer pipe, or any other facility of any public service company, nor within three feet of any open excavation, vault, cesspool or septic tank; nor shall the location be in conflict with any sidewalk or driveway, or be subject to vehicular traffic. All services shall comply with the latest revision of the Rules and Regulations of the Department of Environmental Protection.

### **8.4 Maintenance By Customer**

All connections, service lines, and fixtures furnished by the applicant, shall be maintained by the customer in good order, and all valves, meters and appliances furnished and owned by the Authority, and on the property of the customer, shall be protected properly and cared for by the customer. Any leak in the service between the curb stop and meter must be immediately repaired by the owner or occupant of the premises. Failure to comply will necessitate shut off. The customer shall be responsible for notifying the Authority of the plumber engaged in any maintenance work or installation of the customer's service line, prior to work being commenced, and said plumber shall not backfill any trench until the work has been inspected and approved by the Authority's representative. Any work not acceptable shall be immediately removed and replaced by work that is acceptable.

### **8.5 Authority Not Responsible**

The Authority shall in no event be responsible for maintaining any portion of the service line owned by the customer, or for damage done by water escaping therefrom; or from lines or fixtures on the customer's property; and the customer shall at all times comply with applicable regulations with respect thereto, and make changes therein, required by reason of change or grade, relocation of mains or otherwise.

### **8.6 Renewal of Service Lines**

Where the replacement of the service line from the main to the curb stop, or meter pit, is found to be necessary, the Authority will replace the service in the same location as previously used. If the property owner, or customer, requests the new service line at some other location, the property owner will pay all additional expenses in excess of the cost of laying the service line and cutting off and disconnecting of the old service line shall be the responsibility of the customer.

### **8.7 Property Supplied by Single Service Line**

A service line from the curb stop, or a meter pit, to a property shall not supply more than one property, as generally described and classified below, but any such property, upon proper application of the owner, may be supplied by two or more meters, each of which, for billing purposes, shall be considered as being one customer account, and provided that the supply to each such meter has an individual control at or near the curb, via:

- (a) Any house; either detached, or one side of a double house, or a house in a row of houses. A garage, conservatory and similar structures shall be considered as a portion of that building.
- (b) An industrial, or commercial, or manufacturing establishment.
- (c) A building separated from adjacent buildings by a party wall, e.g. apartments, stores, offices or any combination thereof.
- (d) A detached building comprising apartments, stores, offices, work shops or any combination thereof.

### **8.8 Single Service Line With Two or More Customers**

Where two or more customers are now supplied through a single service line and any violation of the Rates, Rules & Regulations of the Authority occurs with respect to either or any of said customers, it shall be deemed a violation to all, and unless the violation is corrected after notice, the Authority shall take such action as can be taken for a single customer, except that such action will not be taken until a customer who has not violated the Authority's rules has been given a reasonable opportunity to attach his pipe to a separately controlled service connection. All new installations shall be single line services.

## **8.9 Sprinkler Systems**

**8.9.1** No request for permission to tap into the Authority water distribution system for purposes of installing a fire prevention sprinkling system will be reviewed by the Authority until the applicant submits a street opening permit on Township, County, or State owned streets or a written permission from the builder on privately owned streets not yet acquired by the municipal government.

### **8.9.2 Fee**

An inspection fee shall be submitted with the application. A deposit shall also be submitted by the applicant prior to any Authority approval. The deposit shall be held at the Authority Office and shall be returned to the Contractor upon the inspection and approval of the installation by the Authority Superintendent. See Section 21 for appropriate fees.

### **8.9.3 Technical Requirements**

- (a) Meter box shall be a Ford or its equivalent as approved by the Authority.
- (b) Sprinkler system shall provided with a check valve /back flow preventer.
- (c) Ford meter plumb horn VV84 (2 valves & 1” meter)shall be required.
- (d) Meter shall be purchased from the Mantua Township MUA.
- (e) Main tap shall be inspected for workmanship and leakage by the Authority Superintendent or his representative prior to backfilling.
- (f) All taps shall be made during the regular 8:30 A.M. to 4:30 P.M. business hours of the Authority.

## **8.10 Irrigation Systems**

### **8.10.1**

No request for permission to tap into the Authority water distribution system for purposes of installing an irrigation or landscape watering system will be reviewed by the Authority until the applicant submits a street opening permit on Township, County, or State owned streets or written permission from the builder on privately owned streets not yet acquired by the municipal government.

### **8.10.2 Fee**

An application and inspection fee as per Section 21 - Schedule 7 shall be paid as part of the application. A connection fee per Section 21 - Schedule 7 shall be paid upon approval of the application by the Authority and before any work shall commence.

Application shall be accompanied by two (2) sets of plans showing the proposed system from the Authority's main.

### **8.10.3 Agreement Required**

For any service line larger than 3 inches in diameter, no connection shall be made until the execution of a formal, written agreement, and under and subject to the provision appearing in said agreement, and the rules stated hereinafter. The agreement shall be prepared by the Authority's Solicitor and will set out in detail the amount of flow, the flow conditions which shall govern the conditions and cost with the respect to the physical connection, and the charges, if any, in addition to those defined under Section 21 - Schedule 7. It will be the policy of the Authority to consider each application on its merits, and to establish specific conditions applicable to the particular situation for each agreement.

### **8.10.4 Technical Requirements**

- (a) A single service line from the curb stop to the meter pit is required. The service line shall not be connected to any other type of service line (ex.- Fire system, domestic or commercial service.)
- (b) Meter box shall be a Ford or its equivalent as approved by the Authority.
- (c) Sprinkler system shall provided with a check valve /back flow preventer.
- (d) Ford meter plumb horn VV84 (2 valves & 1" meter)shall be required.
- (e) Meter shall be purchased from the Mantua Township MUA.
- (f) Main tap shall be inspected for workmanship and leakage by the Authority Superintendent or his representative prior to backfilling.
- (g) All taps shall be made during the regular 8:30 A. M. To 4:30 P.M. business hours of the Authority.
- (h) The service line shall meet all other requirements of Section 8 - Connections and Service Lines: Water.

### **8.10.5 Irrigation Wells**

Irrigation wells are permitted through the County Board of Health and NJDEP. Irrigation well systems are prohibited from being connected to the public water service provided by the Authority. A copy of the well permit must be forwarded to the Authority for their records.

## **SECTION 9 CONNECTIONS & SERVICE LINES: SEWER**

### **9.1 Authority Service Line**

New connections to existing sewer mains shall be at the expense of the applicant, including tapping (if Approved by the Authority), fittings, pipe, labor and related materials. Such new connections and laterals will become the property of the Authority to the curb line, except when the sewer main is located in the sidewalk area, then the Authority's ownership shall extend to the right-of-way line. The Authority will maintain such new connection and new laterals from the sewer main to the curb line or property line (depending on the location of the sewer main) after installation, and inspection and approval by the representative of the Authority. Applicant will be fully responsible for acquiring and the costs of street permits, excavation and restoration.

### **9.2 Size and Kind of Service Lateral**

The Authority reserves the right to determine the size and kind of the service lateral from the main to the vicinity of the curb line, from the vicinity of the curb line to the property to be served, or from the main in the right-of-way, to the property to be served. Laterals of all sizes shall be constructed of medium strength cast iron soil pipe or other piping materials specifically approved by the Authority.

The service lateral from the curb to the property line including the sewer clean-out shall be furnished, installed and maintained by the owner of the property. A size 4" lateral shall be laid at a minimum grade of 1/4" per foot and in a straight line from the point of connection to the main, where the main is in a right-of-way, or from the end of the Authority constructed service lateral, to the structure to be served and where possible shall be at least four (4) feet below the surface of the ground when final grading of the property has been completed. That portion of the service lateral and sewer clean-out installed and maintained by the owner shall be installed in accordance with the Township Plumbing Code and shall be inspected and approved by the Township Plumbing Inspector prior to backfilling the trench. Any construction not approved shall be immediately removed and reconstructed in an approved manner.

### **9.3 Service Lateral Placement**

No service lateral shall be laid in the same trench with any gas pipe, water service, or any other facility of any public utility company, nor within three (3) feet of any open excavation, vault, meter pit; nor shall the location be in conflict with any sidewalk or driveway, or subject to vehicular traffic. All laterals shall be installed within the limits of the customer's property and be a minimum of three (3) feet from any property line(s).

### **9.4 Elevation of Sanitary Fixtures**

Under no circumstances shall any sanitary fixtures be installed in a building at an elevation lower than the front curb or street centerline elevation whichever is higher.

## **9.5 Maintenance By Customer**

All connections, service laterals, sewer clean-outs and fixtures furnished by the customer, shall be maintained by him/her in good order, and all piping and connections furnished and owned by the Authority and on the property of the customer, shall be protected properly and cared for by the customer. All leaks in the service lateral or any other pipe or fixture in or upon the premises served, must be repaired immediately by the owner or occupant of the premises. The customer shall be responsible for notifying the Authority of the party, e.g. plumber, engaged by said customer to do any maintenance work in the customer's service lateral, prior to work being commenced, and said party shall not backfill any trench until the work has been inspected and approved by the Authority's representative such as the Mantua Township Plumbing Inspector. Any work not acceptable shall be immediately removed and replaced by work which is acceptable.

## **9.6 Responsibility of Authority**

The Authority shall in no way be responsible for maintaining any portion of the service lateral owned by the customer, or for damage done by sewage escaping therefrom; or for lines or fixtures on the customer's property; and the customer shall at all times comply with applicable municipal regulations with respect thereto, and make changes therein, required by reason of changes of grade, relocation of mains or otherwise.

## **9.7 Renewal of Service Lateral**

Where the replacement of the service lateral from the main curb is necessary, the Authority will replace the service in the location as previously used. If the property owner or customer, for his own convenience, desires the new service lateral at some other location, all expenses of such relocation in excess of the cost of laying the service lateral in the same location as previously used, and cutting and disconnecting the old service lateral, shall be the responsibility of the customer.

## **9.8 Prohibited Connections**

Under no circumstances will any of the following be connected to the sanitary sewers, either directly or indirectly:

- (a) Foundation underdrains, sump pumps.
- (b) Floor drain, area drain or yard drain, or drain from swimming pools.
- (c) Rain conductor or downspout.
- (d) Grease pit.
- (e) Air conditioning equipment, except condensate which will be permitted under conditions approved by the Authority.
- (f) Storm water inlets or catch basins.
- (g) Drains from pieces of equipment or manufacturing process, except when specifically authorized under the provisions of these Rates, Rules and Regulations.

## **9.9 Special Connections**

Service laterals to public buildings, churches, apartment houses, commercial establishments, and industrial establishments, shall be installed to conform to detailed plans and specifications approved by the Authority Engineer.

## **9.10 Special Precautions in Wet Ground**

Where ground water is normally above the invert elevation of the service lateral, cast iron soil pipe, with rubber "O"-Ring joints, shall be used in construction of the size 4" service laterals. An approved Static Test shall be witnessed by the M.U.A. Superintendent. Where the trench bottom is soft and yielding, the Authority Engineer reserves the right to require that the service be cast iron soil pipe laid in partial or total concrete encasement. Junctions of two different types of pipe, may, at the option of the Authority Engineer be required to be encased in concrete of mix determined by the Authority Engineer.

## **9.11 Property Served by Single Service Lateral**

A service lateral from the vicinity of the curb, or the main in a right-of-way to a property, shall not serve more than one property but any such property upon proper application of the owner may be served by two or more service laterals, each of which, for billing purposes, shall be considered as being one customer account.

## **9.12 Single Service Lateral With Two or More Customers**

Where two or more customers are now served through a single service lateral, any violation of the Rates, Rules and Regulations of the Authority, with respect to either or any of said customers, shall be deemed a violation as to all, and unless said violation is corrected after reasonable notice, the Authority may take such action as may be taken for a single customer, except that such action will not be taken until a customer who has not violated the Authority's Rates, Rules and Regulations has been given a reasonable opportunity to connect his pipe to a separately controlled service lateral. Such installations will be billed by the number of customers on the lateral.

## **9.13 Policy on Blockages**

While the Authority has no responsibility beyond the curb line, it will, as a public service, clear the curb clean-out at the request of the customer on his initial request. The Authority will also verify that the portion of the service line between the curb and main is clear and, when necessary, take action to clear that section of the line.

### **9.13.1 Clean-out - Distance Behind Curb**

If the curb clean-out is so positioned on the property that there is a distance between it and the curb, the Authority may clear the line and if it is determined that the blockage was between the curb clean-out and the curb, the Authority will charge the customer for clearing the blockage, if requested. The M.U.A. will not be held responsible for any damages to piping or property.

### **9.13.2 If Authority Opens Street**

If the customer requests that the Authority open the street to clear a blockage and the result of the excavation clearly indicates that the blockage is on the service line belonging to the customer, the customer will be assessed all costs of the excavation, service and repairs.

### **9.13.3 No Clean-out - Responsibility**

If the customer has no curb clean-out, any blockage in the service line between the dwelling and the main shall be considered the responsibility of the customer. It is recommended that the customer install a cleanout during any repairs as they may occur.

### **9.14 Policy on Missing or Damaged Curb Clean-out Caps**

When the Authority inspection indicates that a sewer cap is missing or damaged, the customer will be notified that the cap must be repaired or replaced within seven (7) days. After that time period, the Authority will replace or repair the clean-out cap and the customer will be charged for parts and service.

### **9.15 Unauthorized Connection**

No person(s) shall uncover, make any connections, use, alter, or disturb any public M.U.A. sewer, service lateral or appurtenance thereof without first obtaining a written permit from the Authority, accompanied by the required fee.

### **9.16 Construction Safeguards**

All excavations for service lateral installation shall be adequately guarded with barricades and lights so as to protect the public from hazard. No excavations on Township property shall be left open after working hours. Streets, sidewalks, parkways and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the Township of Mantua.

## **SECTION 10 WATER METERS**

### **10.1 All Water Services Shall Be Metered**

Each water service from curb stop or meter pit, to the property shall be metered. The Authority reserves the right to determine the size and location of the meter.

### **10.2 Service Fee**

All water meters will be furnished by the Authority upon payment of a service fee equivalent to the cost of the meter and yoke and shall be installed under the supervision of the Authority, and will remain the property of, and under the control of, the Authority and shall be accessible. See Section 21 for the appropriate fees.

### **10.3 Location**

After the applicant has provided space for the meter, which will be readily accessible and will provide proper protection for the meter, and has had the plumbing arranged to receive the meter at a convenient point approved by the Authority will have the meter set. In cases where it is not practical to place the meter within a building, a brick, concrete or other approved meter box or pit, fitted with a suitable and approved type of iron cover, shall be built inside the property line by the customer. The size and dimensions of the pit or box shall be approved by the Authority, provide adequate access to the meter and permit its ready installation or removal. Meters shall be capable of being read on the outside of the premises being serviced.

### **10.4 Valves Required**

A wheel handled round way stop-cock or gate valve, shall be placed by the customer on the service line directly ahead of the meter, and a stop and waste cock or valve on the outlet side of the meter. A suitable and approved check valve should be placed by the customer, between the stop and waste cock or valve and meters. When a check valve is installed, a safety valve should be inserted at some convenient point in the house piping, to relieve excess pressure due to heating water.

### **10.5 Responsibility for Damage**

Meters will be maintained by the Authority. Damage resulting from freezing, hot water or external causes due to the negligence shall be paid for by the customer.

### **10.6 Cost of Reinstallation**

The customer shall pay a charge for changing a meter because of damage in any way due to the negligence of the customer. The charges shall be as listed in Schedule 5, Section 21.

### **10.7 Minimum Charge**

Each meter is installed with a fixed minimum quarterly charge in accordance with the adopted rate schedule. Such minimum charge shall be nonabateable for nonusers of water and noncumulative against subsequent consumption. In the case of fractional period bills, covering less than a quarter, minimum charges and allowance shall be prorated.

### **10.8 Authority To Be Notified When Meter Not Working**

The customer shall immediately notify the Authority of an inoperative meter.

### **10.9 Registration Conclusive**

The quantity recorded by the meter shall be conclusive on both the customer and the Authority, except when the meter has been found to be inaccurate or has ceased to register. In such cases, the quantity may be determined by the average registration of the meter when in proper working condition.

### **10.10 Disputed Account**

In the event of a disputed account involving the accuracy of a meter, such meter will be tested upon the request of the customer, in conformity with the provisions of the Rates, Rules and Regulations. If when so tested, the meter is found to have an error in registration of four percent or more, the bills will be increased or decreased accordingly.

### **10.11 Request Test**

When a meter is removed, after installation, at the request of the customer, for testing, the following regulations shall apply:

The Authority shall, upon written request of a customer, and if he so desires, in his presence or that of his authorized representative, make a test of the meter accuracy. When a customer desires, either personally or through a representative, to witness the testing of a meter, he may require the meter to be sealed in his presence before removal which seal shall not be broken until the test is made in his presence. If the meter so tested, shall be found to be accurate within the limits specified in 10.10, a fee determined from Schedule 4, Section 21 shall be paid to the Authority by the customer requiring such test, if the meter is faulty, then the cost thereof shall be borne by the Authority, when making such request, the customer shall agree to said terms.

A report of such test shall be made to the customer and a complete record of such test shall be kept by the Authority. The amount of the fee is listed in Schedule 4.

### **10.12 Turn Off Without Authority**

Neither the customer nor any plumber or other person shall turn the water on or off at any corporation stop, curb stop, or meter valve; or disconnect or remove the meter, or permit its disconnection or removal, without the written consent of the Authority.

### **10.13 Tampering With Water Meter**

Where the meter has been inspected and found to have been removed, damaged or tampered. the customer will be notified by letter that a service charge will be required to repair the meter. If the customer refuses entry to the premises, service will be discontinued and an additional fee will be charged to restore the service.

## **SECTION 11 DAMAGE TO SYSTEM**

### **11.1 Penalty**

No person(s) shall maliciously, willfully or negligently break, damage, destroy, uncover, deface or tamper with any structure, appurtenance or equipment which is part of the Mantua Township Municipal Utilities Authority wastewater or water facilities. Any person(s) violating this provision shall be subject to immediate arrest under charge of disorderly conduct.

## **SECTION 12 MINIMUM TECHNICAL DESIGN STANDARDS - SEWERAGE**

In addition to the technical design standards described below, the applicant shall also refer to the most current requirements set forth within the New Jersey Administrative Code Title 7, Department of Environmental Protection, and Title 5, Residential Site Improvement Standards, to assure compliance with all necessary permit applications.

### **12.1 Separate Sewers Required**

The Authority will approve plans for proposed new sewerage systems or extensions only when designed upon the separate system plan, in which all water from roofs, cellars, streets, and other areas is to be excluded.

### **12.2 Summary of Information Required**

The following documents, as prepared by the applicant's engineer, are:

- (a) A general map of the entire project including a key map showing the location of the project with respect to municipal boundaries.
- (b) An area map covering probable future tributary areas for sewer system projects.
- (c) Plans and Profiles of all proposed sewers.
- (d) Specifications for all proposed construction.
- (e) An Engineer's Report describing the proposed system. (See Section 12.7).

