**GUARANTOR AGREEMENT TO BE PROVIDED ON OR PRIOR TO COMMENCEMENT**

# SCHEDULE 22
# MAINTENANCE AND REPAIR FUND PAYMENTS BY OPERATOR/APPLICATION OF FUNDS

## I. Schedule of Payments to Maintenance and Repair Funds by Operator[1]

| Contract Year | Below Ground Amount | Above Ground Amount |
|---|---|---|
| 1 | 500,000 | 200,000 |
| 2 | 515,000 | 206,000 |
| 3 | 530,450 | 212,180 |
| 4 | 546,364 | 218,545 |
| 5 | 562,754 | 225,102 |
| 6 | 579,637 | 231,855 |
| 7 | 597,026 | 238,810 |
| 8 | 614,937 | 245,975 |
| 9 | 633,385 | 253,354 |
| 10 | 652,387 | 260,955 |
| 11 | 671,958 | 268,783 |
| 12 | 692,117 | 276,847 |
| 13 | 712,880 | 285,152 |
| 14 | 734,267 | 293,707 |
| 15 | 756,295 | 302,518 |
| 16 | 778,984 | 311,593 |
| 17 | 802,353 | 320,941 |
| 18 | 826,424 | 330,570 |
| 19 | 851,217 | 340,487 |
| 20 | 876,753 | 350,701 |

[1] The following table reflects an anticipated inflation rate of 3% per year. Should Section 5.5 of Schedule 5 require an increase in the Fixed Management Fee as a result of inflation exceeding the rate specified therein, the figures in the table shall be adjusted in the same manner.

Deposits to the Above Ground Maintenance and Repair Account shall be allocated as follows between the M&R Account and the Capital Item Account (as such terms are defined herein):

For the first two years of the contract, $100,000 shall be deposited into the M&R Account and $100,000 shall be deposited into the Capital Item Account. Such amounts shall be escalated at the same rate as the table. As of the beginning of the third Contract Year and every two Contract Years thereafter throughout the term of the Contract, such amounts shall be adjusted as between the M&R Account and the Capital Item Account based upon (i) the historical expenditure for Maintenance Costs and Repair Costs for the Above Ground System which constitute Capital Item Costs (as compared to such Maintenance Costs and Repair Costs which do not constitute Capital Item Costs) during the two Contract Years immediately prior to the Contract Year in which such adjustment occurs, and (ii) the parties' expectations concerning the expenditures from the Capital Item Account during the ensuing two year period, but in no event shall the amount deposited into the Capital Item Account be less than $50,000 (as escalated at the same rate as the balance of such table). Such amount shall be mutually agreed upon by the parties

## II. General

For purposes of this Schedule 22, the following terms shall have the following meanings.

"Above Ground Annual Maintenance and Repair Amount" means the annual amount set forth in Part I of this Schedule below the heading "Above Ground Amount" for each year commencing with the year beginning on the Commencement Date. Such amount shall increase to a maximum amount of $300,000 (as escalated at the same rate as the balance of the table) if the amount needed to be deposited into the Capital Item Account of the Above Ground Maintenance and Repair Fund exceeds the amount reflected in the Schedule based on (i) the historical expenditures for Maintenance Costs and Repair Costs for the Above Ground System which constitute Capital Item Costs (as compared to such Maintenance Costs and Repair Costs which do not constitute Capital Item Costs) during the two Contract Years immediately prior to such Contract Year and (ii) taking into account of the parties' expectations concerning the expenditures from the Capital Item Account during the ensuing two year period,

"Above Ground Maintenance and Repair Fund" means the fund established by the Operator, including the accounts therein, for the purposes of paying Maintenance Costs and Repair Costs relating to the Above Ground System, as further described in Part IV of this Schedule.

"Above Ground System" means the parts of the Systems situated above ground, within any building or otherwise accessible without excavation, including water treatment plants, pumping stations, buildings, equipment, and well head fixtures located above the ground surface.

"Below Ground Annual Maintenance and Repair Amount" means the annual amount set forth in Part I of this Schedule below the heading "Below Ground Amount" for each year commencing with the year beginning on the Commencement Date.

"Below Ground Maintenance and Repair Fund" means the fund established by the Operator for the purposes of paying Maintenance Costs and Repair Costs relating to the Below Ground System, as further described in Part III of this Schedule

"Below Ground System" means the parts of the Systems, exclusive of the Above Ground System

"Capital Item Cost" means a Repair that constitutes a cost which is capitalizable for federal income tax purposes.

"Labor Cost" means the costs allocated by the Operator for employees thereof incurred with respect to any Capital Item Costs. Such amounts shall include all direct and indirect costs related to such employees.

"Maintenance Costs" means the costs of servicing, preservation and routine renewal or refurbishment of property that does not constitute a cost that is capitalizable and is for the purposes of maintaining the usefulness of the property for the purposes for which it was designed. A Maintenance Cost shall not constitute a Capital Item Cost.

"Repair Costs" means the costs of any repair, renewal or replacement of property, including the acquisition or installation of substitute property, for the purposes of assuring that such property continues to be useful for the purposes for which such property or the original property was designed, without enhancement in the capacity or performance characteristics of such property. A Repair Cost may constitute a Capital Item Cost. A Repair Cost shall not constitute a Capital Improvement.

## III. Below Ground Maintenance and Repair Fund

1. The Operator shall establish a fund designated as the Below Ground Maintenance and Repair Fund.

2. On the first day of each month of each Contract Year during the Term, the Operator shall deposit an amount equal to the Below Ground Annual Maintenance and Repair Amount for such year into the Below Ground Maintenance and Repair Fund, divided by the number of months in such year. The Below Ground Maintenance and Repair Fund shall be the property of the City and held by the Operator as a separate account from all other funds and accounts of the Operator. Moneys on deposit in the Below Ground Maintenance and Repair Fund shall be invested by the Operator and shall be disbursed by the Operator as agent for the City as provided in this Part III in order to pay the Maintenance Costs or the Repair Costs relating to the Below Ground System

3. The Below Ground Maintenance and Repair Fund shall be used to pay all Maintenance Costs and Repair Costs, other then Labor Costs. The cost of labor provided by employees of the

Operator shall not be included in the Maintenance Costs or Repair Costs paid from the Below Ground Maintenance and Repair Fund, but instead shall be paid by the Operator from the Fixed Management Fee.

The Operator agrees that it shall maximize the use of its employees and equipment in connection with the Below Ground Maintenance and Repair Activities. The Operator shall employ and maintain a trained crew of employees and such construction equipment including backhoes, loaders, trucks, and other support equipment, tools, and supplies necessary and normal to maintain and repair the City's water and sewerage system. The use of outside contractors to assist the Operator shall be limited to (i) extraordinary circumstances that require the use of special equipment and equipment operators not normally maintained or employed by operators of major water and sewerage systems of a similar size and nature, (ii) water main breaks and/or sewer main collapses that present a substantial and immediate danger to health or property, or (iii) other extraordinary circumstances that would prevent a timely response for operators of major water and sewerage systems of a similar size and nature. With respect to items (i), (ii) and (iii) above, the Operator shall promptly notify the City as to the occurrence of the circumstances described in such items and shall provide such information about such occurrences as the City may reasonably request. In the event that the City does not agree that the application of funds in the Below Ground Maintenance and Repair Fund for an occurrence described in any such item (i), (ii) or (iii) meets the requirements set forth in such items, the City shall notify the Operator of its disagreement within 30 days of receipt of notice from the Operator. Such notice shall state the basis of the City for such disagreement, and the City shall provide such information about the basis for its disagreement as the Operator may reasonably request. If the City does not notify the Operator within such 30 day period, then the City shall be deemed to have consented to such application of amounts in the Below Ground Maintenance and Repair Fund. In the event that in any calendar year the Operator notifies the City pursuant to paragraphs 4 or 5 of Section III of this Schedule 22 that the City is required to contribute additional amounts to the Below Ground Maintenance and Repair Fund, then the City may raise as a basis for its objection to contributing such additional amounts the withdrawal of amounts by the Operator during such year for occurrences described in items (i), (ii) or (iii) as to which the City disagreed and notified the Operator as provided above. The amount which the City would otherwise be required to deposit in the Below Ground Maintenance and Repair Fund shall be reduced by the amount by which it is determined (by agreement of the parties or through dispute resolution) that the Operator did not meet the requirements set forth in items (i), (ii) or (iii), as the case may be, for the withdrawal of amounts from the Below Ground Maintenance and Repair Fund to pay for such items as to which the City disagreed and notified the Operator. The above may be amended or modified from time to time by mutual consent (in writing) of the parties. In the case of the City, the Business Administrator or such person designated by the Business Administrator shall be the sole person(s) to effectuate such amendment or modification. In the case of the Operator, the Plant Manager or other duly authorized officer shall be the sole person(s) to effectuate such amendment or modification.

In cases where outside contractors are required to assist the Operator in the repair of a water main break or sewer main collapse (or other like situations) the City will be notified promptly. A detailed report shall be filed by the Operator supporting the need for the outside contractor and the costs associated with the action. If the use of the outside contractor meets the requirements set forth above, said costs shall be paid from the Below Ground Maintenance and Repair Fund with no markup by the Operator.

Examples of work which would normally require the Operator to use outside contract services rather than Operator employees are described in Exhibit A attached to this Schedule.

4. In the event there are insufficient moneys on deposit in the Below Ground Maintenance and Repair Fund to pay Maintenance Costs or Repair Costs, the Operator shall advance the Below Ground Annual Maintenance and Repair Amount not yet deposited for such year to the extent needed. If the amount required exceeds the Below Ground Maintenance and Repair Amount for such year, the Operator shall notify the City. Such notice shall include a description of the item of Maintenance Cost or Repair Cost, an estimate of the cost of such item and the additional amount required to be deposited in the Below Ground Maintenance and Repair Fund in order to make the amount on deposit in the Below Ground Maintenance and Repair Fund sufficient to pay the cost of such item in excess of the Below Ground Maintenance and Repair Amount for such year. The City shall provide such amount to the Operator for deposit in the Below Ground Maintenance and Repair Fund within forty-five (45) days of such notice. In the event the City disagrees with the estimated cost of the item, it may require the Operator to provide evidence of such cost and such other information as the City may reasonably require to confirm such cost.