### **12.3 Preparation of Sewer Maps and Plans**

#### **12.3.1 General**

Plans shall be drawn to standard scales generally 1" = 50' and shall show the entire area of the project. The name of the Engineer and his seal shall be shown. Where there is more than one sheet, all shall be bound together and an index map supplied, showing by number, the area and districts covered by the various sheets.

A general plan shall accompany each application for a new system or any extension or modification of any existing sewer system. Plans should be 24 by 36 inches where possible and not generally exceed 30 by 42 inches in size.

Plans shall show district boundaries and all existing and proposed streets and the surface elevations at all street intersections where sewer lines are proposed. Existing structures, both above and below ground, will be shown.

### **12.3.2 Symbols**

Sewers to be built at present and sewers to be constructed later shall be shown by standard conventions. Existing sanitary sewers and combined sewers shall be shown by special designations. All topographical symbols and conventions used are to be the same as those of the United States Geological Survey.

### **12.3.3 Elevations**

Elevations of the surfaces of streets shall be placed outside the street lines opposite their respective positions in the street. The elevations of sewer inverts shall be shown at street intersections, ends of lines, and wherever a change of grade occurs. The elevation of the surfaces shall be shown to the nearest 0.1 foot; those of the sewer inverts to the nearest 0.01 foot. All elevations will be referenced to the standard datum. Sufficient benchmarks shall be permanently established on U.S. Coast and Geodetic Survey Datum.

### **12.3.4 Distances, Grades, Sizes and Types**

The horizontal distance and stationing between manholes, grades in percent and sewer sizes and types shall be shown on all proposed sewer lines. Arrows shall be drawn to indicate the direction of flow.

### **12.3.5 Sewer Appurtenances**

All sewer appurtenances, such as manholes, siphons, pumping stations, etc., shall be designated on the plans by suitable symbols and referenced by a legend near the title.

## **12.4 Profiles**

Profiles shall indicate all manholes (with manhole numbers), siphons, pumping stations, etc., and, in the case of stream crossings, elevations of stream beds, normal flow lines and the type of pipe. Figures showing the sizes and gradients of sewers; surface elevations, sewer inverts, etc., shall be shown at or between each manhole.

Profiles of sewer lines shall be drawn to standard scales which shall be shown upon each sheet.

On each sheet of profiles shall be given, in addition to the title, an index of the streets appearing on that sheet. Profile sheets shall be numbered consecutively.

## **12.5 Standard Details of Construction**

The Mantua Township standard detail drawings of all sewer appurtenances, such as manholes, inspection chambers, siphons, pumping stations, etc., shall be utilized when preparing plans for approval.

## **12.6 Specifications**

Specifications directly applicable to the sanitary engineering (including hydraulic features) of the proposed project shall accompany all plans.

## **12.7 The Engineer's Report**

A report by the designing or consulting engineer shall accompany all plans and specifications. The report shall include or be accompanied by a signed and sealed statement by the engineer certifying that the proposed project complies with all of the Rules and Regulations of the Department of Environmental Protection; provided, however, if there are any exceptions thereto, the certification of compliance shall include a listing of such exceptions and an explanation of the reasons therefore. The report itself shall give all pertinent data upon which the design is based, including, where applicable and appropriate, the following:

### **12.7.1 Required Information Concerning Sewer Systems**

- (a) The nature and extent of the area which it is proposed to include within the present system of sewerage, and of the area which it is planned shall drain ultimately into the system, including sections not within the boundaries of the affected municipality.
- (b) The number of houses and the population to be served, both present and estimated for at least twenty five (25) years hence, with computations and curves.
- (c) The estimated per capita daily flow of sewage to be cared for, with supporting data.
- (d) The total and per capita water consumption of the district to be served at the present time, if available.
- (e) The allowance made for infiltration in the sewers.
- (f) The estimated daily flow of sewage, including infiltration.
- (g) The character of the sewage (whether domestic or industrial wastes or process waters, and in case of the latter, the nature and approximate quantity of the same stated in specific terms); also a breakdown of all quantities.
- (h) That portion of the system to be built at the present time.
- (i) The minimum grades of sewers for each size used.
- (j) Logs of test borings and ground water elevations will be shown.

## **12.8 Capacity and Design Period**

All sanitary sewers, including outfalls, shall be designed to carry at least twice the estimated average design flow when flowing half full. In the case of large interceptor sewer systems, consideration may be given to modified designs.

The design period for the estimated flow shall be at least twenty-five (25) years; longer periods are recommended for major projects.

For sewers other than circular in cross section, the data to be submitted shall include the geometrical shape, dimensions and hydraulic characteristics of the proposed sewer.

## **12.9 Materials, Minimum Grades and Velocity of Flow**

- (a) All sewers shall be constructed of materials acceptable to the Authority for the purposes and conditions they are intended to serve.
- (b) Sewers shall be designed with such hydraulic slope as will give a mean velocity of not less than two (2) feet per second when flowing full or half full, based on Kutter's or Manning's formula with  $n = 0.013$ . The fall in feet per 100 ft. of sewer shall be not less than those identified in NJAC 7:14A-23.6.

When PVC pipe is utilized for sanitary sewerage, consideration may be given to utilizing a Kutter's or Manning's "N" of 0.010, thereby allowing lower grades.

- (c) Grades producing velocities in excess of 10 ft. per second are not permitted.
- (d) The minimum size of sewers will be 8-inch. Maximum manhole spacing shall be 400 feet.
- (e) Sewers crossing streams or to be located within ten (10) feet of a stream embankment or otherwise where unusual strength is indicated, shall be of steel, reinforced concrete, cast iron or other suitable material and shall be properly protected.
- (f) Sewers and water mains generally shall be separated, a distance of at least 10 feet horizontally. If such lateral separation is not possible, the pipes shall be in separate trenches with the sewer at least 18 inches below the bottom of the water main; or such other separation as approved by the Authority shall be made. In general, the vertical separation at a crossing of sewer and water line shall be at least 18 inches. Where this is not possible, the sewer shall be constructed of cast iron pipe using mechanical or slip- on joints, or hot poured lead joints for a distance of at least 10 feet on either side of the crossing or other suitable protection shall be provided.
- (g) Any sewer within 100 feet of a water supply well or a below grade reservoir shall be of steel, reinforced concrete, cast iron or other suitable material; shall be properly protected, of completely watertight construction, and shall be tested for water tightness after installation.

- (h) When grades less than those specified above are proposed, an explanation for the use of such grades shall be included in the Engineer's Report; and said explanation shall be included in the averment called for under 12.7.

### **12.10 Inverted Siphons**

Inverted siphons shall be of cast iron or other approved material and shall have not less than two barrels. Provision shall be made for rodding and for flushing. A velocity of 3.0 feet per second should be provided.

### **12.11 Joints**

Standard slip-on or other approved manufactured joints for PVC pipe may be used. Joints for ductile / cast iron pipes shall be of slip-on or mechanical type.

### **12.12 Manholes**

Manholes shall be provided at the ends of each sewer line and at intersections and at all changes in grade, size or alignment. Lampholes will not be used.

Distances between manholes shall not exceed 400 feet for sewers 18 inches or less in diameter; 500 feet for sewers greater than 18 inches in diameter.

A drop pipe shall be provided for lateral sewers entering manholes above the manhole invert wherever the difference in elevation is two (2) feet or more. Elevation differences of less than (2) feet will require a modification of the pipe slope to tie into the existing channel.

No manholes or connections on a sanitary sewer system will be permitted within 100 feet of a water supply well or a below-grade reservoir.

Adequate provision shall be made for ventilation.

All manholes with forced main connections shall be cored and have a PVC or epoxy coated surface.

### **12.13 Pumping Stations**

The applicant shall also refer to the most current version of the New Jersey Administrative Code Title 7, Chapter 14, Department of Environmental Protection to assure compliance with all TWA permit requirements.

#### **12.13.1 General**

Raw sewage shall be screened before pumping unless special pumping equipment approved by the Department of Environmental Protection is used. Comminutors may be approved in lieu of screens.

When two pumping stations are outletting into a common force main, the design shall provide for staged pumping, preferably by the use of variable-speed pumps, so as to eliminate, as far as practical, surges of flow.

An auxiliary source of power shall be provided for electrically driven pumps, unless an alternate is approved by the Authority.

Automatic sound alarms, operating independently of the station power, shall be installed to give warning of high water, power failure, or breakdown. Such alarm system shall extend by wire to the police station or other location where competent assistance can be obtained in emergency.

Pumping stations shall not be subject to flooding, must be accessible by motor vehicles, and must be fenced and landscaped.

Adequate light and ventilation shall be provided at all pumping stations. Where operational or maintenance duties are required in enclosed areas or pits, forced ventilation by suitable means shall be provided with sufficient capacity to induce at least twelve (12) air changes per hour.

Adequate fresh-water facilities shall be provided to permit routine wash down and cleaning operations at all pumping stations. Where a domestic water service connection is provided to a pumping station, the water supply shall be properly protected as described below. No connections between fresh-water and sewage pumps or pipes shall be permitted.

- (a) An adequate supply of water under pressure shall be installed.
- (b) Where a domestic water service connection is provided to a pumping station, the water supply shall be protected by an approved backflow prevention device acceptable to the N.J.D.E.P. Air gap separation shall be used to prevent cross connections within the dry well and shall mean a physical break between a supply pipe and a receiving vessel. The air gap shall be at least double the diameter of the supply pipe, measured vertically above the top rim of the vessel, in no case less than one inch. All hose connections from the domestic water supply shall be protected with an approved backflow prevention device acceptable to the N.J.D.E.P.
- (c) Taps supplying nonpotable water shall be clearly labeled "Unfit for Drinking".

### **12.13.2 Pumps**

Pumping station capacity should be compatible with the ultimate capacity of the influent sewer. At least two pumps, each designed to handle peak flows for ten (10) years hence, shall be provided. If more than two pumps are provided, their capacities shall be such that, upon failure of the largest pump, the others will handle such peak flows. When ejectors are provided as the method of raising sewage, two compressor units are required, and they shall be so interconnected that the duplicate unit will commence operation in the event of failure of the one in use.

Pumps shall be installed in wet wells and should operate under a positive suction head. Flygt type submerged pumps with guide rails and special discharge flanges for raw sewage will be required. A means of flow metering is required. Shut-off valves will be provided on suction and discharge piping, which shall be flanged or otherwise removable, and check valves shall be provided on discharges. Special repair tools and accessories required for maintenance shall be provided.

Force main velocities shall not be less than 2 ft./second at normal pumping rates. Properly designed air release valves shall be provided on the high points of the force line.

### **12.13.3 Electrical Equipment**

- (a) Electric motors shall be so located as to be protected from flooding.
- (b) Electric motors and electrical power equipment should not be installed in subsurface chambers; where installation in such a location is necessary, the motors and equipment shall be of the explosion - proof and damp - proof type.
- (c) All electrical equipment and work shall comply with Fire Underwriter's regulations for the location involved and to the National Electric Code.

## **SECTION 13 MINIMUM TECHNICAL DESIGN STANDARDS - WATER**

In addition to the technical design standards described below, the applicant shall also refer to the most current version of the New Jersey Administrative Code Title 7, Department of Environmental Protection, and Title 5, Residential Site Improvement Standards, to assure compliance with all necessary permit requirements.

### **13.1 Preliminary Plans**

In the case of extensive or involved projects, or those for which deviations from these Rates, Rules and Regulations are anticipated, the preparation of a preliminary report and plan is advisable before detailed design proceeds; and it is recommended that the preliminary data be discussed with the Authority Engineer before final decisions are made. Formal comments will be made by the New Jersey Department of Environmental Protection on preliminary reports, if requested.

### **13.2 Applications for Approval**

Applications for the approval of plans and specifications shall be submitted by a qualified professional engineer licensed to practice in New Jersey, on forms provided by the Department of Environmental Protection. Plans submitted by such an engineer shall bear his seal.

Applications are to be signed by the proper official (with title) of the public body, company or corporation; (or if signed by an authorized agent, shall be accompanied by a certified copy of the authorization).

### **13.3 Engineering Data to be Submitted to the Department of Environmental Protection**

The following materials shall accompany the application for approval:

- (a) An Engineer's Report as outlined subsequently.
- (b) Maps, plans and specifications.
- (c) Total estimated cost of the proposed project, including the cost of land and legal and engineering fees, and the cost of all applicable structures, even though they may not be subject to review.

### **13.4 Engineer's Report**

The Engineer's Report shall, when pertinent, contain the following information:

- (a) Description of existing waterworks as related to the proposed project.
- (b) Data on present and future population served by the proposed project together with present and anticipated water requirements and the relationship of the proposed works to these factors. Estimates should be for a period of twenty-five (25) years.
- (c) Information on the source of supply, to include the following data:
  - (1) If from a surface source; the dependable yield, characteristics of the quality of the water in relation to its treatability; information obtained as a result of a sanitary survey on the sources of pollution; and the existing or proposed measures to insure protection of the supply.
  - (2) If from an underground source; data on the geological strata expected to be penetrated and the effect that such strata may have on the quality of the water; available information on yield and water quality; test well findings (if any); sources of potential pollution within a minimum distance of five-hundred (500) feet or, in the case of adverse geological conditions such as creviced or fissured rock formations, from a larger area; and a general description of the construction features proposed to protect the source from pollution.
- (d) A description of significant pumping equipment, giving capacity of units and general information on the arrangement of facilities, including the provision of standby power (if provided), control of operation and alarm systems.
- (e) A summary of proposed treatment processes with data to establish that the proposed processes will produce adequate protection of the water so treated, together with sufficient information on the nature and dosage of any chemicals applied so as to provide the reviewer with a clear understanding of their operation. Normal capacity of each unit shall be given to show that the requirements of these Rates, Rules and Regulations are being met.
- (f) The methods proposed for the treatment and disposal of sludge and filter backwash.
- (g) Sanitary features of proposed storage, transmission and distribution works.
- (h) That portion of the system to be built at the present time.

## **13.5 Maps**

A map or maps in sufficient detail to aid in the examination and comprehension and the specific project covered by the application shall be embodied with, or accompany, the plans and specifications. All maps shall be drawn to a suitable scale, shall be properly titled, and the north point and datum shall be indicated. Topography shall be shown by elevations, contours or other suitable methods. Road, streams, municipal boundaries and other features shall be shown, including applicable data such as watersheds, reservoir locations, wells and well fields, water treatment plants, existing transmission and distribution mains, storage tanks, fire hydrants and potential sources of pollution such as sewers and sewage disposal units.

## **13.6 Plans**

### **13.6.1 Details**

Plans shall be drawn to standard scales on uniformly sized sheets. Each sheet shall contain necessary titles, scales, dates, owner's name and the general description of the project. The name of the Engineer and his seal shall be shown on each sheet.

The preferred size is a drawing having a height of twenty-four (24) inches and a length of about thirty-six (36) inches including suitable margins. Lettering should be sufficiently large to permit reduction, and all plans should have graphic scales.

If there is more than one sheet, all shall be bound together and, in the case of transmission and distribution mains, an index map shall be supplied showing by number the area and districts covered by the various sheets.

### **13.6.2 Symbols**

All topographical symbols and conventions used shall be clearly defined. Water transmission and distribution mains to be built at present or constructed later shall be shown by suitable conventions. Where applicable, existing sanitary sewers and combined sewers shall be shown by special designations.

### **13.6.3 Elevations and Dimensions**

Surface elevations shall be shown of all important parts of the work, with sufficient dimensions to permit verification of the operation of the facility. U.S. Coast and Geodetic Survey Datum shall be stated. (Use NADA 83, NADA 88)

## **13.7 Specifications**

Complete specifications shall be submitted covering the potable water facilities of the project. To conserve file space and to facilitate review of the data, sections dealing with general conditions of Contract and Notices to Bidders should be omitted.

## **13.8 Ground Water Supplies**

### **13.8.1 Design**

The following criteria shall be considered in designing a water supply system for a realty improvement:

- (a) Availability of water from a public potable water supply within an economic distance from the realty improvement.
- (b) Advisability of establishing a public potable water supply.
- (c) A dependable source of water supply.
- (d) Geology
- (e) Potential and known sources of pollution.
- (f) A balanced system of supply, pumping, treatment, distribution and storage facilities to meet the peak demand.

### **13.8.2 Alternate Design or Construction Features**

Proposed design or construction features of a water supply differing from the provisions of these standards may be approved upon submission of evidence to the satisfaction of the Administrative Authority that public health or safety would not be affected adversely by such design or construction and such proposed design or construction features did not permit lower standards than those required herein.

### **13.8.3 Water Consumption**

Water supply systems shall be designed to provide a minimum quantity of potable water as determined from the following table with a 50% increase in the quantity indicated by an asterisk (\*) where laundry facilities are provided. Current average daily water demand information can be obtained in Section 7:10-12.6 of the New Jersey Administrative Code, as amended.

**Gallons Per Person**

<b><u>Type of Establishment</u></b>	<b><u>Per Day</u></b>
Cottages, seasonal occupancy	100
Single Family dwellings	100
Multiple family dwellings (Apartments)	75
Rooming Houses	50
Boarding Houses	75*
a. For each non-resident boarder	15
Hotels	50-75*
Motel or Tourist Cabin	50-75*
Mobile Home Park	100
Restaurants	
a. Sanitary Demand per Patron	5
b. Kitchen Demand per Patron	5
c. Kitchen and Sanitary Demand	10
Camps	
a. Barracks type	50*
b. Cottage type	40*
c. Day Camps (no meals served)	15
Day Schools	
a. No cafeteria or showers	10
b. With cafeteria and no showers	15
c. With cafeteria and showers	20
d. Cafeteria, showers & laboratories	25
Boarding Schools	100*
Day Workers: Office, Industrial, etc.	25
Hospitals (depending on type)	150-250
Institutions other than hospitals	75-125
Picnic Grounds	
a. Toilet only	10
b. Toilet and showers	15
Swimming pools and bathhouses	10
Clubhouses	
a. With resident members	60*
b. For each nonresident member	25
Self-service laundries	50 Gal./Wash

When more than one use will occur, the multiple use shall be considered in determining water quantity. Small industrial plants maintaining a cafeteria and/or showers; clubhouses or hotels maintaining swimming pools and/or laundries are typical examples of multiple uses.

At private camp grounds, not less than seventy-five (75) gallons per campsite per day shall be provided if privies are used. Where water- flushed toilets are used, at least one-hundred (100) gallons per campsite per day shall be provided. Where laundry facilities and individual sewer hook ups are used, at least one-hundred and fifty (150) gallons per campsite per day shall be provided.

#### **13.8.4 Sources of Water**

The source of water shall preferably be from the Authority's water distribution system unless the Applicant proves that this connection is not technically feasible.