5. In the event that there occurs an emergency Maintenance Cost or Repair Cost which exceeds the amount on deposit in the Below Ground Maintenance and Repair Fund, the Operator shall advance the Below Ground Annual Maintenance and Repair Amount not yet deposited for such year to the extent needed. If the amount required exceeds the Below Ground Maintenance and Repair Amount for such year, the Operator shall notify the City. Such notice shall include a description of the item of Maintenance Cost or Repair Cost, an estimate of the cost of such item and the additional amount required to be deposited in the Below Ground Maintenance and Repair Fund in order to make the amount on deposit in the Below Maintenance and Repair Fund sufficient to pay the cost of such item in excess of the Below Ground Maintenance and Repair Amount for such year. The City shall provide such amount to the Operator for deposit in the Below Ground Maintenance and Repair Fund within forty-five (45) days of such notice. In the event the City disagrees with the estimated cost of the item, it may require the Operator to provide evidence of such cost and such other information as the City may reasonably require to confirm such cost. If the City has not provided the Operator with the additional amount as provided above by such time that the Operator determines it needs to disburse funds in order to pay the Maintenance Cost or Repair Costs of such item, the Operator may in its discretion deposit such additional amount in the Below Ground Maintenance and Repair Fund in order to pay the Maintenance Cost or Repair Costs of such emergency item.

6. In the event the Operator makes any advances of the Below Ground Annual Maintenance and Repair Amount prior to their scheduled deposit, future deposits for such year shall be reduced proportionately. In the event the Operator deposits additional moneys into the Below Ground Maintenance and Repair Fund pursuant to paragraph 5, the Operator shall be reimbursed by the City to the extent of such additional deposits, plus interest thereon at the Prime Rate.

7. The Operator shall provide an accounting to the City for the Below Ground Maintenance and Repair Fund within ninety (90) days of the end of each year. Such accounting shall show the Operator's deposits into the Below Ground Maintenance and Repair Fund, expenditures from the Below Ground Maintenance and Repair Fund, interest earned and closing balance on the last day of the year. In addition, the Operator shall determine the amount of expenditures paid during such year from the Below Ground Maintenance and Repair Fund that constitute Capital Item Costs and the amount of related Labor Costs. Such Labor Costs shall be considered a variable component of the Operator's compensation under schedule 5 for purposes of Rev. Proc. 97-13.

8. If funds are on account to the Below Ground Maintenance and Repair Fund at the end of any Contract Year, such balance shall be applied at the discretion of the City, which may request payment of such balance to the City or require that such funds be maintained in the Below Ground Maintenance and Repair Fund as a starting balance in such fund for use in the next succeeding Contract Year, provided, however, a decision by the City to retain such balance in such fund for use in the next succeeding Contract Year shall not reduce the Operator's obligation to deposit the Below Ground Annual Maintenance and Repair Amount for such succeeding Contact Year

9. If any funds are on deposit to the Below Ground Maintenance and Repair Fund upon the termination of this Contract, such funds shall be paid to the City.

## IV. Above Ground Maintenance and Repair Fund

1. The Operator shall establish a fund designated as the "Above Ground Maintenance and Repair Fund", and within such fund, an "M & R Account" and a "Capital Item Account."

2. On the first day of each month of each Contract Year during the Term, the Operator shall deposit to the Above Ground Maintenance and Repair Fund an amount equal to the Above Ground Annual Maintenance and Repair Amount for such year divided by the number of months in such year. The Capital Item Account shall be the property of the City and the M & R Account shall be the property of the Operator. Both Accounts shall be held by the Operator as separate accounts from all other funds and accounts of the Operator. Moneys on deposit in the Above Ground Maintenance and Repair Fund shall be invested by the Operator and shall be disbursed by the Operator as provided in this Section in order to pay the Maintenance Costs and the Repair Costs relating to the Above Ground System; provided, however, that the purchase price of vehicles purchased by the Operator to replace City

vehicles used in connection with the Above Ground System shall be funded by the Operator from moneys not on deposit in the Above Ground Maintenance and Repair Fund. However, maintenance cost for vehicles may be paid from the Above Ground Maintenance and Repair Fund.

3. The M & R Account shall be used to pay all Maintenance Costs and Repair Costs relating to the Above Ground System, other than (i) related Labor Costs, which shall be paid by the Operator from its Fixed Management Fee and (ii) Capital Item Costs, which shall be paid from the Capital Item Account. Maintenance Costs and Repair Costs relating to the Above Ground System shall be payable initially from the M & R Account (to the extent of moneys deposited therein or to be deposited under section 5 below) and then by the Operator up to an amount equal to $50,000 per occurrence. Any amount in excess of such amount per occurrence shall be payable by the City, which may authorize the Operator to apply moneys in the Capital Item Fund for such purpose. The Operator shall be responsible to pay all Maintenance Costs and Repair Costs relating to the Above Ground System, up to the per occurrence limit, even if the full amount required to be deposited in the M & R Account for such Contract Year is utilized.

4. The Capital Item Account shall be used to pay all Maintenance Costs and Repair Costs relating to the Above Ground System for Capital Item Costs, other than (i) Labor Costs, which shall be paid by the Operator from the Fixed Management Fee, or (ii) Repairs, other than Repairs that are Capital Item Costs. Examples of work which would normally require the Operator to use outside contract services rather than Operator employees are described in Exhibit A attached to this Schedule.

5 In the event there are insufficient moneys on deposit in either Account of the Above Ground Maintenance and Repair Fund to pay Maintenance Costs or Repair Costs, the Operator shall advance to the applicable Account the Above Ground Annual Maintenance and Repair Amount not yet deposited for such year to the extent needed. If the amount required for the M & R Account exceeds the Above Ground Annual Maintenance and Repair Amount applicable to the M & R Account, then the Operator shall pay such excess amount, subject to $50,000 per occurrence, as provided in paragraph 3. If the amount required for the Capital Item Account exceeds the Above Ground Annual Maintenance and Repair Amount applicable to the Capital Item Account, the Operator shall notify the City. Such notice shall include a description of the item of Repair Cost, an estimate of the cost of such item and the additional amount required to be deposited in the Capital Item Account of the Above Ground Maintenance and Repair Fund in order to make the amount on deposit in the Capital Item Account of the Above Ground Maintenance and Repair Fund sufficient to pay the cost of such item in excess of the Above Ground Annual Maintenance and Repair Amount applicable to the Capital Item Account. The City shall provide such amount to the Operator for deposit in the Capital Item Account of the Above Ground Maintenance and Repair Fund within forty-five (45) days of such notice. In the event the City disagrees with the estimated cost of the item, it may require the Operator to provide evidence of such cost and such other information as the City may reasonably require to confirm such cost.

6. In the event that there occurs an emergency Maintenance Cost or Repair Cost which exceeds the amount on deposit in either Account of the Above Ground Maintenance and Repair Fund, the Operator shall advance to the applicable Account the Above Ground Annual Maintenance and Repair Amount not yet deposited for such year to the extent needed. If the amount required for the M & R Account exceeds the Above Ground Annual Maintenance and Repair Amount applicable to the M & R Account, then the Operator shall pay such excess amount, subject to $50,000 per occurrence, as provided in paragraph 3. If the amount required for the Capital Item Account exceeds the Above Ground Annual Maintenance and Repair Amount applicable to the Capital Item Account, the Operator shall notify the City. Such notice shall include a description of the item of Maintenance Cost or Repair Cost, an estimate of the cost of such item and the additional amount required to be deposited in the Above Ground Maintenance and Repair Fund in order to make the amount on deposit in the Above Ground Maintenance and Repair Fund sufficient to pay the cost of such item in excess of the Above Ground Annual Maintenance and Repair Amount applicable to the Capital Item Account. The City shall provide such amount to the Operator for deposit in the Capital Item Account of the Above Ground Maintenance and Repair Fund within forty-five (45) days of such notice. In the event the City disagrees with the estimated cost of the item, it may require the Operator to provide evidence of such cost and such other information as the City may reasonably require to confirm such cost. If the City has not provided the Operator with the additional amount as provided above by such time that the Operator determines it needs to disburse funds in order to pay the Maintenance Cost or Repair Costs of such item, the Operator may in its discretion deposit such additional amount in the Above Ground Maintenance and Repair Fund in order to pay the Maintenance Cost or Repair Costs of such emergency item.

7. In the event the Operator makes any advances to either Account of the Above Ground Maintenance and Repair Amount, future deposits for such year shall be reduced proportionately. In the event the Operator deposits additional moneys to either Account of the Above Ground Maintenance and Repair Fund pursuant to paragraph 6, the Operator shall be reimbursed by the City to the extent of such additional deposits, plus interest thereon at the Prime Rate.

8. The Operator shall provide an accounting to the City for the Above Ground Maintenance and Repair Fund within ninety (90) days of the end of each year. Such accounting shall show the Operator's deposits into the Above Ground Maintenance and Repair Fund, expenditures from the Above Ground Maintenance and Repair Fund, interest earned and closing balance on the last day of the year.

9. If funds are on account in the M & R Account at the end of any Contract Year, such amount shall be carried over to the succeeding Contract Year. If funds are on account in the Capital Item Account at the end of any Contract Year, such Account shall be applied at the discretion of the City, which may request payment of such balance to the City or require that such funds be maintained in the Account as a starting balance in such Account for use in the next succeeding Contract Year, provided, however, a decision by the City to retain such balance

in such Account for use in the next succeeding Contract Year shall not reduce the Operator's obligation to deposit the Above Ground Annual Maintenance and Repair Amount for such succeeding year.