#### **13.8.5 Grading**

Final grading shall provide adequate drainage of surface water away from the well and be of sufficient height to protect the sources of water supply from flooding.

#### **13.8.6 Freezing**

All parts of the water supply system shall be designed, located and constructed to protect against freezing.

#### **13.8.7 Cross Connection**

No (physical) cross connection shall be established between a water supply system serving a realty improvement and an approved public potable water supply unless approved in accordance with the provisions of N.J.S.A. 58:11-9.1 et seq.

#### **13.8.8 Priming**

A pump which requires priming, other than the initial priming following installation, shall not be employed for any water supply system serving a realty improvement.

#### **13.8.9 Disinfection**

Upon completion of the installation of a water supply system or following repairs to its pumping equipment, it shall be flushed, disinfected with a chlorine solution, and thoroughly reflashed to remove all traces of chlorine in a manner acceptable to the Administrative Authority.

#### **13.8.10 Duplicate Installations Required**

In supplies derived entirely from ground water sources, duplicate wells and pumping equipment, or equivalent, shall be provided when average water demand exceeds twenty thousand (20,000) gallons per day or the number of services exceeds one-hundred (100).

An interconnection with another approved public water supply may be accepted in lieu of a duplicate installation.

### **13.8.11 Protection of Ground Water Sources**

Sufficient land shall be acquired around wells, infiltration galleries, springs and similar sources of ground water developed for public water supply, as to satisfy the Department of Environmental Protection.

All land within a minimum of fifty (50) feet from a well shall be acquired by the owners of a public water supply system.

Any sewer or line carrying sanitary or industrial wastes which is within one-hundred (100) feet of a well shall be of steel, reinforced concrete, cast-iron or other suitable material; shall be properly protected, of completely watertight construction, and shall be tested for water tightness after installation.

No manholes or connections on a sanitary sewer system shall be permitted within one-hundred (100) feet of a well.

### **13.8.12 General Information Required**

The Engineer's Report required in accordance with the provisions of Section 13.4 shall include the following information:

- (a) General description of the construction of the ground water source.
- (b) Test pumping report including maximum tested yield and drawdown.
- (c) Capacity of pumping equipment installed and the control of its operation.

### **13.8.13 Information to be Shown on Map**

The map or maps required in accordance with the provisions of Section 13.5 shall show the following information:

- (a) Topography and the locations of existing, presently planned, and future planned ground water sources in the area under consideration. Each source shall be given an identifying number in chronological order of construction.
- (b) Elevations of well-heads above a common datum plane and highest known flood elevations.
- (c) Pollutational hazards (such as septic tank systems, sewers, barnyards and watercourses), are required.

### **13.8.14 Formation Log**

The detailed plans and specifications shall be accompanied by a formation log showing the types and thickness' of formations penetrated by the well or, in the event this information is not available at the time of the application, it shall be submitted to the Department of Environmental Protection, when the well has been constructed and prior to the approval of the well as a source of water for public potable and domestic purposes.

### **13.8.15 Detailed Drawings**

(a) A schematic drawing or drawings of the construction shall be included with as much detail as is practicable with the information available, and shall include:

- (1) Length, size and locations of casings and screens.
- (2) Method of sealing off shallow ground water from entering the well, including the sealing of the annular space between the drill hole and the outer casing and surface strata.
- (3) Pumping unit, including prime and stand-by power sources.
- (4) Plan and section of pump house or similar structure.
- (5) Method of connecting the well or other ground water source with the distribution system.

(b) A detailed drawing or drawings shall be submitted for the following construction:

- (1) Details of well head, including elevations of protective curbing, top of casing, pump house floor and surrounding grade.
- (2) Method of sealing well head against surface pollutants.
- (3) Provision and locations of well vents and the methods for their protection against the entry of contaminating matter.
- (4) Well head piping details, showing provision and locations of check valves, surge or air-relief valves, gate valves, sampling tap, water level indicator, discharge pressure gauge and blow-off connection to permit pumping to waste.

### **13.8.16 Applicability of AWWA Standards for Wells**

Subject to the provisions of this Section, minimum well construction standards shall equal applicable portions of the American Water Works Association Standard for Deep Wells (AWWA A100-66) or superseding standard.

## **13.9 Distribution Systems**

### **13.9.1 Material to be Submitted**

- (a) For new water supply systems, a plan showing the distribution system shall be submitted with the other engineering data. This shall show locations, diameters and material of the pipes, and location of hydrants, blow offs, and main valves.
- (b) Major extensions, additions, and improvements of transmission and distribution lines in excess of an estimated construction cost of \$50,000 (total for all Sections), shall be submitted for review and approval. Routine extensions, additions and alterations need not be submitted.

### **13.9.2 Capacity and Size of Mains**

- (a) Design capacity of water mains shall be such as to provide a minimum residual pressure of twenty pounds per square inch (20 psi), at peak day demand plus fire flow.
- (b) The minimum diameter of all distribution mains shall be six (6) inches. In any case, any pipe intended to supply fire hydrants shall have a minimum diameter of six (6) inches. All mains having more than one (1) fire hydrant shall be a minimum of eight (8) inches.

### **13.9.3 General Design Requirements**

- (a) So far as is practicable, distribution mains shall be laid in the loop system to eliminate dead ends. Dead ends, if unavoidable, shall have a fire hydrant, flushing hydrant or blow off for flushing purposes.
- (b) All distribution mains shall be provided with sufficient earth (four feet minimum), or other suitable cover to prevent freezing.
- (c) Water services and plumbing shall conform to the relevant local and/or State plumbing codes.
- (d) The specifications shall include provisions for the adequate disinfection of all new distribution mains prior to being placed into service.
- (e) Water mains and sewers generally shall be separated by a horizontal distance of ten (10) feet. If such lateral separation is not possible, the water and sewer pipes shall be in separate trenches, with the sewer at least eighteen (18) inches below the bottom of the water main. At crossings of sewers and water mains, the sewer shall be at least eighteen (18) inches below the bottom of the water main. Where this is not possible, the sewer shall be constructed of cast iron pipe with mechanical or slip-on joints, or hot-poured lead joints, for a distance of at least ten (10) feet on either side of the crossing.

### **13.9.4 Water Body Crossings**

- (a) Surface water crossings, both over and under water, present special problems which should be discussed before final plans are prepared.
- (b) Sampling taps and valves will be provided at each end of a water body crossing to facilitate sanitary control.

### **13.9.5 Maintenance of Adequate Protection**

- (a) Chambers or pits containing gate valves, air-relief valves, blow offs, meters or similar appurtenances to a distribution system shall be suitably drained and shall not be connected directly to any storm sewer or sanitary sewer.
- (b) No blow offs, air-relief valve, flushing device or hydrant drain shall be directly connected to a storm sewer or sanitary sewer.
- (c) The open end of an air-relief pipe shall be extended from the manhole or enclosing chamber to a point at least one (1) foot above the ground, and shall be provided with a down facing elbow and insect screen.
- (d) Except as permitted under the provisions of Chapter 47, P.L. 1966 (N.J.S.A. 58:11-9.1 et. seq.) there shall be no physical connection between the distribution system and any unapproved source of water. No steam condensate, or cooling water from engine jackets or other heat-exchange devices, shall be returned to the potable water supply.

## **13.10 Distribution Storage**

### **13.10.1 General**

- (a) Storage for finished water shall be provided as an integral part of each water supply system.
- (b) The location, size, type and elevation of the equalization reservoir, standpipe or elevated tank shall be such as to meet the distribution system pressure requirements contained in Section 13.9.
- (c) Unless a smaller capacity can be justified by the provision of standby power, alternate sources of supply, adequate booster pumps or inter-connections, storage facilities serving the system by gravity shall be equivalent to approximately one day's water requirements.
- (d) In any system serving more than fifty (50) customers, hydropneumatic tanks will not be considered as providing adequate storage.

- (e) Clear wells, whether designed as separate structures or as part of the filter structure, shall meet the requirements for below grade reservoirs, as issued by the New Jersey Department of Environmental Protection.
- (f) Finished water shall not be stored adjacent to an untreated water compartment when only a single wall separates the two.
- (g) Each reservoir and tank shall be equipped with overflow and low level warnings or alarms.
- (h) There shall be means available to determine water level elevations in each distribution storage unit.
- (i) Facilities shall be so designed as to permit dewatering for cleaning and maintenance without interrupting service. Direct connection to a storm sewer or sanitary sewer will not be permitted.

### **13.10.2 Protection and Safety**

- (a) All equalization reservoirs, standpipes and elevated tanks shall be protected against unauthorized access and vandalism. Fencing, locks and other necessary safeguards shall be provided.
- (b) Due regard, in the design of an elevated facility, must be given to the personal safety of the employees.

## **SECTION 14 RELATED TECHNICAL STANDARDS - SEWER**

### **14.1 Materials**

Materials used in the construction of sewers, force mains and outfalls shall be as follows:

- (a) Gravity sewers shall be constructed of cast iron, ductile iron or PVC pipe.
- (b) Inverted siphons, force mains and outfalls shall be constructed of ductile iron or steel pipe, unless otherwise permitted by the Authority.

### **14.2 Ductile Iron Pipe and Fittings**

Ductile iron pipe shall conform to the requirements of the American Standards Association Specification A21.51 as amended and revised to date. Unless otherwise specified herein, ductile iron pipe shall be thickness Class 52.

"Tyton" joints shall conform to the American National Standards Specification A21.11 as amended and revised to date.

All cast iron fittings, including Y-branches, shall conform to the requirements of the current American Water Works Association Specifications therefore, except that fittings shall be provided with joints suitable for use with the adjoining pipe. Unless otherwise specified herein, cast iron fittings shall be 250 PSI for sizes 12 inches and less, and 150 PSI for sizes 14 inches and greater. Cast iron saddles shall be subject to the approval of the Engineer.

### **14.3 Polyvinyl Chloride (PVC) Sewer Pipe**

Shall be made of PVC plastic having a cell classification of 12454-B or 12454-C or 13364-B (with minimum tensile modulus of 500,000 psi) as defined in ASTM Specification D-1784. Fittings shall be made of PVC plastic having a cell classification of 12454- B, 12454-C, or 13343-C as defined in Specification D1784. Compounds that have different cell classifications because one or more properties are superior to those of the specified compounds are also acceptable.

All fittings shall utilize rubber gasket joints, the rubber gaskets complying in all respects with the physical requirements specified in ASTM F-477, D-1869, C-361 or C-443.

The pipe and fittings shall be homogeneous throughout and free from visible cracks, holes, foreign inclusions, or other injurious defects. The pipe shall be as uniform as commercially practical in color, opacity, density, and other physical properties.

PVC pipe and fittings shall be Type PSM SDR 35 Gravity Sewer Pipe conforming to ASTM D3034 as manufactured by Johns-Manville, CertainTeed or approved equal.

PVC pipe and fittings, for depths greater than (8') eight feet shall be Type PSM SDR 26 Gravity Sewer Pipe conforming to ASTM D3034 as manufactured by Johns-Manville, CertainTeed or approved equal.

All pipe and fittings shall receive a protective lining consisting of two (2) coats of asphaltic paint equal to Inertol No. 49 as manufactured by Inertol Co., Inc. The total dry film thickness shall not be less than 4 mils.

Materials for house service from the main to two (2) feet inside of the curb line shall be cast iron pipe. The cleanout shall be located two (2) feet inside the curb line. House connections from the building to the cleanout shall be cast iron or approved equal.

## **14.4 Manholes**

### **14.4.1 Construction**

All manholes shall be constructed of precast reinforced concrete riser sections, an eccentric conical or flat slab top section, and a base section as shown or required. Where required, eccentric reducing sections shall be used to join riser sections of different diameters.

Precast manhole sections shall be manufactured in accordance with ASTM Designation C478. Manholes shall be manufactured by the "wet" process and shall be cured in the forms for several hours. The minimum compressive strength of the concrete for all sections shall be 4000 lbs. per+square inch.

The maximum allowable absorption of the concrete shall not exceed 8% of the dry weight. Tests shall be similar to those described in ASTM C-76. The circumferential reinforcement in the walls of all sections shall be a minimum of 0.12 square inch per linear foot for inside diameters up to and including 54 inches, and 0.17 square inch per linear foot for the larger sizes. Reinforcement in flat slab top sections shall be designed for the load to be supported. Additional reinforcement shall be provided at all openings larger than six (6) inches.

Joints of the sections shall be formed entirely of concrete in accordance with ASTM Designation C443 and shall be made with a rubber gasket installed in accordance with the manufacturer's recommendations. Joints shall be self-centering and watertight against internal and external hydrostatic pressure with the gasket utilized as the sealing element and external and internal seams grouted.

Base sections shall be furnished by the manufacturer with either a compressible rubber ring equal to the Omega manhole, or with a flexible sleeve equal to the Interpace flexible manhole sleeve. Waterways shall be constructed by a journeyman mason in the field after the manhole has been installed. The shape and size of waterways shall conform to the shape and size of connecting pipes as shown or ordered. Special shall be taken to form channels with curved shapes that will provide the best hydraulic conditions for smooth flow. Benches shall be sloped to drain to the waterways. Concrete used in forming water ways shall be a stiff, rich mix, and shall be given a steel trowel finish.

Riser sections, conical sections, and the outsides of flat slab top sections, shall be given a protective lining consisting of two (2) shop coats of asphaltic paint. The total dry film thickness shall be not less than 4 mils. The line shall be applied in accordance with the manufacturer's recommendations.

Foundation material under manholes shall be crushed stone. Excavation and earthwork shall be as specified.

Manhole frames shall be adjusted to finish grade by building a circular brick-in-mortar collar above the precast manhole opening. Maximum height of the collar shall be 12 inches except where otherwise ordered. Brick shall be sound, hard, well-burned, sewer brick conforming to the requirements of ASTM Designation C-32, Grade MA and shall be laid radially. Mortar shall consist of two (2) parts sand to one (1) part cement, thoroughly mixed in the required proportions before adding water. After laying up the collar and setting the frame in a full bed of mortar, the exterior of the collar shall receive a minimum 3/4 inch thick mortar coat to provide water tightness.

#### **14.4.2 Manhole Appurtenances**

Appurtenances shall include manhole frames and covers, and manhole rungs. Manhole frames and covers shall be of the best quality, close grained grey iron castings conforming to the requirements of ASTM Designation A 48, Class No. 30. Seating surfaces of manhole frame and covers shall be machined to insure a nonchattering fit. Manhole frames and covers shall be properly cleaned and coated with a waterproof asphaltum applied by immersion, while the castings are hot.

Unless otherwise indicated, manhole frames and covers shall be of the circular flared type frame with round flange equal to Catalog No. 1217 as manufactured by Campbell Foundry Company or Bridgestate Pattern 1206 or 1012A..

Locking devices, equal to Campbell No. 1487, shall be provided on frames and covers on all manholes located in easements. Locking type covers shall also be provided with a single recessed lifting handle. Lifting handle shall be equal to that shown for Campbell No. 1255. A key shall be supplied with each locking type unit.

Frames and covers equal to those specified above as manufactured by the Campbell Foundry Co Neenah Foundry Co. will be acceptable.

All covers shall be cast with identifying letters shown. Letter shall be two (2) inches high and embossed against a recessed background.

Manhole rungs shall be extruded aluminum alloy of the step drop front design. Rungs shall be cast in the vertical sides of the manhole sections on twelve (12) inch centers.

Special details shall be provided for drop manholes with invert differences exceeding two (2) feet, and for shallow manholes where the grade-to-invert depth is less than 5'-6".

Between manholes, pipe shall be straight and at uniform grade. Spacing shall not exceed 400 feet for sewers 18 inches or less and 500 feet for sewers greater than 18 inches in diameter.

The Contractor shall modify existing manholes by cutting masonry, setting pipe in place and filling with nonshrink grout. Waterways shall be chipped and roughened, and then finished with cement mortar to provide the best hydraulic conditions for smooth flow.

Flexible joints shall be placed at the manhole wall, and within four (4) feet of the wall.

## **SECTION 15 RELATED TECHNICAL STANDARDS - WATER**

### **15.1 Water Mains**

Water mains shall be cement lined ductile iron. All fittings shall be cast iron.

### **15.2 Ductile Iron Pipe and Fittings**

Ductile iron pipe shall conform to the requirements of the ANSI Specification A-21.51 as amended and revised to date. Unless otherwise specified herein, ductile iron pipe shall be thickness Class 52. "Tyton" joints shall conform to the ANSI Specification A-21.11 as amended and revised to date.

Cement mortar lining for ductile iron pipe and fittings shall conform to the requirements of the ANSI Specification A-21.4 as amended and revised to date.

Fittings shall be cast or ductile iron.

### **15.3 C-909 Pipe and Fittings**

C-909 pipe shall to AWWA C-909 and shall be UL and FM approved for all sizes. PVC pressure pipe shall be P.W. Eagle, Ultra Blue, AWWA-C909, CL150 and shall be factory made with rubber gaskets installed in the ring groove. All polyvinyl chloride pipe shall conform to ASTM D2241 and AWWA. In all pressure zones the pipe must be Pressure Class 150. PVC pressure pipe shall be made from white or blue virgin materials whose cell classifications are either Class 1245A or 1245B and shall be furnished in length of 20 feet. Lesser lengths will be accepted to allow the proper placement of fittings, valves, etc. Pipe shall be furnished in cast Iron pipe equivalent outside diameters with rubber gasketed joints.

1. All PVC water mains shall have a suitable electronic locator tape buried over the water main approximately one foot below grade with the locator tape being wrapped around the fire hydrants. The tape shall be continuous between valves and secured to each valve. The tape shall be at least 4.5 mils thick, 2-inch minimum width and made with an aluminum material sandwiched between 2 layers of polyethylene. It shall have imprinted in permanent black ink with 1- inch letters "CAUTION WATER MAIN BURIED BELOW" on blue background.
2. Unless otherwise approved by the Authority, all fittings for PVC piping 3 inches and larger shall be M.J. cast or ductile iron fittings with a transition gasket for use with PVC pipe.
3. Water Pipe: PVC pressure pipe (4 inches through 12 inches in diameter) shall conform to the requirements of AWWA C909. It shall have the same O.D. as ductile iron pipe and be compatible for use with ductile iron fittings. The pipe shall conform to these standards: working pressure of 150 psi, and laying length of 20 feet.
4. All PVC not buried shall be formulated for sunlight exposure and shall pass the impact strength test as described by ASTM D2444, latest revision, using TUP A with impact level of 94 ft.-lbs.

5. Fittings for PVC pipe (4 inches through 12 inches) shall be ductile iron mechanical joint with a minimum pressure rating of 250 psi and shall conform to the requirements of ANSI/AWWA A21.10/C110 or A21.53/C153. All pipe fittings shall bear the approval seal of the National Sanitation Foundation (NSF) for potable water pipe. Solvent weld PVC fittings will not be acceptable.
6. Joints: All PVC pipe shall have provisions for expansion and contraction provided in the joints. All joints shall be designed for push-on makeup connection. A push-on joint may be an elastomeric gasket ball end coupling manufactured as an integral part of the pipe barrel consisting of a thickened section with an expanded bell with a groove to retain a rubber sealing ring of uniform cross-section. See Appendix 11 for approved materials / products.