10. As the part of the annual accounting for the Above Ground Maintenance and Repair Fund described above, the parties shall determine (i) the amount paid from the Capital Item Account in respect of Maintenance Costs or Repair Costs subsequently determined to not constitute a Capital Item Cost in such Contract Year (collectively, the "Non-Capital Amount") and (ii) the amount of any Capital Item Costs paid from the M & R Account inadvertently by the Operator during such Contract Year (the "Excess Capital Amount"), and the amount of related Labor Costs of Excess Capital Amount, as well as the Labor Costs for all expenditures paid from the Above Ground Maintenance and Repair Fund that constitute Capital Item Costs. Such Labor Costs shall be considered a variable component of the Operator's Compensation for purposes of Rev. Proc. 97-13. The Operator shall be obligated to deposit to the Above Ground Maintenance and Repair Fund an amount equal to the excess of the Non-Capital Amount over the Excess Capital Amount and the City shall be obligated to reimburse the Operator any excess of the Excess Capital Amount over the Non-Capital Amount, with interest at the Prime Rate, determined as of the end of such Contract Year, within 45 days of the end of such year.

12 Any amount on deposit to the Above Ground Maintenance and Repair Fund at the termination of the Contract shall be paid to the City.

13. Any amount payable by the City hereunder which the Operator pays temporarily shall constitute a Pass-through Charge.

EXHIBIT A

Use of Outside Contractors for Underground M&R Fund Activities

Sewer collapses or water main breaks of greater than 50 feet in length or greater than 15 feet in depth

Sewer collapses or water main breaks, attached to bridges or under rivers

Final paving following road openings for utility repairs

Well rehabilitations of minimum of two wells per year or such greater number of wells as can be rehabilitated for the amount set forth below:

- This includes using the services of an outside well (engineering) consultant
- This also includes an equipment rehabilitation component which when done in conjunction with underground redevelopment, is not included in the above-ground M&R fund.

Outside contractor costs for rehabilitation of two wells per year shall be limited as follows:

Engineering
Contractor redevelopment
Construction management

for a total of $107,000 per year, as inflated at 3% per year beginning 1999. After the Operator has rehabilitated such two wells per year and spent such amount rehabilitating wells in a year, the Operator shall only be required to undertake additional well rehabilitation in any year pursuant to an agreement to be negotiated between the City and the Operator.

Use of Outside Contractors for Above Ground M&R Fund Activities

Removal and installation of equipment (large pumps, motors, blowers, well pumps, etc.) requiring specialized equipment, machinery, or techniques such as cranes or rigging.

Pump and equipment repairs requiring specialty services or equipment such as pressing bearings, machining shafts, metal fabrications, etc.

Motor repairs.

Servicing of specialized systems such as standby generators.

Structural repairs such as roof repairs or replacements

Electrical work that exceeds in-house certifications. This includes items such as transformer inspections and service or installation of new electrical feed lines requiring licensed electricians

Certified calibrations of meters and other measuring devices.

Filter media inspections

Vehicle maintenance.

Extensive fence repairs or fence additions/replacements.

Meter testing

Commercial/industrial meter repairs or replacements

Q3

MAR:egf
June 8, 1995

ORDINANCE NO. 3128

Ordinance Amending and Supplementing
the Administrative Code; Section 564;
of the City of Camden

WHEREAS, the Council for the City of Camden originally adopted an Administrative Code on December 9th, 1961 and has amended and supplemented the Code since the original date of adoption in order to have an efficient and effective government; and

WHEREAS, changes to the existing code have been proposed to the governing body; and

WHEREAS, Council has determined that these recommended changes shall contribute to an efficient and effective government and shall enable the City to better serve and protect the safety of the citizens of Camden; now, therefore

BE IT ORDAINED, by the City Council of the City of Camden as follows:

Section 1. Chapter 564 entitled, Water, shall be amended and supplemented to include the following amendments and changes:

Article XI
Cross Connection Program for the Dept. of Utilities
Part 1: Cross-Connection Control: General Provisions

§ 564-46: Purpose

A. The purpose of this Article is:

1) To protect the public water supply of the City of Camden from the possibility of contamination or pollution by isolating within the customer's internal distribution system(s) or the customer's private water system(s) such contaminants or pollutants that could backflow into the public water system; and,

2) To promote the elimination or control of existing cross connections, actual or potential, between the customer's in-plant water system(s) and non-potable water system(s), plumbing fixtures, and industrial piping systems; and,

3) To provide for the maintenance of a continuing program of Cross Connection control that will systematically and effectively prevent the contamination or pollution of all potable water systems.

§ 564-47: Responsibility

The Utilities Commissioner for the City of Camden shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow of contaminants or pollution through the water service connection. If, in the judgment of the Utilities Commissioner, an approved backflow assembly is required (at the customer's water service connection; or within the customer's private water system) for the safety of the water system, the Utilities commissioner or his/her designated agent shall give notice in writing to said customer to install such an approved backflow prevention assembly(s) at specific location(s) on his/her premises. The customer shall immediately install such approved assembly(s) at his/her own expense; and failure, refusal, or inability on the part of the customer to install, have tested, and maintain said assembly(s) shall constitute for the discontinuing of water service and/or the assessment of a fine to the premises until such requirements have been satisfactorily met.