#### **15.4 Gate Valves**

Valves shall conform to the requirements of the American Water Works Association Specification therefore, as amended and revised to date.

Valves shall be inside screw, parallel seat, double disc gate type. They shall be designed for 200 psi working water pressure and have mechanical joint ends. Valve stems shall be the nonrising type unless otherwise specified. Valves shall be operated by a 2-inch square wrench nut and shall open in the counter-clockwise direction. The direction of opening shall be marked on the nut by an arrow and the work "OPEN".

All cast iron surfaces of the valves shall be painted with three coats of asphaltum paint.

Valves shall be Model A2380-20 as manufactured by the Mueller Company or approved equal.

#### **15.5 Valve Boxes**

Valve boxes shall be Buffalo Type, 3 piece cast iron, 5-1/4", sliding or screw type or approved equal.

Valve boxes shall be complete with covers and both valve box and cover shall be of ample strength and dimension to fully sustain the shocks of heavy vehicular traffic and to maintain the upper section and cover at proper grade under heavy vehicular traffic.

Covers shall have the word "WATER", an arrow showing the opening direction, and the word "OPEN" clearly cast thereon.

#### **15.6 House Connections**

Materials for house service connections from the main to one (1) foot inside of the curb line shall be copper Type K or approved equal with a minimum size of 1". The curb stop and box shall be installed and be of a type approved by the Authority.

## **15.7 Fire Hydrants**

Fire hydrants shall conform to the requirements of the AWWA Specifications C502 therefore, as amended and revised to date.

Hydrants shall be cast iron bronze mounted, compression type with 5-1/4" valve opening; 6" inlet connection styled to accomplish approved joint assembly with a 6" branch; two - 2-1/2" hose and one 5" Storz connection with blind cap and chain: Operating nut (National Standard Details); stuffing box to incorporate "O" Ring Seals, asphaltum coating on interior water passageways, exterior below ground line, two (2) finishing coats of paint on above ground line exterior, the final enamel coat to be the color as directed by the Engineer; hydrant shall have breakable body flange and stem coupling and be suitable for a working pressure of 150 psi. Hydrants shall be of a suitable length for a trench 4-1/2 feet deep, measured from the surface of the ground to the bottom of the connecting pipe.

Hydrants shall be equipped with a two piece outer casing which will permit its extension without excavating in case of future grade changes. The casing shall have a free vertical travel of not less than four (4) inches.

Fire hydrants shall be the 5-1/4" A-423 Centurion by Mueller Company or approved equal.

## **SECTION 16 RELATED TECHNICAL STANDARDS - GENERAL**

The work shall conform in all respects to the requirements of Standard Specifications of the New Jersey Department of Transportation as amended and revised to date.

### **16.1 Cement**

Cement used shall conform to the following requirements of the ASTM as amended and revised to date.

- (a) Standard Portland Cement - ASTM Designation C-150, Type 1.
- (b) High Early Strength Portland Cement - ASTM Designation C-150, Type 3.
- (c) Air Entraining Portland Cement - ASTM Designation C-175, Type 1-A. Air Entraining Agent shall be Vinsol Resin or Darex A.E.A.

### **16.2 Aggregates**

Aggregates, both fine and coarse, shall conform to the requirements therefore of the N.J. Department of Transportation Standard Specifications as amended and revised to date.

### **16.3 Water**

Water shall be clean, fresh and free of oils, acids, salts, organic matter or other injurious substances.

### **16.4 Concrete**

Unless otherwise provided, all concrete shall be air entrained having 4% to 7% of entrained air, and shall be produced by using Standard Portland Cement with additive or Air Entraining Portland Cement with or without additional additive as may be required.

Except where otherwise specifically provided, concrete shall be Class A, B, or C, as prescribed, proportioned as follows:

Class	Cement	Sand	Course Aggregate	Void Content	28 Day Verification Strength (PSI)
A	1	1.50	3.0	1.350	5000
B	1	1.75	3.5	1.575	4500
C	1	2.00	4.0	1.800	4000

When the coarse aggregate has a percentage of voids above or below 45, the volume of coarse aggregate or sand, respectively, shall be decreased so that the volume of said voids will equal 90 percent of the sand volume. The volumes shall be measured when the materials are dry and loose, not when they are rodded or shaken.

Class "C" concrete shall be used for the construction of concrete cradles and thrust blocks. Batching and mixing equipment shall be of a size and type suitable for work to be done and shall be subject to the approval of the Engineer. The Class of concrete required for the various items of work shall be as shown on the plans or in the specifications.

### **16.5 Reinforcement Steel**

Reinforcement steel shall be Grade 40, conforming to the requirements of either ASTM Designation A-615 or ASTM Designation A- 617.

### **16.6 Wire Mesh or Fabric**

Wire mesh or fabric shall conform to ASTM Designation A-185 as amended and revised to date.

### **16.7 Concrete Block**

Concrete block for the construction of manholes, inlets and catch basins shall conform to the requirements of the American Society for Testing Materials Specifications therefore, as amended and revised to date. Concrete blocks for manholes shall have the required radius and batter.

### **16.8 Brick**

Brick shall be Grade MA conforming to the American Society for Testing Materials Specifications therefore, as amended and revised to date.

### **16.9 Mortar**

Mortar shall be 1 : 2 cement-sand mortar.

### **16.10 Iron Castings**

Iron castings shall conform to the requirements of the American Society for Testing Materials Specifications for gray iron casting as amended and revised to date, supplemented as follows:

Castings shall be boldly filleted and risers shall be sharp and perfect. The castings shall be true to pattern in form and dimension, free of pouring faults, sponginess, cracks, blowholes and other defects which affect their strength and value for the service intended. The bearing surfaces of frames, covers and grates shall be fitted together so as to prevent rocking and the pieces match marked.

## **16.11 Ladder Rungs - Aluminum**

Ladder rungs shall be fabricated of extruded aluminum alloy conforming to the current American Society for Testing Materials Specifications therefore and shall be subject to the approval of the Engineer.

## **16.12 Excavation and Earthwork**

### **16.12.1 Limits of Excavation**

Excavation shall be made to approved lines which shall be of sufficient width for forming the pipe joints. Trench widths shall be selected so that the backfill will not exceed the safe load on the pipe. In all cases, the trench sides shall be vertical from the bottom to twelve (12) inches above the top outside diameter of the pipe. In general, the widths of pipe trenches shall not be wider than the outside diameter of the pipe barrel plus two (2') feet at the level of the top of the pipe, unless otherwise approved. Trench bottoms shall be trimmed by hand to provide firm bedding. The last three (3) inches of depth for all pipe trenches shall be removed with pick and shovel to the proper lines and grades before placing foundation material and pipe.

All excavation and earthwork activities shall be in full compliance with OSHA regulations. Blasting for rock excavation will be permitted only on approval of methods, and in compliance with applicable State and local regulations. The Mantua Township MUA is not responsible for onsite safety.

### **16.12.2 Sheeting and Bracing**

Where excavations are made with sides at greater than natural slope, sheeting and bracing shall be used of sufficient strength to sustain the sides of the excavations and to prevent movement which could in any way injure the work, or diminish the work spaces sufficiently to delay the work. Sheeting and Bracing shall conform to the requirements of the "Construction Safety Code" of the Bureau of Engineering and Safety of the New Jersey Department of Labor and Industry.

### **16.12.3 Dewatering**

The Contractor shall provide, operate and maintain satisfactory facilities and equipment including well points, with which to collect and pump all water entering excavations or other parts of the work to suitable places for disposal. All excavations shall be kept free of water until the work or structure to be built therein is completed. Water shall be discharged through pipe or gutters, or any other suitable artificial means to catch basins, watercourses, or ditches in such a manner as to avoid interference with business, pedestrian and vehicular traffic and so as to prevent damage to property. Dewatering shall continue on a 24 hour per day basis as required to avoid flotation danger to the structures until completed.

Contractors intending to divert more than 100,000 gallons of water per day for less than 31 days within a consecutive 365 day period may be authorized for such a diversion under a short term use permit rule provided that certain conditions are met. The contractor shall be responsible for meeting these conditions and submitting all required information to NJDEP for compliance. The Contractor shall be responsible for supplying any dewatering permits required in accordance with the New Jersey Administrative Code, Title 7, Chapter 19.

#### **16.12.4 Backfill**

All backfill shall consist of a suitable selected and approved earth generally from storage of approved excavated soil, free from rejected organic matter, boggy, peaty, humus or other unsuitable material such as silt, rubbish, waste, ashes or cinders. If sufficient suitable material for backfill is not available from the excavated material, as determined by the Engineer, the Contractor shall procure elsewhere a sufficient quantity of suitable material and shall furnish and place such material. No frozen earth shall be used for backfill, and all stones more than six (6) inches in the largest dimensions shall be removed from the acceptable earth or fill and backfill. Unsuitable or excess backfill material shall be promptly removed from the site.

#### **16.12.5 Placing and Compacting Backfill**

Backfill shall be made to the slopes, grades and elevations required. Backfill shall be compacted, in an approved manner to a density at least equal to that of the adjacent undisturbed soil, so as to avoid future unequal settlement.

No backfill shall be placed until the structure has been inspected in place and approved. Backfilling shall be carried out as soon as possible after such approval.

Trenches shall be backfilled from the top of the foundation material to a depth of not less than twelve (12") inches over the pipes using only bank run sand and gravel. Such material shall be uniformly placed on each side of the pipe in six (6") inch layers, wetted as required, and firmly compacted by approved tamping machines. Care shall be taken not to damage the pipe. After a compacted coverage of twelve (12") inches has been made, the remainder of the trench shall be compactly filled in an approved manner.

The bank run sand or gravel must be compacted after sprinkling with water to obtain optimum moisture content. Final in-place density must be at least ninety (90%) percent of the maximum density obtainable with the material used, as determined by AASHO Designation T 99 Compaction and Density Tests, using Method "C".

#### **16.12.6 Foundation Material**

Foundation material used for pipe bedding, from a distance below the pipe invert to the lower quarter point of the pipe, shall be bank run sand and gravel or crushed stone. Pipe embedment material from the lower quarter point to twelve (12") inches above the top of the pipe shall be bank run sand and gravel.

Bank run sand and gravel shall conform to the requirements of the New Jersey Department of Transportation, 1989 Revisions, Standard Specifications for Type 1, Class A bank run sand and gravel, while crushed stone shall conform to the requirements of the New Jersey Department of Transportation Standard Specifications, Division 8, Subsection 900, Type 1, Class C. Frozen and lumpy material shall not be used.

All crushed stone shall be screened and prior to its placement with the trench. All foundation material shall be placed and compacted as directed and approved by the Engineer.

### **16.13 Pipe Laying and Installation**

All pipe and fittings shall be installed to the lines and elevations shown or ordered, and in accordance with the manufacturer's recommendations.

Suitable tools and equipment shall be used for proper handling, storing, laying pipe and fittings. In order to avoid damage to the interior coatings of pipe, lifting hooks or bars shall not be inserted therein. Each pipe and fitting shall be checked for defects and injuries as laying proceeds. Imperfect pipe materials shall be rejected and removed from the work. Pipe found to be defective after laying shall be removed and replaced by undamaged material.

The interior of all pipe shall be cleaned of dirt, and other deleterious materials, and kept clean, as the next section of pipe is laid. During the progress of the work, the exposed ends of the pipe shall be provided with approved temporary covers fitted to the pipe, in order to prevent material from entering the pipe.

Where pipe must be cut to fit as closing pieces, such cuts shall be evenly and squarely made in a workmanlike manner with approved equipment. Injury to linings or coatings shall be satisfactorily repaired.

Where cast iron mechanical joint, Tyton or Ring-Tite fittings are used, the Contractor shall furnish and install concrete thrust blocks, tie rods, or other approved means for preventing movements at joints, bends, tees and other fittings as shown or directed. Joints must be thoroughly brushed with a wire to remove all loose rust or foreign materials, soapy water must be brushed over the joint surfaces and over the gasket. Bolts shall be tightened uniformly, using only torque-limiting wrenches to avoid over stressing the bolts. Bolt heads, nuts and other unpainted surfaces shall be coated with two (2) heavy applications of black asphaltum varnish.

All pipe shall be laid in accordance with approved details. All pipe shall be laid on top of a layer of foundation material and the same material shall be carried up to a level four (4") inches from the bottom of the pipe. Where concrete cradles are used to support the pipe, foundation material will not be required. No solid blocking will be permitted under pipe. Joints shall be made in accordance with the recommendations of the manufacturer.

## **SECTION 17 INSPECTION & TESTING OF INSTALLED FACILITY**

### **17.1 Inspection of Sewerage and/or Water Distribution System During Course of Construction**

All construction of sewerage or water distribution systems shall be under the jurisdiction of the Engineer for the Authority, either directly or through inspectors under his supervision.

- (a) The Authority Engineer shall enforce compliance with the approved plans and specifications.
- (b) The Authority Engineer shall have the authority to have the work discontinued in the event of noncompliance.
- (c) The applicant shall also furnish the name of the occupant, the street address, and lot and block number two (2) weeks prior to request for certificate of occupancy from the Building Inspector in order that the wiring, meter installations and lateral inspections can be accomplished.
- (d) No sewer or water connections shall be made to the appropriate street main whether tested or not, unless under the supervision and inspection of the Engineer for the Authority.

A temporary, leak proof bulkhead type plug shall be installed in the upstream (inlet) side of the manhole furthest downstream in any sewer main or branch under construction and shall remain intact and unloosened until written permission is received from the Authority Engineer to remove same. Water mains shall be capped, plugged or valves closed and shall remain intact and unloosened until written permission is received from the Authority Engineer to remove same.

This permission will not be granted until each section of the sewer has been cleaned and flushed in a manner acceptable to the Authority's Engineer or water mains have been flushed and sterilized in a manner acceptable to the Authority Engineer.

### **17.2 Testing of Completed System**

All sewers and water mains shall be subjected to one or more of the following types of tests (infiltration, exfiltration or pressure test). Exfiltration tests shall be conducted in lieu of infiltration tests when the pipe has been laid above the groundwater level. The tests shall be performed between two manholes or as otherwise directed by the Engineer for the Authority and shall include all related sewerage including house connections.

The Contractor shall furnish all labor, materials and equipment necessary for the testing.

Exfiltration tests shall be under at least a four (4) foot head or a pressure corresponding to the head equal to the depth of the lower manhole of the section under the test.

An infiltration test should be performed in the late winter or early spring following construction. Allowable infiltration or exfiltration shall not exceed a rate of 100 gallons per mile, per inch of diameter of sewer per 24 hours.

In order to ensure that there shall be no gushing or spurting streams entering the sewer, the Contractor shall be held responsible for water tightness of the line, shall satisfactorily repair all joints and other parts not sufficiently watertight and then shall make additional tests of the infiltration or exfiltration until the test results conform to the requirements given herein.

When individual or house connections are connected to sewer mains already tested, the individual or house connections shall be pressure tested prior to connection to the sewer main. Individual or house connections shall be pressure tested under a ten (10) foot head of water and shall be made tight from the point of connection at the main to the lowest cleanout in the building.

Water pressure tests should be made with pressure in excess of the normal anticipated water pressure.

## **17.3 Infiltration**

### **17.3.1 Objective**

This procedure establishes the method(s) to be used for the testing of sanitary sewer system.

### **17.3.2 Purpose**

The purpose of this procedure is to establish a uniform method and practice in testing sanitary sewers for infiltration, exfiltration and alignment.

### **17.3.3 Infiltration Test**

The test shall be performed in the presence of the Mantua Township MUA's Engineer

Examine the sanitary sewer system for infiltration at the downstream end of the system after construction has been completed and prior to any sanitary building connections.

In the event that there is infiltration and water is flowing at the downstream end of the system, then the source and volume of flow must be determined.

To isolate the source, it is necessary to go upstream one manhole at a time, to find where the flow is originating. This is done by plugging the first upstream manhole and observing to see if the flow stops. This procedure is repeated one manhole at a time until the infiltration has been isolated.

When the infiltration has been isolated to a section or area, the volume of flow shall be determined as follows: (Installation and use of V-Notch weirs)

- (a) Insert a 60 degree V-Notch weir into the downstream end of pipe and ensure there is no leakage between weir seal and pipe wall.
- (b) Allow water to build up and flow over weir until a maximum crest is established.
- (c) To read, observe the water level against the back side, or upstream side, of the transparent dial at the side away from the "V" opening. The figures at this point will give you the rate of flow in gallons per day.

- (d) The permissible infiltration is based on the allowable rate of 100 gallons/inch diameter of pipe per mile/24 hours.
- (e) The installation of the eight (8”), ten (10”), twelve (12”) inch or larger weir is very simple. Place weir in the pipe and adjust to proper position as indicated by level bubble. However, on the larger size pipes, select the adapter numbered for size or pipe to be tested. Place in the pipe, the upper crescent of this adapter has a fifteen (15”) inch diameter. Set the fifteen (15”) inch weir in this crescent, adjust using level bubble and clamp tight.
- (f) If the permissible infiltration number is greater than the actual infiltration number, the infiltration test passes. If the actual infiltration is greater than the permissible infiltration, the infiltration test fails, and further investigation by the Contractor will be required to reduce the infiltration.

## **17.4 Exfiltration Test Procedures**

### **17.4.1 Testing Sanitary Sewer Lines For Exfiltration**

The test shall be performed in the presence of the Mantua Township MUA’s Engineer

When testing sanitary sewer lines for exfiltration, the following method shall be used:

The low pressure air test is the most desirable method of testing and should be used when possible. The low pressure air test is very fast, and isolation of leaks is very precise.

Prior to the start of the exfiltration test, all construction work for the system under test shall be completed. This includes backfilling and completion of all manholes.

- (a) Low Pressure Air Test (4.0 lbs.) to be conducted between two consecutive manholes, as directed by the Engineer.
- (b) The test section of the sewer line is plugged at each end. One of the plugs used at the manhole must be tapped and equipped for the air inlet connection for filling the line from the air compressor.
- (c) All service laterals, stubs and fittings into the sewer test section should be properly capped or plugged, and carefully braced against the internal pressure to prevent air leakage by slippage and blowouts.
- (d) Connect air hose to tapped plug selected for the air inlet. Then connect the other end of the air hose to the portable air control equipment which consists of valves and pressure gauges used to control:
  - (1) The air entry rate to the sewer test section, and
  - (2) To monitor the air pressure in the pipe line.

More specifically, the air control equipment includes a shut- off valve, pressure regulating valve, pressure reduction valve and monitoring pressure gauge having a pressure range from 0 to 5 psi. The gauge should have a minimum division of 0.10 psi and an accuracy of .04+/- psi. See Figure No. 1 for typical control equipment apparatus.