§ 564-48: Definitions

As used in this article, the following terms shall have meanings indicated:

Utilities Commissioner - The Utilities Commissioner in charge of the Department of Utilities is vested with the Authority and responsibility for the implementation of an effective Cross-Connection control program and for the enforcement of the provisions of this ordinance. In the event that the Commissioner is not the Licensed Operator of Record, then he shall defer to the Licensed Operator of Record on matters of a technical nature.

Approved - Accepted by the Department of Utilities as meeting an applicable specification stated or cited in this ordinance or as suitable for the proposed use.

Auxiliary Water Supply - Any water supply on or available to the premises other than the purveyor's approved water supply. These auxiliary waters may include water from another purveyor's public water supply or any natural source(s), such as a well, spring, river, stream, harbor, and so forth; used waters;or industrial fluids. These waters may be contaminated or polluted, or they may be objectionable and constitute an unacceptable water source over which the water purveyor does not have sanitary control.

Backflow - The undesirable reversal of flow in a potable water distribution system as a result of a cross connection.

Backpressure - A pressure, higher than the supply pressure, caused by a pump, elevated tank, boiler, or any other means that may cause backflow.

Backsiphonage - Backflow caused by negative or reduced pressure in the supply piping.

Backflow Preventer - An Assembly or means designed to prevent backflow

A) Air Gap - The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water or waste to a tank, plumbing fixture, receptor, or other assembly and the flood rim of the receptacle. These vertical, physical separations must be at least twice the diameter of the water supply outlet, but never less than 1 in. (25mm).

B) Reduced Pressure backflow-prevention assembly - The approved reduced pressure principle backflow-prevention assembly consists of two independently acting approved check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and below the first check valve. These units are located between two tightly closing resilient-seated check valves as an assembly and equipped with properly located resilient-seated test cocks.

C) Double Check Valve assembly - The approved double check valve assembly consists of two internally loaded resilient-seated check valves constructed and installed as a unit between two tightly closing, resilient-seated shut off valves and fittings with properly located resilient-seated test cocks. This assembly shall only be used to protect against a non-health hazard (that is, a pollutant).

Contamination - An impairment of a potable water supply by the introduction or admission of any foreign substance that degrades the quality and creates a health hazard.

Cross Connection - A connection or potential connection between any part of a potable water system and any other environment containing other substances in a manner that, under any circumstances would allow such substances to enter the potable water system. Other substances may be gases, liquids, or solids, such as chemicals, waste products, steam, water from other sources (potable or non-potable), or any matter that may change the color or add odor to the water.

Cross Connection-Controlled - A connection between a potable water system and a non-potable water system with an approved backflow-prevention assembly properly installed and maintained so that it will continuously afford the protection commensurate with the degree of hazard.

Cross Connection Control by Containment - The installation of an approved backflow prevention assembly at the water service connection to any customer's premises, where it is physically and economically unfeasible to find and permanently eliminate or control all actual or potential cross connections within the customer's water system; or it shall mean the installation of an approved backflow-prevention assembly on the service line leading to and supplying a portion of a customer's water system where there are actual or potential cross connections that cannot be effectively eliminated or controlled at the point of the cross-connection.

Hazard, Degree of - The term is derived from an evaluation of the potential risk to public health and the adverse effect of the hazard upon the potable water system.

A) Hazard-Health - A cross connection or potential cross connection involving a substance that could, if introduced in the potable water supply, cause death, illness, spread disease, or have a high probability of causing such effects.

B) Hazard-Plumbing - A plumbing-type cross connection in a customer's water system that has not been properly protected by an approved air gap or an approved backflow-prevention assembly.

C) Hazard-Nonhealth - A cross connection or potential cross connection involving any substance that generally would not be a heath hazard but would constitute a nuisance or be aesthetically objectionable, if introduced into the potable water supply.

D) Hazard-System - An actual or potential threat of severe damage to the physical properties of the public potable water system or the consumer's potable water system or of a pollution or contamination that would have a protracted effect on the quality of the potable water in the system.

Industrial Fluids System - Any system containing a fluid or solution that may be chemically, biologically, or otherwise contaminated or polluted in a form or concentration, such as would constitute a health, system, pollution, or plumbing hazard, if introduced into an approved water supply. This may include, but not be limited to: polluted or contaminated waters and used waters originating from the public potable water supply that may have deteriorated in sanitary quality; chemicals in fluid form; plating acids and alkali's; circulating cooling waters connected to an open cooling tower; and/or cooling towers that are chemically or biologically treated or stabilized with toxic substances; contaminated natural waters, such as wells, springs, steams, rivers, bays, harbors, seas, irrigation canals or systems, and so forth; oils, gases, glycerin, paraffins, caustic and acid solutions, and other liquid and gaseous fluids used in industrial or other purposes or fire-fighting purposes.