Connect another air hose between the air compressor (or other source of compressed air) and the air control equipment. This completes the test equipment set up. Test operations may commence.

Supply air to the test section slowly, filling the pipe line until a constant pressure of 4.0 psi is maintained. The air pressure must be regulated to prevent the pressure inside the pipe from exceeding 5.0 psi.

When constant pressure of 4.0 psi is reached, throttle the air supply to maintain the internal pressure above 3.5 psi for at least 5 minutes. This time permits the temperature of the entering air to equalize with temperature of the pipe wall. During this stabilization period, it is advisable to check all capped and plugged fittings with a soap solution to detect any leakage at these connections.

If leakage is detected at any cap or plug, release the pressure in the line and tighten all leaky caps and plugs. Then start the test operation again by supplying air. When it is necessary to bleed off the air to tighten or repair a faulty plug, a new five-minute interval must be allowed after the pipe line has been refilled.

After the stabilization period, adjust the air pressure to 4.0 psi and shut off or disconnect the air supply. Observe the gauge until the air pressure reaches 3.5 psi. At 3.5 psi, commence timing with a stop watch which is allowed to run until the line pressure drops to 2.5 psi at which time the stop watch is stopped. The time required, as shown on the stop watch, for a pressure loss of 0.5 psi is used to compute the air loss. Most authorities consider it unnecessary to determine the air temperature inside the pipe line and the barometric pressure at the time of the test.

If the air pressure drops but remains above (Greater than shown in Table #1) 3.5 psig, (3.5 psig being the cut off) and does not exceed the starting pressure of 4.0 psig in the allowable time, in minutes and seconds, shown in Table 1 for the designated pipe size, the section undergoing the test shall have passed and shall be presumed to be free of defects. The test may be discontinued at that time.

If the air pressure drops below (LESS than shown in Table 1) 3.5 psig in the allowable time, in minutes and seconds, shown in Table 1 for the designated pipe size, the section undergoing the test shall not have passed the test; therefore, adequate repairs must be made and the line retested.

**TABLE 1**

<u>TIME REQUIREMENTS FOR AIR TESTING</u>		
<u>PIPE SIZE</u>	<u>TIME</u>	
<u>(In Inches)</u>	<u>Minutes</u>	<u>Seconds</u>
4	2	32
6	4	00
8	5	6
10	6	22
12	7	39
14	8	56
15	9	35
16	10	12
18	11	34
20	12	45
21	13	30

NOTE: Test at 4.0 PSI with .5 PSI Maximum Allowable Loss

- a) Pipe sizes with their respective Recommended Minimum Times, in Minutes and Seconds, for Acceptance by the Air Test Method.
- (b) For eight (8) inch and smaller pipe, only: if, during the five minute saturation period, pressure drops less than 0.5 psi after the initial pressurization and air is NOT added, the pipe section undergoing test shall have passed.
- (c) Multi Pipe Sizes: When the sewer line undergoing test is 8" or larger diameter pipe and includes 4" or 6" laterals, the figures in Table 1 for uniform sewer main sizes WILL NOT give reliable or accurate criteria for the test. Where multi-pipe sizes are to undergo the air test, the engineer can compute the "average" size in inches which is then multiplied by 38.2 seconds. The results will give the minimum time in seconds acceptable for a pressure drop of 0.5 psi for the "averaged" diameter pipe.

An air pressure correction is required when the prevailing ground water is above the sewer line being tested. Under this condition, the air test pressure must be increased .433 psi for each foot the ground water level is above the invert of the pipe.

**17.4.2 Procedures for Making Air Pressure Correction**

Determination of Ground Water Elevation.

Where ground water is known to exist or is anticipated in the area before the air testing would be conducted, the following procedure is suggested at the time the sewer main and manholes are constructed.

Determine air pressure correction, which must be added to the four (4.0) psi normal starting pressure of test, by dividing the vertical height in feet by 2.31. The result gives the air pressure correction in pounds per square inch to be added. Example: If the vertical height of water from the sewer invert to the top of the water column measures 11.55 feet, the additional air pressure required would be:

$$\frac{(11.55)}{2.31} = 5 \text{ psi}$$

Therefore, the starting pressure of the test would be four (4.0) plus five (5.0) or nine (9.0) psi, and the one half pound drop becomes 8.5 psi. There is no change in the allowable drop (0.5 psi) or in the time requirements established for the basic air test.

All force mains and pressure lines shall be tested at 50 psi or 2 times the operating pressure whichever is greater or as required by the specifications.

Each section of pipe shall be slowly filled with water. Before applying the specified test pressure, all air shall be expelled from the pipe through blow-offs or taps that may be required for the release of air at the highest points.

When the test pressure has been reached, the amount of make-up water to maintain the test pressure in two (2) hours shall be measured.

No pipe installed will be accepted until the amount of leakage does not exceed 50 gallons per day per inch diameter per mile of pipe.

Where sections of pipeline fail to meet this requirement, they shall be repaired, again maintained under pressure in two (2) hours and retested as necessary until these requirements are complied with.

Calculations to determine loss per inch of pipe per day per mile shall be done as follows:

- a. Gallons of make-up water x 24 = gallons loss/day.
- b. Gallons x loss/day x 5280 feet/mile = gallons loss/ mile/ day  
Feet or Pipe Being Tested
- c. Gallons loss/mile/day = gallons/inch dia./mile/day  
Pipe Dia. Inches

Allowable exfiltration rate is 50 gallons/inch dia./mile/day

Example:      2 x TDH x (.4333)  
                    TDH = 130  
                    Test Pressure = 90 PSI  
                    TDH = Total Dynamic Head

## **17.5 Alignments**

Alignment (Lamp Test) shall be done on all gravity sanitary sewer lines.

Alignment consists of visually examining inside of pipe between two consecutive manholes with the aid of a light and mirror.

A light is shown from one manhole towards the other manhole. A mirror is held at the invert of pipe and adjusted so the light and barrel of pipe can be seen. The barrel of the pipe shall have no vertical deflection and at least 75% of the barrel shall be visible in the horizontal direction.

In the event that alignment shows the pipe not laid true and to grade it shall be repaired and be aligned as necessary until the alignment complies with these requirements,

The applicant shall perform a T.V. video inspection of the condition of the sanitary sewer system prior to dedication of the main. The Authority Engineer may require a mandrel test to be performed, if not satisfied with other forms of testing and /or construction practices in the field.

## **17.6 Television Inspection**

### **17.6.1 Objective**

This procedure establishes the method(s) to be used for the televising of sanitary sewer systems.

### **17.6.2 Purpose**

The purpose of this procedure is to establish a uniform method and practice in testing sanitary sewers for defects via television inspection.

### **17.6.3 Television Inspections Procedures**

- \* The test shall be performed in the presence of the Authority Engineer.
- a) The televising shall be performed following the approval of the sewer system's air pressure testing.
- b) Television inspection will be employed as the method of final inspection of the completed gravity sewer mains. All sanitary sewer mains shall be cleaned with a combination jet/vacuum vehicle prior to any televising and/or dedication of the mains to the Township. The contractor shall furnish a complete portable closed-circuit television system for visual inspection of the interior of the sewers. The television inspection shall be video recorded to document same and lateral locations. One copy shall be provided to the Authority Engineer.
- c) The system to be furnished by the Contractor shall include all required television equipment, related equipment, electrical power to operate the equipment, trained personnel all floats, cables, reels, footage, counting devices, lights and other materials necessary to perform the inspection.

- d) The equipment used shall produce a clear, sharp image on the monitor screen. Any equipment not producing a satisfactory result on the monitor screen shall be replaced with another unit. The personnel operating the equipment shall be thoroughly familiar with the operation of the equipment and in interpreting the visual results obtained. One (1) copy of the video tape for each televised section shall be provided to the Department's Engineer for review to the Department's files.
- e) Any irregularities in the pipe such as cracks, misalignment (horizontal or vertical) or poor joints, shall be corrected by the Contractor at his expense prior to acceptance of the project or for final payment. If in the opinion of the Engineer the sewer is not acceptable for reasons such as poor alignment, obvious leaks or cracks in pipes or manholes, excessive amount of deposits in pipes or manholes, etc., the Contractor shall repair or replace the defective section or sections of pipe and manholes at his own expense and to the satisfaction of the Engineer. Where excessive amount of deposits are noted, the Contractor will be required to flush such sections of sewers to remove the foreign material from the pipes. The flushing will be done between two manholes at a time, with a plug inserted in any section previously cleaned to prevent foreign material from entering this pipe section. All water used to flush lines shall be pumped from the lines and disposed of by the Contractor.
- f) Television reinspection of the sewer, or any portion thereof, may at the Owner's option, be repeated at any time prior to the release of the maintenance bond. Any deficiencies disclosed in such reinspection shall be immediately repaired or replaced by the Contractor as a condition precedent to the release of said maintenance bond.
- g) The Authority or Authority Engineer has the right to waive the television inspection if all other forms of testing meet the proper specifications.

## **17.7 Testing Procedure for Public Water Supply Systems**

### **17.7.1 Objective**

This procedure establishes the methods which are to be used for the testing of public water supply systems.

### **17.7.2 Purpose**

The purpose of this procedure is to establish a uniform method and practice in testing public water supply systems for exfiltration, chlorine residual, (sterilization), and bacteria.

### **17.7.3 Exfiltration Test Procedures**

The test shall be performed in the presence of the Mantua Township MUA's Engineer. After the pipe has been laid or installed, it shall be subjected to a pressure and leakage test. For pressure piping trench, this shall be conducted prior to the complete backfilling of the trench, unless otherwise permitted by the Mantua Township MUA Engineer, and for pressure piping in structures, this shall be conducted prior to the completion of any construction which would make it impossible or difficult to gain access to the pipe if found defective. The Contractor shall test sections of the pipes between valves, where practicable or where ordered by the Mantua Township MUA Engineer.

The Contractor shall make the necessary arrangements with the Authority for the procurement of water for the pressure and leakage tests, and for subsequent sterilization, and shall furnish the necessary labor, pumps, valves, pressure gauges, water meters and all other equipment required for this purpose. Each section of pipe shall be subjected to a hydrostatic pressure 150 psi and maintained for a period of two (2) hours. Before applying the specified test pressure, all air shall be expelled from the pipe, through hydrants, blow-offs, or any taps that may be necessary for the release of air from the highest points. Taps required for the release of air and blow-offs required for filling the line shall be furnished and installed by the Contractor. The cost of such taps shall be included in the unit prices bid for the water main.

When the test pressure has been reached, the amount of make-up water to maintain the test pressure shall be measured. No pipe installed will be accepted until the amount of leakage meets the following requirements. Where sections of pipelines fail to meet this requirement, the Contractor shall, at his own expense, locate and make necessary, again maintained under pressure for two (2) hours, and retested as necessary until these requirements are complied with.

Leakage shall be defined as the quantity of water that must be supplied into the newly installed pipe or any valved section thereof to maintain pressure within 5 psi of the specified test pressure (150 psi) after the pipe have been filled with water and the air has been expelled. Leakage shall not be measured by a drop in pressure in a test section over a period of time.

Calculations to determine loss per inch of pipe per day per mile shall be done as follows:

- Gallons of make up water x 24 = gallons loss/day.
- Gallons loss/day x 5280 Ft./Mile = Gallons loss/mile/
- Feet of Pipe being Tested day
- Gallons loss/mile/day = Gallons/inch dia./mile/day
- Pipe Dia. in Inches

**Allowable leakage at various pressures is shown in Table 2.**

<b>PRESSURE TESTING WATER</b>	
<b>PIPE SIZE In Inches</b>	<b>GALLONS LOSS (1,000 Ft.)</b>
3	0.28
4	0.37
6	0.55
8	0.74
10	0.92
12	1.10
14	1.29
16	1.47
18	1.66
20	1.84
24	2.21
30	2.76
42	3.86
48	4.41
54	4.97

**BASED ON AWWA STANDARD @ 150 PSI  
FOR ONE HOUR**  
\* AWWA standard shall be latest revision.

NOTE: Due to Table 2 being based on a one (1) hour test, the allowable loss determined must be doubled for the two (2) hour test.

NOTE: The testing methods described in this section are specific for water-pressure testing. These procedures should not be applied for air-pressure testing because of the serious safety hazards involved.

**Sterilization**

Each completed unit of the water main and distribution system shall be thoroughly sterilized with chlorine before it is placed in operation. The amount of chlorine applied shall be such as to provide a dosage of at least fifty (50) ppm. The contact period shall be at least twenty-four (24) hours, at the end of which time the chlorine residual shall be at least ten (10) ppm. The line should then be flushed with clean water until the chlorine residual is not greater than 0.2 ppm.

The chlorine required shall be in the form of high test calcium hypochlorine (HTH) in tablet form. The number of tablets required per length of pipe shall be determined from the following table:

<u>Length of Section</u>	<u>6"</u>	<u>8"</u>	<u>10"</u>	<u>12"</u>
13'	2	3	4	4
18'	3	3	4	4
20'	3	4	5	6

The required number of tablets should be fastened to the top of each length of pipe as it is laid using hot tar or "Permatex No. 2" gasket cement as the adhesive. Care should be taken to see that the adhesive only covers the side of each tablet so that as much surface as possible is exposed to the water when it is introduced into the main. A newly installed main shall be disinfected in accordance with ANSI/AWWA C651. Following chlorination, the main should be flushed as soon as possible, since prolonged exposure to high concentrations of chlorine might damage the asphaltic seal coating.

**NOTE:** *Other methods of sterilization may be used, however, approval by the Mantua Township MUA, in writing, must be obtained prior to the test being performed.*

**Bacteria Test**

- a. After flushing has been completed and the chlorine residual is not greater than 0.2 ppm, a bacteriological sample shall be taken in accordance with the New Jersey Department of Environmental Protection Agency, Potable Water Standards bulletin PW-D 10, December, 1970.
- b. The mouth of the valve, hydrant, blow off etc., shall be sterilized using a propane torch or equivalent and the water then allowed to flow for a period of not less than 5 minutes.

- c. The standard sample taken shall be collected in sterile bottles care being taken not to contaminate the neck of the bottle or stopper during collection.
- d. This sample shall be collected by the certified laboratory designated by the Mantua Township MUA or its Engineer for analysis.
- e. Copies of the analysis shall be sent to the engineer directly from the laboratories.
- f. In the event that the laboratory analysis shows bacteria present the line shall be rechlorinated, flushed, sterilized and a new sample taken until such time as the New Jersey Department of Environmental Protection, Potable Water Standard PW-D 10, December 1970 are met.

TO: Mantua Township M.U.A.  
397 Main Street  
Mantua, N.J. 08051

DATE: \_\_\_\_\_

Attn.: Superintendent

RE: \_\_\_\_\_  
Project  
\_\_\_\_\_  
Section  
\_\_\_\_\_  
As Built - Water

This is to inform you that the water mains referred to above and for which we have requested an inspection for pressure compliance have been disinfected in accordance with the project specifications.

Very truly yours,

\_\_\_\_\_  
Signature  
\_\_\_\_\_  
Company

cc: Mantua Township M.U.A.  
Authority Engineer

## **SECTION 18 BILLING, PAYMENTS, DELINQUENCIES, Etc.**

### **18.1 Rendering of Bills for Water & Sewer Service**

A single bill for water and sewer services will be rendered quarterly to each customer. The bill will be printed the first of the month and rendered as soon as thereafter as practicable.

Water charges will be based on the quarterly readings read prior to the printing of the bill. If the meter cannot be read, the minimum charge will apply and the customer's meter card will be charged with 10,000 gallon usage.

Sewer and garbage disposal charges are billed in advance for the quarter beginning with the billing date.

### **18.2 Payment Schedule**

If a bill is not paid within thirty (30) days of the date of billing, the interest rate shall be the maximum amount allowed by statute.

In case of a disputed bill terminating substantially in favor of the customer, the payment is due within ten (10) days of the termination of the dispute.

### **18.3 Delinquent Accounts**

Any bill unpaid after thirty (30) days of presentation shall be classified as delinquent. Any bill unpaid after forty-four (44) days of presentation shall be subject to discontinuance of service after not less than five (5) days of written notice.

All requests to shut-off the service of a delinquent customer shall be over the signature of the Superintendent.

If service is discontinued for nonpayment of the account, it will not be restored until the turn-on fee (payable in cash) plus all unpaid charges are paid or satisfactory arrangements have been made for payment. (See Schedule 5).

If the check used as payment to prevent shut-off of service is returned by the bank for insufficient funds, a processing fee will be charged against the account and the service will be discontinued immediately without further notice. (See Schedule 3).

Any unpaid balance of service charges and interest hereon shall be a lien against the property and action shall be initiated pursuant to the procedures specified under N.J.S.A. 40:14B-32.

Notice of delinquent charges shall be given annually to the Tax Collector of Mantua Township thirty (30) days prior to the Township posting notice of publishing all delinquent taxes.

#### **18.4 Discontinuance of Service**

Service may, at the sole discretion of the Authority, be discontinued for any of the following reasons:

- (a) Misrepresentation in application.
- (b) Willful waste of water through improper or imperfect pipes.
- (c) Failure to comply with restrictions imposed pursuant to Section 19 - Reserve Supply.
- (d) Use of water for any other property or purpose than that described in the application.
- (e) Molesting any service pipe, meter, curb stopcock or seals, or any other appliance of the Authority.
- (f) Vacancy in excess of thirty (30) days (water only).
- (g) Nonpayment of any charge occurring under the application.
- (h) Refusal of reasonable access to the property for purposes of inspecting, reading, repairing or removing meters.
- (i) Making or refusing to sever any cross connection between a pipe or fixture carrying water furnished by the Authority and a pipe or fixture carrying water from any other source.
- (j) Nonpayment of bills within time prescribed.
- (k) Violation of any rules of the Authority.

#### **18.5 Renewal Service**

Service will be renewed when the conditions under which such service was disconnected are corrected and upon payment of all accrued charges provided in the schedule of rates or rules of the Authority.

#### **18.6 Abatement**

DELETED - JUNE 1985

### **18.7 Deposits**

Deposits may be required from any customer who becomes habitually delinquent. Amount of deposit shall be equal to his average quarterly bill.

Any customer having paid a deposit shall pay bills for water and sewer service as rendered, in accordance with the rules of the Authority. The deposit shall not be considered as payment on account of a bill during the time the customer is receiving service.

Deposits shall be returned to the depositor when he shall have paid undisputed bills for service for a period of twelve (12) consecutive months.

Deposits shall be deposited in an interest-bearing account and the interest shall also be returned to the depositor upon the conclusion of the twelve (12) months.

### **18.8 Continuing Obligation to Pay Service Charge**

Upon connection of an improved and usable property to a sewer, the obligation to pay the minimal annual service charge continues despite the failure to occupy the property or to use the sewer facilities, so long as the building or structure on the property is still available for use and the sewer facilities remain available.