Pollution - The presence of any foreign substance in water that tends to degrade its quality so as to constitute a nonhealth hazard or impair the usefulness of the water.

Water, Potable - Water that is safe for human consumption as described by the Environmental Protection Agency and the New Jersey State Department of Environmental Protection.

Water, Non-Potable - Water that is not safe for human consumption or that is of questionable quality.

Service Connection - The terminal end of a service connection from the public potable water system, that is, where the water purveyor loses jurisdiction and sanitary control of the water at its point of delivery to

the customer's water system. If a meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the meter. There shall be no unprotected takeoffs from the service line ahead of any meter or backflow prevention assembly located at the point of delivery to the customer's water system. Service connection shall also include water service connection from a fire hydrant and all other temporary or emergency water service connections from the potable water system.

Water-Used - Any water supplied by a water purveyor from a public water supply system to a consumer's water system after it has passed through the point of delivery and is no longer under the sanitary control of the water purveyor.

## Part 2: Requirements

§ 546-49: Water System:

A) The water system shall be considered to be made up of two parts: the utility system and the customer system.

B) The Utility system shall consist of the source facilities and the distribution system, and shall include all those facilities of the water system under the complete control of the utility, up to the point where the customer's system begins.

C) The source shall include all components of the facilities utilized in the production, treatment, storage, and delivery of water to the distribution system.

D) The distribution system shall include the network of water mains located within the geographic limits of the City of Camden used for the delivery of water from the source to the customers system.

E) The customer's system shall include those parts of the facilities beyond the service connection to the water main, not including the water meter, that are utilized in conveying utility-delivered domestic water to points of use.

§ 546-50: Policy

A) No water service connection to any premises shall be installed or maintained by the water purveyor unless the water supply is protected as required by state laws and regulations and this ordinance. Service of water to any premises shall be discontinued by the water purveyor if a backflow- prevention assembly required by this ordinance is not installed, tested, removed, bypassed, or if an unprotected cross connection exists on the premises. Service will not be restored until such conditions or defects are corrected.

B) The customer's system should be open for inspection at all reasonable times to authorized representatives of the Department of Utilities to determine whether cross connections or other structural or sanitary hazards, including violations of these regulations, exist. When such a condition becomes known, the Utilities Commissioner shall deny or immediately discontinue service to the premises by providing for a physical break in the service line until the customer has corrected the condition(s) in conformance with state laws and regulations and local ordinances relating to plumbing and water supplies and the regulations adopted pursuant thereto.

An approved backflow-prevention assembly be installed on each service line to a customer's water system at or near the property line or immediately inside the building being served; but in all cases, before the first branch line leading off the service line wherever the following conditions exist:

1) In the case of premises having an auxiliary water supply that is not or may not be of safe bacteriological or chemical quality and that is not acceptable as an additional source by the Utilities Commissioner, the public water system shall be protected against backflow from the premises by installing an approved backflow-prevention assembly in the service line, appropriate to the degree of hazard.

2) In the case of premises on which any industrial fluids or any other objectionable substances are handled in such a fashion as to create an actual or potential hazard to the public water system, the public system shall be protected against backflow from the premises by installing an approved backflow-prevention assembly in the service line, appropriate to the degree of hazard. This shall include the handling of process waters and waters originating from the utility system that have been subject to deterioration in quality.

3)In the case of premises having (1) internal cross connections that cannot be permanently corrected and controlled, or (2) intricate plumbing and piping arrangements or where entry to all portions of the premises is not readily accessible for inspection purposes, making it impracticable or impossible to ascertain whether or not dangerous cross connections exist, the public water system shall be protected against backflow from the premises by installing an approved backflow-prevention assembly in the service line.

D) The type of protective assembly required under subsections C1,C2 and C3 of this section shall depend upon the degree of hazard that exists as follows:

1) In the case of any premises where there is an auxiliary water supply as stated in subsection C1 of this section and it is not subject to any of the following rules, the public water system shall be protected by an approved air-gap separation or an approved reduced-pressure principal backflow-prevention assembly.

2) In the case of any premises where there is water or substance that would be objectionable but not hazardous to health, if introduced into the public water system, the public water system shall be protected by an approved double check valve assembly.

3)In case of any premises where there is any material dangerous to health that is handled in such a fashion as to create an actual or potential hazard to the public water system, the public water system shall be

protected by an approved air-gap separation or an approved reduced-pressure principle backflow-prevention assembly. Examples of premises where these conditions will exist include sewage treatment plants, sewage pumping stations, chemical manufacturing plants, hospitals, mortuaries, and plating plants.

4)In the case of any premises where there are "uncontrolled" cross connections, either actual or potential, the public water system shall be protected by an approved air-gap separation or an approved reduced-pressure principle backflow-prevention assembly at the service connection.

5) In the case of any premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete in-plant cross-connection survey, the public water system shall be protected against backflow from the premises by either an approved air-gap separation or an approved reduced-pressure principle backflow-prevention assembly on each service to the premises.

6) In the case of any premises where, in the opinion of the Utilities Commissioner or an undue health threat is posed because of the presence of extremely toxic substances, the Utilities Commissioner may require an air gap at the service connection to protect the public water system. This requirement will be at the discretion of the Utilities Commissioner and is dependent on the degree of hazard.

E) Any backflow-prevention assembly required herein shall be a model and size approved by the Utilities Commissioner. The term approved backflow-prevention assembly shall mean an assembly that has been manufactured in full conformance with the standards established by the American Water Works Association titled:

**AWWA C510-89 Standard for Double Check Valve Backflow-Prevention Assembly, and AWWA C511-89 Standard for Reduced-Pressure Principle Backflow Prevention Assembly,**

and have met completely the laboratory and field performance specifications of the Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California established by "Specification of Backflow-Prevention Assemblies" - Sec. 10 of the most current issue of the Manual of Cross-Connection Control.

Said AWWA and FCCHR standards and specifications have been adopted by the Utilities Commissioner. Final approval shall be evidenced by a "Certificate of Approval" issued by an approved testing laboratory certifying full compliance with said AWWA standards and FCCHR specifications.

The following testing laboratory has been qualified by the Utilities Commissioner to test and certify backflow preventers:

Foundation for Cross-Connection Control and Hydraulic Research
University of Southern California
University Park
Los Angeles, Ca 90089

Testing laboratories, other than the laboratory listed above, will be added to an approved list as they are qualified by the Utilities Commissioner.

Backflow preventers that may be subjected to backpressure or backsiphonage that have been fully tested and have been granted a certificate of approval by said qualified laboratory and are listed on the laboratory's current list of approved backflow-prevention assemblies may be used without further testing or qualification.

F) It shall be the duty of the customer-user at any premises where backflow -prevention assemblies are installed to have certified inspections and operational tests made at least every 90 days. These inspections and tests shall be at the expense of the water user and shall be performed by a certified tester approved by the Utilities Commissioner. It shall be the duty of the Utilities Commissioner to see that these tests are made in a timely manner. The customer-user shall notify the Utilities Commissioner in advance when the tests are to be undertaken so that the customer-user may witness the tests if so desired. These assemblies shall be repaired, overhauled, or replaced at the expense of the customer-user whenever said assemblies are found to be defective. Records of such tests, repairs, and overhaul shall be kept and made available to the Utilities Commissioner. The Utilities Commissioner shall set the minimum requirement for backflow prevention device tests.

G) All presently installed backflow-prevention assemblies that do not meet the requirements of this section but were approved assemblies for the purpose described herein at the time of installation and that have been properly maintained, shall, except for the inspection and maintenance requirements under subsection F, be excluded from the requirements of these rules so long as the Utilities Commissioner is assured that they will satisfactorily protect the utility system. Whenever the existing assembly is moved from the present location, requires more than minimum maintenance, or when the Utilities Commissioner finds that the maintenance constitutes a hazard to health, the unit shall be replaced by an approved backflow-prevention assembly meeting the requirements of this section.

§ 546-51: Annual Fees -The following fees shall be remitted to the Department of Utilities, Water & Sewer Billing on or before the fifteenth of the calendar month that it is due.

| | |
|---|---|
| A) Cross Connection Permit | $200.00 |
| B) Certified Backflow Technicians License | $ 100.00 |

§ 546-52: Quarterly Fees - The following fees shall be remitted to the Department of Utilities, Water & Sewer Billing on or before the fifteenth of calendar month that it is due.

A) Inspections $35.00/hr

B) Cross Connection Device Testing $64.00/hr

§ 546-53: Time Restrictions - After the initial survey or a inspections the following restrictions apply:

A) Installation of a new Cross Connection Control Assembly: 30 Days

B) Repair a Cross Connection Assembly that can be removed from service without constituting a uncontrolled cross connection 10 Days

C) Repair a Cross Connection Assembly in a non-hazardous location that cannot be removed from service without constituting a uncontrolled cross connection. 5 Days

D) Repair a Cross Connection Assembly in a hazardous location that cannot be removed from service without constituting a uncontrolled cross connection. 48 Hours

§ 546-54 : Violations and Penalties - A person or entity who violates the provisions of this Article shall, upon conviction thereof, be punished by a fine not exceeding one thousand dollars ($ 1000.) or by imprisonment for a term not exceeding ninety (90) days or by a period of community service not exceeding ninety (90) days.

**Section 2. Any portion of Chapter 564 not herein amended and supplemented shall remain in full force and effect.**

**Section 3. All ordinances or parts of ordinances inconsistent with the provisions of this ordinance are hereby repealed as to such inconsistency only.**

**Section 4. This ordinance shall take effect twenty (20) days after it's final passage and publication as provided by law.**

ALFRED W. PALUMBO

**Dated: June 8, 1995**

The above has been reviewed
and approved as to form.

City Attorney

President
City Council

FIRST READING: JUNE 8, 1995

SECOND READING: JUNE 22, 1995

ADOPTED: JUNE 22, 1995

ATTESTED: Dorothy G Burley
MUNICIPAL CLERK

Alfred W. Palumbo, Jr.
Vice-President
City Council

Mayor