**SECTION 19 RESERVE SUPPLY**

The Authority shall have the right to reserve a sufficient supply of water at all times in storage, to provide for fire and other emergencies, or may restrict or regulate the quantity of water used by the customer in case of scarcity, or whenever the public welfare may so require.

## **SECTION 20 RESPONSIBILITY FOR SERVICE**

It is agreed by the parties receiving public fire service, private fire service, or any other service, that the Authority does not assume any liability as insurer of property or person, and that the Authority does not guarantee any special service, pressure, capacity or facility, other than is permitted by the ordinary and changing operating conditions of the Authority, as the same exists from day to day. It is agreed, by the parties receiving service, that the Authority shall be free and exempt from any and all claims for injury to any person or property by reason of fire, water failure to supply water pressure or capacity.

When a prospective customer has made application for a new service or has applied for the reinstatement of an existing service, it shall be presumed that the piping and fixtures on the applicant's premises are in good condition. The Authority will not be liable in any event, for any accident, breaks or leakage arising in any way in connection with the supply of water or failure to supply same, or the freezing of water pipes or fixtures of the customer, nor any damage to the property which may result from the usage of water supplied to the premises.

No water will be furnished to any premises where any possibility exists of the mingling of the water furnished by the Authority, with water from any other source. Nor will the Authority permit its mains or service pipes to be connected in any way to any piping, swimming pools, tank, vat or other apparatus containing liquids, chemical, or any other matter which may flow back into the Authority's service pipes or mains and consequently endanger the water supply.

Whenever any person, persons, firm or firms, partnership or partnerships, corporation or corporations, or any combination thereof causes or has caused any damage to the water or sewer system or facilities of the said Authority, the party or parties causing such damage shall immediately notify the Authority of such damage. The said Authority shall have the right to repair such damage or have such damage repaired, and shall have the further right to recover the full cost and expense of such repairs, including, but not limited to, the standard charges for work performed by Authority employees, for materials, supplies and equipment used for such repairs from the party or parties causing such damage.

### **20.1 Complaints**

Complaints with respect to the character of the service furnished, or the reading of the meters, or of the bills rendered, must be made at the Authority's office, either orally or in writing, and a record of such complaint will be kept by the Authority, noting the name and address of the complainant, the date, the nature of the complaint and the remedy.

### **20.2 Reasonable Access**

The properly identified authorized agents of the Authority shall have the right of access to the premises served, at all reasonable hours, for the purposes of reading meters, examining fixtures and pipes, observing the manner of using water and/or sewers, and for any other purposes which are proper and necessary in the conduct of the Authority's business.

### **20.3 No Oral Agreements**

No agent or employee of the Authority has authorization to bind it by any promise, agreement or representation not provided for in these Rates, Rules and Regulations.

### **20.4 Single Service - Water Only**

In instances where owners of existing properties make application for and are furnished only water service, all rules pertaining to water service must be complied with, and the charge for such service shall be as described in the Schedule of Rates.

### **20.5 Single Service - Sewerage Only**

In instances where owners of existing properties make application for and are furnished only sewerage service, all rules applicable to furnishing sewerage service must be complied with, and the charge for such service shall be as described in the Schedule of Rates.

### **20.6 Emergency**

As necessity may arise in the event of breakdown, emergency, or for any other unavoidable cause, the Authority shall have the right to cut-off the water supply temporarily, in order to make necessary repairs, connections, etc. The Authority will use reasonable and practical measures to notify the customer of such discontinuance of service but the Authority shall not be liable for any damage or inconvenience experienced by the customer; or any claim against it at any time for interruption in service, lessening of the supply, inadequate pressure, poor quality of water, or for causes beyond its control. When the supply of water is to be temporarily interrupted, written notice will be given, when practicable, to all customers affected by the temporary interruption of service, stating the probable duration of the interruption, and also the purpose of the interruption.

### **20.7 Discharges**

The discharge of any surface or subsurface water directly or indirectly to the sanitary sewer system is prohibited. Underdrain systems for foundation of buildings shall be connected to a storm drainage system approved by the Township Engineer. Further, underdrain systems in municipal rights-of-way shall have separate cleanouts which shall not be in any appurtenance of the sanitary sewer system.

### **20.8 Mandatory Water and Sewer Connection**

When the Authority provides for water and sewer to pass immediately adjacent to a property owner's boundary line, and within 200 feet of buildings, structures or houses, upon notice of the availability of water and/or sewer, said property owner shall make the necessary arrangements to tie into the system provided for within 180 days of delivery of the written notice. Such written notice should be served by certified mail, return receipt requested.

### **20.8.1 Failure to Tie In**

Should a property owner, after the 180 days referred to in 20.8 fail to tie in to the water and/or sewage facility provided for along the property owner's property line, then and in that event the Authority may make the tie-in or contract with a duly licensed contractor to effect the tie-in and then proceed against the property owner for the cost of the tie-in as well as other expenses including attorney fees incidental to the collection of the cost for the tie-in. This shall be accomplished by having a lien, filed against the property, and that steps to perfect that lien, including a tax sale through the Municipal Clerk, be employed. If the tie-in has been commenced but not completed within the 180 days referred to in Section 20.8, the Authority may grant a reasonable extension of time to complete the tie-in.

### **20.8.2 Cost of Tie-In**

The property owner shall be responsible for the cost of all tie- ins for water and/or sewer.

### **20.8.3 Required to Tie-In**

Only improved properties with structures for either habitation or commercial use such as retail stores, manufacturing or service centers, but not limited thereto, shall be subject to Section 20.8 through 20.8.2.

### **20.8.4 Tie-In or Lateral**

The terms "tie-in" or "lateral" are intended to be used interchangeably and shall be the same as found in Section 1.13.

## **SECTION 21 SCHEDULE OF RATES**

### **Schedule 1 - Sewer Service Charges**

Residential sewer connections shall be charged at an annual rate of \$304.00 per Domestic Consumer Unit payable at three month intervals. (\$76.00 per DCU – per quarter)

Senior Citizen/Permanently & Totally Disabled Persons shall be charged at an annual rate of \$216.00 per Domestic Consumer Unit payable at three month intervals. (\$54.00 per DCU – per quarter)

Non-residential sewer connections shall be at an annual rate of \$304.00 per Domestic Consumer Unit payable at three month intervals. (\$76.00 per DCU – per quarter)

### **Domestic Consumer Units**

<b><u>Type of Structure</u></b>	<b><u>Unit</u></b>
Single Family Home	1 Unit
Private dwelling with rented rooms or boarding house	1 Unit
Each room available for rent	1/2 Unit
Hotel or Motel - per living unit	1/2 Unit
Rental or Condominium apartments or mobile living unit - per living unit	1 Unit
Townhouses - 1 bedroom unit	2/3 Unit
- 2 bedroom unit	1 Unit
- 3 bedroom unit	1 Unit
Single family home with place of business	
Each place of business having separate water fixtures	1 Unit
School - per each 30 full-time pupils	1 Unit
- per each 30 full-time pupils with cafeteria	1.5 Units
- per each 30 full-time pupils with cafeteria and showers	2 Units
- per each 30 full-time pupils with cafeteria, showers & laboratory	2.5 Units

<b><u>Type of Structure</u></b>	<b><u>Unit</u></b>
Church	1 Unit
Public Buildings	2 Units
Clubs, Societies, Service Organizations	1 Unit
Clubs, Societies, Service Organizations with bar and/or dining facilities	3 Units
Service Station - without car washing facilities	1 Unit
Service Station - with car washing facilities each car washing bay	3 Units
Commercial Garage - with water fixtures	2 Units
Take-out Restaurant without seating facilities	2 Units
Diner, Tavern or restaurant - 1 to 10 seating capacity	1 Unit
- Each additional 15 seating capacity or segment thereof	1 Unit
Laundromat or self-service laundry - per each washer - per each washer under 12 lb. capacity	1/4 Unit
- per each washer over 12 lb. capacity	1/2 Unit
- per each dry cleaning machine	1 Unit
Soda Fountain and/or Luncheonette - - 1 to 10 seats	1 Unit
- Each additional 20 seats or segment thereof	1 Unit
Drive-in Restaurant - 1 to 10 seating capacity	1 Unit
Each additional 20 seats or segment thereof	1 Unit
Nursing Home (per each 10 inhabitants and Staff)	1 Unit
Bakery (with baking facilities - whether part of dwelling or not)	2 Units

<b><u>Type of Structure</u></b>	<b><u>Unit</u></b>
Swim Clubs (wastewater from fixtures only)	2 Units
<b><u>NOTE:</u></b> Swim pool drain may not be connected to sanitary sewer system	
Supermarket	10 Units
Industrial or Manufacturing Plant (without industrial waste)	
- per each 3,000 sq.ft. of gross area or per each 5 employees which ever is greater.	1 Unit
Warehouse - per each 5,000 sq.ft. of gross area or segment thereof	1 Unit
Office Building - per each 3,000 sq. ft. of gross area or segment thereof	1 Unit
General Commercial - Single Occupant	
Not otherwise categorized:	
The less of:	
- per 3,000 sq.ft. of gross area (1 Unit minimum)	1 Unit
- 1/12 Unit x average daily employment (1 unit minimum per occupant)	1 Unit
Professional Offices	
Use appropriate General Commercial Formula	

If, after one year, the applicant-owner has not shown proof of connection, the connection permit will be deemed invalid and the fees will be returned by the Authority. The applicant may, however, renew his application for a period of one year evidenced by submittal of a new application. If, however, a new application is submitted at any time, the new application shall be at the prevailing fees at the time of submitting the new application. This section shall be strictly adhered to.

In the event a business or structure is described in the Schedule by general classification, but the particular nature of said business or structure would result in an inequitable connection charge if the Schedule were used, the Authority, in its discretion, may determine that a higher or lower connection charge, as the case may be, shall be charged.

## **Schedule 2 - Miscellaneous Charges**

Search Fee - \$10.00

Bad Check - \$20.00

## **Schedule 3 - Domestic Wastewater Connection Charges**

Connection charges for sewer are \$900.00 each Domestic Consumer Unit as listed under Schedule 1 of this section. The domestic wastewater connection charge will be a one time charge by the Authority payable when required by these Rates, Rules and Regulations or as directed by the Authority. This charge does not include fees and/or charges required by agencies other than Mantua Township Municipal Utilities Authority.

## **Schedule 4 - Water Service Charges**

### **Domestic Consumer Units**

<b><u>Type of Structure</u></b>	<b><u>Unit</u></b>
Single Family Home	1 Unit
Private dwelling with rented rooms or boarding house	1 Unit
Each room available for rent	1/2 Unit
Hotel or Motel - per living unit	1/2 Unit
Rental or Condominium apartments or mobile living unit - per living unit	1 Unit
Townhouses - 1 bedroom unit	1 Unit
- 2 bedroom unit	1 Unit
- 3 bedroom unit	1 Unit
Single family home with place of business	
Each place of business having separate water fixtures	1 Unit

<b><u>Type of Structure</u></b>	<b><u>Unit</u></b>
School - per each 30 full-time pupils	1 Unit
- per each 30 full-time pupils with cafeteria	1.5 Units
- per each 30 full-time pupils with cafeteria and showers	2 Units
- per each 30 full-time pupils with cafeteria, showers & laboratory	2.5 Units
Church	1 Unit
Public Buildings	2 Units
Clubs, Societies, Service Organizations	1 Unit
Clubs, Societies, Service Organizations with bar and/or dining facilities	3 Units
Service Station - without car washing facilities	1 Unit
Service Station - with car washing facilities each car washing bay	3 Units
Commercial Garage - with water fixtures	2 Units
Take-out Restaurant without seating facilities	2 Units
Diner, Tavern or restaurant	
- 1 to 10 seating capacity	1 Unit
- Each additional 15 seating capacity or segment thereof	1 Unit
Laundromat or self-service laundry - per each washer	
- per each washer under 12 lb. capacity	1/4 Unit
- per each washer over 12 lb. capacity	1/2 Unit
- per each dry cleaning machine	1 Unit
Soda Fountain and/or Luncheonette -	
- 1 to 10 seats	1 Unit
- Each additional 20 seats or segment thereof	1 Unit

<b><u>Type of Structure</u></b>	<b><u>Unit</u></b>
Drive-in Restaurant - 1 to 10 seating capacity	1 Unit
Each additional 20 seats or segment thereof	1 Unit
Nursing Home (per each 10 inhabitants and Staff)	1 Unit
Bakery (with baking facilities – whether part of dwelling or not)	2 Units
Swim Clubs (wastewater from fixtures only)	2 Units
<b><u>NOTE:</u></b> Swim pool drain may not be connected to sanitary sewer system	
Supermarket	10 Units
Industrial or Manufacturing Plant (without industrial waste) - per each 3,000 sq.ft. of gross area or per each 5 employees which ever is greater.	1 Unit
Warehouse - per each 5,000 sq.ft. of gross area or segment thereof	1 Unit
Office Building - per each 3,000 sq. ft. of gross area or segment thereof	1 Unit
General Commercial - Single Occupant	
Not otherwise categorized:	
The less of:	
- per 3,000 sq.ft. of gross area ( 1 Unit minimum)	1 Unit
- 1/12 Unit x average daily employment (1 unit minimum per occupant)	1 Unit
Professional Offices	
Use appropriate General Commercial Formula	

If, after one year, the applicant-owner has not shown proof of connection, the connection permit will be deemed invalid and the fees will be returned by the Authority. The applicant may, however, renew his application for a period of one year evidenced by submittal of a new application. If, however, a new application is submitted at any time, the new application shall be at the prevailing fees at the time of submitting the new application. This section shall be strictly adhered to.

In the event a business or structure is described in the Schedule by general classification, but the particular nature of said business or structure would result in an inequitable connection charge if the Schedule were used, the Authority, in its discretion, may determine that a higher or lower connection charge, as the case may be, shall be charged.

### **Private Fire Protection**

Any size connection

1 Unit

### **Miscellaneous Water Charges**

(a) Pool Filling Charge: Service Fee - \$20.00  
plus actual consumption water based upon pool dimensions

(b) Meter Service:

(1) Service charge for repair to tampered meter

- \$20.00 first offense
- \$50.00 each subsequent offense

(2) Test of meter at customer's request

- \$20.00 for meters having an outlet not exceeding 1 inch
- \$120.00 per inch for other water service meters larger than 1 inch in dia.

(c) Sprinkling Systems:

- \$20.00 Inspection Fee
- \$50.00 Deposit (See Section 8.9.2)

(d) Construction:

Water for building purposes shall be metered and charged \$2.80 per 1000 gallons.

(e) Turn On/Off Fee at Customer's Request: - \$20.00.

(f) Delinquent Fees:

1. Turn-on fee following shut-off for delinquency:

- \$20.00 - 1st offense
- \$35.00 - 2nd offense
- \$45.00 - 3rd offense (within 1 year of first delinquency)

2. Service charge to restore service where customer has turned water back on at curb after M.U.A. shut-off for delinquency and M.U.A. preventive action was required - \$35.00 Cash.

3. Bad Check Charge for check issued at time of shut-off and said check returned by bank - \$25.00 Cash.

**Schedule 5 - Water Service**

Size of Meter	Minimum Charge per quarter	Consumption Charge per quarter in gals
5/8 or 5/8" x 3/4"	\$ 30.00	10,000
3/4"	39.27	14,000
1"	60.53	23,000
1-1/2"	112.90	45,000
2"	175.98	71,000
3"	342.91	174,000
4"	510.58	308,000
6"	1520.90	1,103,000
8"	2700.65	1,930,000

Each additional consumer unit serviced through the same Standard Residential meter shall be charged \$30.00 per quarter above the minimum charge.

Senior Citizens with a Standard Residential Meter will be charged a Minimum Charge of \$20.00 per quarter for 10,000 gallon consumption allowance.

The excess rate for the Senior Citizen with a Standard Residential Meter would be the same as the Residential Customer with a Standard Meter.

An excess rate shall be charged for quarterly consumption exceeding the quantity consumption allowance at the rate of \$3.30 per 1000 gallons from 10,000 gallons to 20,000 gallons; \$3.70 per 1000 gallons from 21,000 gallons to 40,000 gallons; \$4.30 per 1000 for 41,000 gallons to 60,000 gallons; \$4.65 per 1,000 gallons for 60,000 to 110,000 gallons; \$5.00 per 1000 gallons over 110,000 gallons.

Connection charges shall be \$1,600.00 for each Water Domestic Consumer Unit as per Schedule 4; which shall be paid upon the receipt of written notice from the Authority that the user is obligated to connect to the Authority system.

**Public Fire Protection Charges**

For each public fire hydrant, an annual charge of \$64.00 per hydrant will be made. No additional charge will be made for water used in fighting a fire or for testing purposes.

**Private Fire Protection Charges**

<u>Type of Service</u>	<u>Annual Charge</u>
2" Sprinkler Line	\$ 128.00
3" Sprinkler Line	\$ 412.00
4" Sprinkler Line	\$ 735.00
6" Sprinkler Line	\$1,650.00
8" Sprinkler Line	\$2,950.00
10" Sprinkler Line	\$4,590.00
12" Sprinkler Line	\$6,620.00
Private Fire Hydrant (each)	\$64.00

**Hydrant Flow Test**

Fee: \$75.00 per test

**General Requirements:** All requests for flow tests must be made at least two (2) working days in advance. The Authority reserves the right to reschedule any flow test in the event that an Observer will not be available. The accepted application shall constitute a contract between the Authority and the applicant, obliging the applicant to pay the Authority its rates as established from time to time, and to comply with its Rates, Rules and Regulations.

**See Appendix A for Application Form**

## **Schedule 6 - Connection Fee Installment Plan**

In instances where owners of existing residential properties, upon the receipt of written notice from the Authority, are obligated to connect to the Authority's water and/or sewer systems, the owner may elect to defer the payment of the Water Connection Fee and/or the Sewer Connection Fee over a period of Sixty (60) months from the due date.

If so notified in writing of the owner's election, the Authority will bill the connection fee thus deferred, with no interest, on a monthly basis for sixty (60) consecutive months. The monthly payment shall be an amount that is equal to one sixtieth (1/60) of the deferred connection fee.

If funds are available, the Authority may, when it deems appropriate, purchase limited blocks of sewer connection fees from the Gloucester County Utilities Authority for re-sale to owners of existing residential properties. In such a case, the owner may elect to defer the payment of the County Sewer Connection Fee over a period of the same sixty (60) months from the due date, without interest, in sixty (60) equal monthly installments.

Any monthly bill unpaid after thirty (30) days of presentation shall be classified as delinquent. Any monthly bill unpaid after ninety (90) days shall subject the account to discontinuance of the Installment Plan and the remaining outstanding balance of the Connection Fee shall become due and payable in full, after not less than five (5) days of written notice.

If a bill is not paid within thirty (30) days of the date of billing, the interest rate per month shall be the maximum amount allowed by statute.

## **Schedule 7 - Irrigation Charges**

Application Fee	\$10.00
Inspection Fee	\$25.00
Connection Fees:	\$1,600.00 per unit

<u>Size of Service</u>	<u>Units</u>
1" or less	1 Unit
1" to 3"	2 Units
4" to 6"	3 Units
8" to 10"	4 Units
12"	6 Units

Consumption Charges:

\$3.30 per 1,000 gallons	0	-	20,000 gallons
\$3.50 per 1,000 gallons	21,000	-	40,000 gallons
\$3.75 per 1,000 gallons	41,000	-	60,000 gallons
\$4.00 per 1,000 gallons	61,000	-	110,000 gallons
\$4.45 per 1,000 gallons	111,000	-	150,000 gallons
\$4.80 per 1,000 gallons	151,000	-	500,000 gallons
\$5.40 per 1,000 gallons	501,000	-	1,000,000 gallons
\$6.00 per 1,000 gallons			over 1,000,000 gallons

Meters shall be in a pit as per Section 8.10.4 and will be read two (2) times per year. Bills will be rendered two (2) times per year.

## **SECTION 22 REVISION OF RATES, RULES & REGULATIONS**

The Authority reserves the right to change or amend, from time to time, these Rates, Rules and Regulations.

Adopted: May 1977

Revised:

June	1985
November	1987
January	1989
October	1989
July	1991
September	1999
May	2000
February	2004
February	2010
January	2012

**APPENDIX A: MANTUA TOWNSHIP MUA APPLICATION FORMS**

Water and Sewer Main Application Summary

**Form A:** APPLICATION FOR REPORT ON FEASIBILITY OF PUBLIC SEWER AND/OR WATER, RECOMMENDATIONS AND CONDITIONS

**Form B:** APPLICATION FOR PRELIMINARY REVIEW OF PLANS FOR PUBLIC SEWER AND/OR WATER

**Form C:** APPLICATION FOR CONSTRUCTION OF PUBLIC SEWER AND/OR WATER SYSTEM

**Form D:** APPLICATION FOR TITLE TRANSFER, PUBLIC SEWER AND/OR WATER SYSTEMS

**Form E:** APPLICATION FOR CONSTRUCTION OF PUBLIC SEWER AND/OR WATER SYSTEM FOR A INDIVIDUAL DWELLING UNIT INTO AN EXISTING MTMUA SYSTEM.

**Form F:** COMMERCIAL OR INDUSTRIAL APPLICATION FOR REVIEW OF PLANS FOR PUBLIC SEWER AND/OR WATER

COMMUNICATIONS ANTENNA APPLICATION

APPLICATION FOR HYDRANT FLOW TEST

## Water and Sewer Main Extension Application Summary

The following summary is not intended to be an all inclusive list of necessary data but can be used as a guide in an effort to comply with the submission requirements. The applicant is expected to review the indicated sections for each application for further detailed information regarding submission details.

### Section 7.3

<b>FORM A</b>	<b>Application for Feasibility</b>	
Application Fees:	\$50, Sewer	\$50, Water
*Review Fees:	\$500, Sewer	\$500, Water

\* In the event that the costs of review are more than deposited, the applicant shall pay the additional costs prior to approval. Any excess moneys shall be returned to the applicant.

### Section 7.4

<b>FORM B</b>	<b>Application for Preliminary Approval</b>	
Filing Fees:	\$50, Sewer	\$50, Water
*Review Fees:	\$10.00/dcu for 1st 100 units. Additionally, \$7.50/dcu ranging between (101 - 200) units. Additionally, \$5.00/dcu for all units in excess of 200.	

\* Separate fees, calculated in this manner, shall be paid for sewer and for water.  
 \* In the event that the costs of review are more than deposited, the applicant shall pay the additional costs prior to approval. Any excess moneys shall be returned to the applicant.

Minimum Escrow: \$2,000

#### Forms and Supporting Data:

- 2 copies Engineers Report
- 5 copies TWA-1
- 2 copies WQM-003
- 2 copies Plans and Profiles
- 2 copies Construction Specifications
- 2 copies Documents Required by GCUA
- 2 copies Documents Required by NJDEP

### Section 7.5

<b>FORM C</b>	<b>Application for Construction Approval</b>	
Filing Fees:	\$50, Sewer	\$50, Water
*Review Fees:	\$750, Sewer	\$750, Water
Inspection Fee:	5% of the total water and sewer construction costs.	

\* The applicant shall periodically escrow portions of the escrow account as required by the Authority. The actual amounts of review and inspection fees shall be based on vouchers and all surpluses shall be returned to the applicant when the respective phases are completed.

## **Section 7.6**

### **FORM D**

### **Application for Acceptance**

Filing Fees: \$0, Sewer \$0, Water

Review Fee: See section 7.6 for specific requirements.

\* The applicant shall periodically escrow portions of the escrow account as required by the Authority. The actual amounts of review and inspection fees shall be based on vouchers and all surpluses shall be returned to the applicant when the respective phases are completed.

#### Forms and Supporting Data:

2 copies Final data as approved in the Preliminary Approval (Form B)

2 copies Fire hydrant plans as approved by the Fire Marshall.

#### Other Data (Partial

#### List):

All necessary documents, legal descriptions, deed of easement and plans approved by the Authority.

Proof of payment of all fees and charges required by these Rates, Rules and Regulations.

Certification by the applicant's Engineer as to the quality and content of the installed system.

Required application filing fees.

N.J. Department of Environmental Protection Permit to Operate.

The applicant shall perform a T.V. video tape of the condition of the sanitary sewer system. Any defects, debris, slit, etc. within the pipeline shall be corrected prior to Form "D" approval.

Letter from the M.U.A. superintendent certifying that a visual inspection of all the M.U.A. improvements has been completed.

Maintenance Bond: 15% of the total improvement cost.

**Section 7.7**

**FORM E: Application for Connection of an Individual Dwelling Unit Into The Existing Authority System**

Application Fee: \$5, Sewer \$5, Water  
\*Inspection Fee: \$15, Sewer \$15, Water

\* The fee will be returned if connection to the MUA system is not feasible.

Forms and Supporting Data:

Blank forms for all applications prepared for their respective service will be furnished by the Authority  
(2) sets of plans prepared by a registered plumber showing the proposed line from the dwelling to the Authority main

**Section 6.2**

**FORM F: Commercial or Industrial Application**

Filing Fee: \$50, Sewer \$50, Water  
Review Fee: \$750, Sewer & \$750, Water for 1st 5000 square feet  
\$300 for each additional square feet  
\*Inspection Fee: 5% of total sewer construction, (Minimum \$750)

\* The actual amounts of review and inspection fees shall be based on vouchers and all surpluses shall be returned to the applicant when the respective phases are completed. In the event that the costs of review are more than deposited, the applicant shall pay the additional cost prior to final approval by the Authority.

Forms and Supporting Data:

2 copies Plans and Profiles  
2 copies Construction Specifications  
2 copies Engineers Report  
Fire hydrant plan, private fire service, sprinkler system approved  
2 copies by the Fire Marshall.

\*If additional data is required after the initial review, the Applicant will be contacted by the Authority.

**Section 6.10**

**Application to Install Communication Antenna**

Filing Fee: \$100.00  
Review Fee: \$2,500.00

\* The actual amounts of review and inspection fees shall be based on vouchers and all surpluses shall be returned to the applicant when the respective phases are completed. In the event that the costs of review are more than deposited, the applicant shall pay the additional cost prior to final approval by the Authority.

Forms and Supporting Data:

2 copies	Drawings, reports and other pertinent data.
2 copies	Structural support calculations

**MANTUA TOWNSHIP**  
**MUNICIPAL UTILITIES AUTHORITY**

397 Main Street  
Mantua, New Jersey 08051  
Phone: (856) 468-1111 Fax: (856) 464-0034  
Website: [mantuamua.com](http://mantuamua.com)

**FORM A: APPLICATION FOR REPORT ON FEASIBILITY OF PUBLIC SEWER AND/OR WATER, RECOMMENDATIONS AND CONDITIONS**

**PURPOSE:** To determine the economic and technical feasibility of extending public sewer and/or water service to the municipal system.

**FILING FEE:** \$50.00 Sewer \$50.00 Water  
(Check should be made payable to Mantua Twp. M.U.A.)

**REVIEW FEE:** \$500.00 minimum fee for water and \$500.00 minimum fee for Sewer to be deposited into Escrow funds for professional review. In the event that the costs of review are more than deposited, the applicant shall pay the additional cost prior to final approval by the Authority. Any excess moneys shall be returned to the applicant.

**1. APPLICANT:**

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_

**2. PROJECT TO BE SERVICED:**

Name: \_\_\_\_\_

Location: \_\_\_\_\_

Area of Entire Tract: \_\_\_\_\_  
\_\_\_\_\_

Portion to be Serviced: \_\_\_\_\_

No. of Lots: \_\_\_\_\_ Tax Map: \_\_\_\_\_ Plate: \_\_\_\_\_

Block: \_\_\_\_\_

Type: (Check)      Single Family: \_\_\_\_\_      Townhouses: \_\_\_\_\_  
   Industrial: \_\_\_\_\_      Commercial: \_\_\_\_\_  
   Apartments: \_\_\_\_\_      Other: \_\_\_\_\_

**3. ACTION INITIATED WITH PLANNING BOARD:**

Type of Request: (Check)  
Subdivision Classification: \_\_\_\_\_  
Zoning Change: \_\_\_\_\_ From Zone To: \_\_\_\_\_

**4. DEVELOPMENT PLANS:**

Construction Start Date: \_\_\_\_\_  
Applicant Intends to:      Sell unimproved lots: \_\_\_\_\_  
   Sell improved lots: \_\_\_\_\_  
   Sell completed units: \_\_\_\_\_

**5. PROFESSIONAL ENGINEER DESIGNING WATER/SEWER SYSTEM:**

Name: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
   \_\_\_\_\_  
Telephone: \_\_\_\_\_

**6. DESCRIPTION OF PROPOSED SYSTEMS:**

Water: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Sewer: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**7. SUPPORTING DATA REQUIRED:**

A. General location plan showing streams, streets, blocks, lots and tax map numbers.

Three copies: \_\_\_\_\_

\_\_\_\_\_

B. Proposed system outlines & route of construction: \_\_\_\_\_

\_\_\_\_\_

C. Estimated volumes of flow: \_\_\_\_\_

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Date

**ACTION:** A letter will be issued by the Mantua Township Municipal Utilities Authority to applicant and Planning Board within 45 days after this application has been received.

**FOR OFFICE USE ONLY:**

Date Application Received: \_\_\_\_\_

Amount of Check:            Application Fee: \_\_\_\_\_    Check #: \_\_\_\_\_

Review Fee: \_\_\_\_\_    Check #: \_\_\_\_\_

\_\_\_\_\_  
Signature of MTMUA

-----

**ACTION BY THE AUTHORITY:**

1. Subdivision Classification: Letter Issued: Date: \_\_\_\_\_

Feasibility: \_\_\_\_\_

Feasible: \_\_\_\_\_

Not Feasible Letter Issued: Date: \_\_\_\_\_

2. Zoning Change: Letter Issued (Date): \_\_\_\_\_

**MANTUA TOWNSHIP**  
**MUNICIPAL UTILITIES AUTHORITY**

397 Main Street  
Mantua, New Jersey 08051  
Phone: (856) 468-1111 Fax: (856) 464-0034  
Website: mantuamua.com

**FORM B: APPLICATION FOR PRELIMINARY REVIEW OF PLANS FOR PUBLIC SEWER AND/OR WATER**

**PURPOSE:** This application and supporting data specifying the engineering details of the proposed project will be analyzed for compliance with Authority engineering standards including provisions for orderly growth. The final condition of approval will be a mutual agreement between the applicant and the Authority regarding the terms and conditions for providing sewer and/or water services.

**FILING FEE:** \$50.00 Sewer \$50.00 Water  
(Check made payable to Mantua Township M.U.A.).

**REVIEW FEE:** Separate fees, calculated in the same manner, shall be paid for sewer and water. The Fee shall be \$10.00 per Domestic Consumer Unit (DCU) for the first 100 units; \$7.50 per DCU for the next 100 units; \$5.00 per DCU for all DCU's in excess of 200 units. Minimum amount to be placed in escrow fund necessary to initiate professional review of combined sewer and water system is \$2,000. Projects defined as a minor subdivision shall deposit a minimum escrow of 1,500.00. In the event that the costs of review are more than deposited, the applicant shall pay the additional cost prior to final approval by the Authority. Any excess moneys shall be returned to the applicant.

**1. APPLICANT:**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

**2. PROJECT TO BE SERVICED:**

Name: \_\_\_\_\_

Location: \_\_\_\_\_

MTMUA Form A Letter Issued On: \_\_\_\_\_

Planning Board Classification Issued on: \_\_\_\_\_

(Attach Copy)

Proposed No. of Lots: \_\_\_\_\_

**SUPPORTING DATA REQUIRED:**

Application for sewer and water permits which shall include:

1. Five copies of Application Form TWA-1
2. Two copies of Form WQM-003
3. Two copies of Engineer's Report (two water and two sewer)
4. Two copies of Plans and Profiles
5. Two copies of the Construction Specifications
6. Two copies of all documents required by the Gloucester County Utilities

Authority.

**ESTIMATED TOTAL ITEMIZED CONSTRUCTION COSTS OF FACILITIES OF PROJECT INCLUDING FIRE HYDRANTS**

Sewer:\_\_\_\_\_ Water:\_\_\_\_\_

**ESTIMATED CONSTRUCTION TIME REQUIRED TO FINISH PROJECT ONCE AUTHORIZATION TO CONSTRUCT (CONSIDER STATE PERMIT ALSO) IS GIVEN:\_\_\_\_\_**

Duration of Project:\_\_\_\_\_

When the Agreement between applicant and the MTMUA has been signed, the applicant may, at that time, prepare the necessary data for the submittal to the N.J. Dept. of Environmental Protection for state sewer and/or water permits.

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Date

**ACTION:** Abstract of Agreement for public sewer and/or water will be issued to the Planning Board.

Resolution by Mantua Township Municipal Utilities Authority approving submittal of the Project to the Gloucester County Utilities Authority and the New Jersey Department of Environmental Protection.

Resolution #:\_\_\_\_\_

**FOR OFFICE USE ONLY:**

Date Application Received: \_\_\_\_\_

Amount of Check:            Application Fee: \_\_\_\_\_    Check #: \_\_\_\_\_

Review Fee: \_\_\_\_\_    Check #: \_\_\_\_\_

\_\_\_\_\_  
Signature of MTMUA

-----

**ACTION BY THE AUTHORITY:**

Contract negotiated and sent to  
Applicant: \_\_\_\_\_

Signed Contract received by  
MTMUA: \_\_\_\_\_

Abstract of Agreement sent to Planning  
Board: \_\_\_\_\_

**MANTUA TOWNSHIP**  
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**FORM C: APPLICATION FOR CONSTRUCTION OF PUBLIC SEWER AND/OR WATER SYSTEM**

**PURPOSE:** To control the extent and schedule of planned sewer and/or water facility installations and to establish a schedule for Authority inspection of completed installations.

**FILING FEE:** \$50.00 - Sewer: \$50.00 - Water  
(Checks made out to the Mantua Township M.U.A.)

**\*REVIEW FEE:** \$750.00 minimum fee for water and \$750.00 minimum fee for Sewer to be deposited into Escrow funds for professional review.

**\*INSPECTION FEE:** 5% of total sewer and/or water, construction costs, as verified by the Authority Engineer.

\* In the event that the costs of review are more than deposited, the applicant shall pay the additional cost prior to final approval by the Authority. Any excess moneys shall be returned to the applicant.

**1. APPLICANT:**

Name: \_\_\_\_\_

**2. PROJECT:**

Name: \_\_\_\_\_

Location: \_\_\_\_\_

Section: \_\_\_\_\_ No. of Lots: \_\_\_\_\_

Date of MTMUA Form B Approval: \_\_\_\_\_

Date of Planning Board Preliminary Approval: \_\_\_\_\_

**3. PROFESSIONAL ENGINEER DESIGNING SEWER/WATER SYSTEM:**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone: \_\_\_\_\_

**4. SUPPORTING DATA REQUIRED:**

- A. Engineer's Itemized Report on total sewer and/or water construction costs including fire hydrants: \$\_\_\_\_\_
- B. Detailed Plans, Profiles and Specifications of sewage pump stations, sewer and water mains, hydrants (as approved by the Fire Marshal) and appurtenances (Plans shall indicate individual tax lots and blocks):  
4 sets:\_\_\_\_\_
- C. N.J. Department of Environmental Protection Permit to Construct  
No. \_\_\_\_\_ Date: \_\_\_\_\_
- D. Performance Bond: 120% (Min.) of total sewer and water construction costs (see attached samples)
- E. Cash payment (to be escrowed) in the amount of 5% of total construction costs to insure payment of Inspection Fee.
- F. Typed list coordinating individual tax lot and block with street address.

ESTIMATED CONSTRUCTION TIME REQUIRED TO FINISH PROJECT ONCE AUTHORIZATION TO CONSTRUCT IS GIVEN:\_\_\_\_\_

\_\_\_\_\_  
Signature of Applicant Date

**ACTION:** **AUTHORITY LETTERS OF AUTHORIZATION TO CONSTRUCT** will be issued. Water and sewer permits will be issued upon receipt of the Performance Bond, Assessment, Review Fee, the Department of Environmental Protection Construction Permit, and necessary connection fees.  
(Reference is made to Chapter 199, P.L. 1954, and Standards for the Construction of Water Supply Systems and Sewerage Facilities for Realty Improvements)

**FOR OFFICE USE ONLY:**

Date Application Received: \_\_\_\_\_

Amount of Check:            Application Fee: \_\_\_\_\_    Check #: \_\_\_\_\_

Notification of construction costs by Authority Engineer: \_\_\_\_\_

\_\_\_\_\_  
Signature of MTMUA

**ACTION BY AUTHORITY**

Form C Approval Letter sent to Applicant: \_\_\_\_\_

Water permit No. \_\_\_\_\_ Issued: \_\_\_\_\_

Sewer permit No. \_\_\_\_\_ Issued: \_\_\_\_\_

Connection Fee: \$ \_\_\_\_\_ Received: \_\_\_\_\_

Auxiliary Electrical Power Assessment \$ \_\_\_\_\_ Received: \_\_\_\_\_

**MANTUA TOWNSHIP**  
**MUNICIPAL UTILITIES AUTHORITY**  
397 Main Street  
Mantua, New Jersey 08051  
Phone: (856) 468-1111 Fax: (856) 464-0034  
Website: mantuamua.com

**FORM D: APPLICATION FOR TITLE TRANSFER, PUBLIC SEWER AND/OR WATER SYSTEMS**

**PURPOSE:** To request the Mantua Twp. M.U.A. to accept the installed system.

**FEES:** Fee was presented by applicant at time of submittal of Form C as a cash payment (which was escrowed) in the amount of 5% of the total sewer and/or water construction costs. Upon Authority acceptance of the systems, the balance, if any, of the fee after the administration fee of \$50.00 Sewer and \$50.00 Water plus the legal and engineering vouchers have been deducted, will be returned to the applicant.

The Authority reserves the right to field verify as built information upon the completion of remedial measures taken to correct construction deficiencies. All costs associated with the engineering, inspection or surveying tasks performed to verify the completed construction will be at the Applicants expense.

**APPLICANT:** \_\_\_\_\_

**PROJECT:** Name: \_\_\_\_\_

Location: \_\_\_\_\_

Section: \_\_\_\_\_

Sewer & Water Permit NO: \_\_\_\_\_ Issued: \_\_\_\_\_

Total No. Lots in Section: \_\_\_\_\_ No. Lots completed: \_\_\_\_\_

HAVE THE STREETS BEEN ACCEPTED BY THE TOWNSHIP? Yes No (CIRCLE ONE)

HOW LONG HAS THE SYSTEM BEEN COMPLETED? \_\_\_\_\_

DOES THE AS-BUILT PLAN FOLLOW EXACTLY THE PLAN SUBMITTED WITH FORM C IN REGARD TO DETAILS AND AREA COVERED? IF NOT, INDICATE SIGNIFICANT CHANGES: \_\_\_\_\_

**SUPPORTING DATA REQUIRED:**

1. Survey control points, bearings and distances of all easements and properties required, lot and block numbers, and a copy of the plans on compact disk required for the preparation of asbuilts.
2. Maintenance Bond (15% of the total cost of the improvement) guaranteeing satisfactory performance of the system for a period of two years from date of acceptance.
3. All necessary documents approved by the Authority that will permit the dedication of all necessary property and easements that are an inherent and necessary part of the complete system.
4. Certification by the Applicant's Engineer as to the following:
  - A. The quality and content of the installed system.
- 5 Proof of payment of all fees.
- 6 N.J. Department of Environmental Protection Permit to Operate.
- 7 Letter from the M.U.A. superintendent certifying that a visual inspection of all the M.U.A. improvements has been completed.

As-Built Plans must be completed as per Form D requirements and video inspection by the Applicant must be submitted and deemed acceptable. A separate copy of the plans shall be provided on a digital format (CD) prepared with AutoCAD in a version acceptable to the Authority Engineer.

**FOR SEWER**

I, \_\_\_\_\_, being a duly licensed Engineer in the State of New Jersey have made an inspection of the work shown on these drawings as it is proposed for acceptance by the Authority and find good workmanship throughout the entire project, that the sewers exist true and straight to grade, that the free flow conditions exist, that no debris or obstructions are in the lines, and that the infiltration of the completed system does not exceed the limits set forth in the Rates, Rules and Regulations of the Mantua Township Municipal Utilities Authority.

**FOR WATER**

I, \_\_\_\_\_, being a duly licensed Engineer in the State of New Jersey have made an inspection of the work shown on these drawings as it is proposed for acceptance by the Authority and find good workmanship throughout the entire project, that no debris or obstructions are in the lines, that the pressure tests have been completed and the lines have been sterilized and comply with the Rates, Rules and Regulations of the Mantua Township Municipal Utilities Authority. I also certify that the project as offered and as shown on these particular drawings is in substantial compliance with the Plans that were given for submittal of Form C:

Authorization to Construct and as approved by the MUA Engineer.

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Date

**ACTION:** Within 45 days after this form has been received at the Authority office, the Authority Engineer will conduct a final inspection. Upon his recommendation to accept the systems, the Authority Solicitor will have executed the transfer of the necessary deeds, easements and/or public rights-of-way. The applicant will be notified that the Authority accepts the Maintenance Bond as of that date; releases him from the Performance Bond and agrees to take responsibility for the system.

**FOR OFFICE USE ONLY:**

Date Application Received: \_\_\_\_\_

Escrowed: \$ \_\_\_\_\_  
(Presented at submittal of Form C)

\_\_\_\_\_  
Signature of MTMUA

**ACTION BY AUTHORITY:**

Final Inspection by MTMUA Engineer: \_\_\_\_\_

Result: \_\_\_\_\_

Result: \_\_\_\_\_

Recommended for Acceptance of Systems: \_\_\_\_\_

Legal Documents executed: \_\_\_\_\_

Connection Fee for all, proposed construction to be serviced by the system:

\$ \_\_\_\_\_ Paid: \_\_\_\_\_

Vouchers Paid:	Administrative:	\$50.00 Sewer	Paid: _____
		\$50.00 Water	(To Revenue Fund)
			Paid: _____

Engineer Review: \$ \_\_\_\_\_ Paid: \_\_\_\_\_

Legal Fee: Paid: \$ \_\_\_\_\_ Paid: \_\_\_\_\_

Balance Returned to Applicant: \$ \_\_\_\_\_ Paid: \_\_\_\_\_



**ACTION BY THE AUTHORITY:**

The application and supporting data will be reviewed by the Authority. If it is determined that it is feasible to extend service the applicant will be notified of the Authority's approval and the connection fee, meter service charges and/or other charges as per the Rates, Rules and Regulations of the Mantua Township M.U.A. If it is NOT, feasible to extend service, a letter of APPROVAL TO INSTALL ONSITE SANITARY SEWER AND/OR POTABLE WATER SYSTEM AS APPROVED BY THE BOARD OF HEALTH will be issued to the applicant, the Gloucester County Board of Health, and the Building Inspector.

**GENERAL REQUIREMENTS:**

Application and materials must be approved by the Authority before any construction can be started. All connections and taps to any water and/or sewer main must be done in the presence of a representative of the Authority. Inspections by a representative of the Authority shall only be done during the regular business hours of the Authority. All requests for inspections must be made at least two (2) working days in advance. The Authority reserves the right to reschedule any inspection in the event that an inspector will not be available. All connections and taps must be done by a registered plumber as approved by the Authority.

The applicant is responsible for any person, persons, firm or firms, partnership or partnerships, corporation or corporations, or any combination thereof that causes or has caused any damage to the water and/or sewer system or facilities of the Authority. The Authority shall have the right to repair such damage or have such damage repaired, and shall have the further right to recover the full cost and expenses of such repairs, including, but not limited to, the standard charges for work performed by Authority employees, for materials, supplies and equipment used for such repairs. The service shall not begin or be restored until the Authority receives payment in full for the total cost of the repairs.

The accepted application shall constitute a contract between the Authority and the applicant, obliging the applicant to pay the Authority its rates as established from time to time, and to comply with its Rates, Rules and Regulations.

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**FOR OFFICE USE ONLY:**

Application Received: \_\_\_\_\_ Check #: \_\_\_\_\_ Amount: \$ \_\_\_\_\_

Application Type: Water \_\_\_\_\_ Sewer \_\_\_\_\_ Water & Sewer \_\_\_\_\_

Action: Feasible \_\_\_\_\_ Not Feasible \_\_\_\_\_ Reviewed by: \_\_\_\_\_

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Letter of Approval for Onsite Water and/or Sewer Issued: YES NO (Circle One)

Sewer Connection Fee: \_\_\_\_\_ Ck #: \_\_\_\_\_ Date: \_\_\_\_\_

Water Connection Fee: \_\_\_\_\_ Ck. #: \_\_\_\_\_ Date: \_\_\_\_\_

Meter Service Charge: \_\_\_\_\_ Ck. #: \_\_\_\_\_ Date: \_\_\_\_\_

Meter # \_\_\_\_\_ Received by Customer on: (Date) \_\_\_\_\_

Inspected by: \_\_\_\_\_ Date: \_\_\_\_\_

Inspection Check: \_\_\_\_\_ Date Received: \_\_\_\_\_

**MANTUA TOWNSHIP**  
**MUNICIPAL UTILITIES AUTHORITY**

397 Main Street  
Mantua, New Jersey 08051  
Phone: (856) 468-1111 Fax: (856) 464-0034  
Website: mantuamua.com

**FORM F:**                    **APPLICATION FOR REVIEW OF PLANS FOR PUBLIC SEWER AND/OR WATER**

**SITE PLAN:**                    **COMMERCIAL OR INDUSTRIAL**

**PURPOSE:**                    This application and supporting data specifying the engineering details of the proposed project will be analyzed for compliance with Authority engineering standards including provisions for orderly growth. The final condition of approval will be a mutual agreement between the applicant and the Authority regarding the terms and conditions for providing water and sewer service.

**FILING FEE:**                    \$50.00 Sewer and \$50.00 Water

**REVIEW FEE:**                    A review fee of \$750.00 for both water and sewer shall be deposited for the first 5,000 square feet or any portion thereof and \$300.00 for each additional 5,000 square feet or part thereof.

Inspection Fee: 5% of the total potable water and sewer construction cost, as verified by the Authority Engineer. (Minimum of \$750.00.)

In the event that the costs of review are more than deposited, the applicant shall pay the additional cost prior to final approval by the Authority. Both checks shall be payable to the MTMUA.

**APPLICANT:**                    Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

**PROJECT:**                    Name: \_\_\_\_\_

Location: \_\_\_\_\_

Area of Entire Tract: \_\_\_\_\_ Portion to be serviced: \_\_\_\_\_

Tax Map:    Plate: \_\_\_\_\_ Block: \_\_\_\_\_ Lots: \_\_\_\_\_

Industrial or Commercial: \_\_\_\_\_ Total Sq.Ft.: \_\_\_\_\_

No. of Individual Stores of Offices: \_\_\_\_\_

Proposed Use for Stores or Offices: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Other: \_\_\_\_\_ Describe: \_\_\_\_\_

\_\_\_\_\_

3. **DEVELOPMENT PLANS:**

Construction Date: \_\_\_\_\_ Duration of Project: \_\_\_\_\_

4. **PROFESSIONAL ENGINEER DESIGNING WATER AND/OR SEWER SYSTEM**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

5. **REQUIRED SUPPORTING DATA:**

Four sets of drawings, reports and other pertinent data describing details of the sanitary sewer system and water distribution system, including fire hydrants, private fire service and sprinkler systems must be submitted. If additional data is required after the initial review, the applicant will be contacted to submit same.

6. **INDUSTRIAL WASTE AGREEMENT** (If Required):

The undersigned being the of the \_\_\_\_\_ located at

\_\_\_\_\_  
(owner, lessee, tenant, etc.)

\_\_\_\_\_

does hereby request a permit to \_\_\_\_\_ an industrial  
(install, use)

\_\_\_\_\_ which company  
(Name of Company)

is engaged in \_\_\_\_\_ at said location.

- (a) A plan of the property showing accurately all water, sewer and drains now existing is attached hereunto as Exhibit "A"
- (b) Plans and Specifications covering any work proposed to be performed under this application is attached hereunto as Exhibit "B".
- (c) A complete schedule of all process waters and industrial wastes produced or expected to be produced at said property, including a description of the character of such waste, the daily volume, maximum rates of discharge and representative analysis is attached hereunto as Exhibit "C".
- (d) The name and address of the person or firm who will perform the work covered by this application is

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In consideration of reviewing this application, the undersigned agrees:

- (a) To furnish any additional information relating to the installation or use of the industrial sewer for which this application is made as may be requested by the superintendent or Authority Engineer.
- (b) To accept and abide by all provisions of the Ordinances of the Township of Mantua and of all other pertinent ordinances or regulations that may be adopted in the future regarding industrial waste.
- (c) To operate and maintain any waste pretreatment facilities, as may be required, as a condition of the acceptance into the public sewer of the industrial wastes involved, in an efficient manner at all times, and at no expense to the Authority.
- (d) To cooperate at all times with the superintendent and his representatives in their inspecting, sampling, and study of the industrial wastes, and any facilities provided for pretreatment.
- (e) To notify the superintendent immediately in the event of any accident, negligence, or other occurrence that occasions discharge to the public sewers of any wastes or process waters not covered by this application.

\_\_\_\_\_  
Signature of Applicant (Date)

\_\_\_\_\_  
(Address of Applicant)

**FOR OFFICE USE ONLY:**

Date Application Received: \_\_\_\_\_

Amount of Check:                      Application Fee: \_\_\_\_\_      Check #: \_\_\_\_\_

Review Fee: \_\_\_\_\_                      Check #: \_\_\_\_\_

\_\_\_\_\_  
Signature of MTMUA

=====

**ACTION BY AUTHORITY:**

Review Fee Requested: \_\_\_\_\_ Received: \_\_\_\_\_

Contract Negotiated & Sent to  
Applicant: \_\_\_\_\_

Signed Contract Received by MTMUA: \_\_\_\_\_

Report Sent to Planning Board: \_\_\_\_\_

Inspection Fee Requested: \_\_\_\_\_ Received: \_\_\_\_\_

Excess Review and/or Inspection Fees Returned to Applicant:

Date: \_\_\_\_\_ Amount: \_\_\_\_\_

# MANTUA TOWNSHIP MUNICIPAL UTILITIES AUTHORITY

397 Main Street  
Mantua, New Jersey 08051  
Phone: (856) 468-1111 Fax: (856) 464-0034

## **APPLICATION FOR REVIEW OF PLANS FOR INSTALLATION OF COMMUNICATIONS ANTENNA ON MTMUA FACILITIES**

This application and supporting data specifying the engineering details of the proposed project will be analyzed for compliance with Authority engineering standards. The final condition of approval will be a mutual agreement between the Applicant and the Authority regarding the terms and conditions for installation of communication antenna arrays on MUA facilities

**FILING FEE:** \$100.00

**REVIEW FEE:** A review fee of \$2,500.00 shall be deposited in Escrow for review costs.

In the event that the costs of review are more than deposited, the applicant shall pay the additional cost prior to final approval by the Authority. Checks shall be payable to the Associated Escrow Account with MTMUA.

**APPLICANT:** Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Email address: \_\_\_\_\_

**PROJECT:** Location: \_\_\_\_\_  
Tax Map: Plate: \_\_\_\_\_ Block: \_\_\_\_\_ Lot: \_\_\_\_\_

## **PROFESSIONAL ENGINEER DESIGNING COMMUNICATIONS ANTENNA**

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Telephone: \_\_\_\_\_  
Email address: \_\_\_\_\_

**REQUIRED SUPPORTING DATA:**

Two (2) sets of drawings, reports and other pertinent data describing details; Structural Support calculations must also be submitted with the plans and specifications. If additional data is required after the initial review, the applicant will be contacted to submit same.

MTMUA Approval by resolution must be obtained prior to submittal to the Mantua Township Zoning Board.

**DEVELOPMENT PLANS:**

Construction Date: \_\_\_\_\_ Duration of Project: \_\_\_\_\_

In consideration of reviewing this application, the undersigned agrees:

- by (a) To furnish any additional information relating to the installation requested  
the Superintendent or Authority Engineer.
- (b) To accept and abide by all provisions of the Ordinances of the Township of  
Mantua and of all other pertinent ordinances or regulations that may  
be adopted in the future.
- (c) To cooperate at all times with the Superintendent , Authority Engineer and  
their representatives.
- (e) To notify the Superintendent immediately in the event of any accident,  
negligence, or other occurrence not covered by this application.

\_\_\_\_\_  
Signature of Applicant (Date)

\_\_\_\_\_  
(Address of Applicant)

=====  
**FOR OFFICE USE ONLY:**

Date Application Received: \_\_\_\_\_

Amount of Check: Application Fee: \_\_\_\_\_ Check #: \_\_\_\_\_

Review Fee: \_\_\_\_\_ Check #: \_\_\_\_\_

\_\_\_\_\_  
Signature of MTMUA

**MANTUA TOWNSHIP**  
**MUNICIPAL UTILITIES AUTHORITY**

397 Main Street, Mantua, New Jersey 08051  
Phone: (856) 468-1111 Fax: (856) 464-0034  
www.mantuamua.com

**APPLICATION FOR HYDRANT FLOW TEST**

**APPLICANT:** Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Phone: \_\_\_\_\_

**LOCATION:** Tax Map: Plate: \_\_\_\_\_ Block: \_\_\_\_\_ Lot: \_\_\_\_\_

**FEE:** **\$75.00 PER TEST**

**DATE OF TEST:** \_\_\_\_\_ Time: \_\_\_\_\_

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Date

**GENERAL REQUIREMENTS:**

All requests for flow tests must be made at least two (2) working days in advance. The Authority reserves the right to reschedule any flow test in the event that an Observer will not be available.

The accepted application shall constitute a contract between the Authority and the applicant, obliging the applicant to pay the Authority its rates as established from time to time, and to comply with its Rates, Rules and Regulations.

<b>APPENDIX B: MANTUA TOWNSHIP MUA STANDARD DETAILS</b>	
<b>PRECAST CONCRETE MANHOLE DETAIL</b>	<b>MTMUA-01</b>
<b>PRECAST DROP MANHOLE DETAIL</b>	<b>MTMUA-02</b>
<b>STANDARD LATERAL DETAIL 3'-8' IN DEPTH</b>	<b>MTMUA-03</b>
<b>DEEP CUT LATERAL DETAIL (OVER 8' DEEP)</b>	<b>MTMUA-04</b>
<b>FIRE HYDRANT DETAIL</b>	<b>MTMUA-05</b>
<b>WATER SERVICE DETAIL</b>	<b>MTMUA-06</b>
<b>BLOW-OFF DETAIL</b>	<b>MTMUA-07</b>
<b>WATER MAIN OFF-SET DETAIL</b>	<b>MTMUA-08</b>
<b>CONCRETE CRADLE DETAIL</b>	<b>MTMUA-09</b>
<b>CONCRETE ENCASEMENT DETAIL</b>	<b>MTMUA-10</b>
<b>SANITARY SEWER CLEANOUT COVER DETAIL</b>	<b>MTMUA-11</b>
<b>GATE VALVE &amp; VALVE BOX DETAIL</b>	<b>MTMUA-12</b>
<b>DOGHOUSE MANHOLE DETAIL</b>	<b>MTMUA-13</b>
<b>MINIMUM SIZE OF CONCRETE THRUST BLOCKS</b>	<b>MTMUA-14</b>
<b>P.V.C. SADDLE CONNECTION DETAIL</b>	<b>MTMUA-15</b>
<b>VACUUM AND AIR RELEASE MANHOLE DETAIL</b>	<b>MTMUA-16</b>
<b>VALVE PIT DETAIL</b>	<b>MTMUA-17</b>
<b>FORCE MAIN – INSIDE DROP CONNECTION DETAIL</b>	<b>MTMUA-18</b>
<b>STANDARD PUMP STATION DETAIL</b>	<b>MTMUA-19</b>
<b>STANDARD PUMP STATION NOTES</b>	<b>MTMUA-20</b>
<b>TYPICAL PUMPING STATION SITE PLAN</b>	<b>MTMUA-21</b>
<b>SINGLE LINE DIAGRAM</b>	<b>MTMUA-22</b>
<b>YARD HYDRANT DETAIL</b>	<b>MTMUA-23</b>
<b>AIR RELEASE / VACCUM MANHOLE DETAIL</b>	<b>MTMUA-24</b>