

Sec. 1-1 Legal and Regulatory Basis

On March 25, 1980 the City of Seneca was given full power, right and authority to maintain, construct, and operate sewerage facilities for the use and benefit of the city and its citizens. (Code of Ordinance Sec. 25-1, Sec 25-2 and Sec. 25-3). Furthermore, the City of Seneca Water and Sewer Department, referred to hereafter as Seneca Light and Water Plant (SL&WP), may promulgate such rules and regulations as they deem necessary to provide for the safety, maintenance, good order and proper function of the facilities of the county sewer authority commission.

In an effort to provide safe, adequate and uninterrupted sewage removal to the customers of SL&WP who are connected to SL&WP's sewage collection system, Seneca Light and Water Plant has implemented a Fats Oil and Grease Control Program, referred to hereafter as the Grease Control Program (GCP). The guidelines for the GCP are taken from the City of Seneca Code of Ordinance, the International Plumbing Code, the Department of Health and Environmental Control of South Carolina, and the U.S. Environmental Protection Agency.

Sec. 1-2 Rules Governing Discharges to Seneca Light and Water Plant Public Sewers.

- I. Discharge of certain wastes restricted. No person shall discharge or cause to be discharged the following described prohibited substances, materials, waters, or wastes if it appears likely, in the opinion of the SL&WP Water and Sewer Superintendent, that such wastes can harm either the sewers, sewage treatment process or equipment, have an adverse affect on the receiving stream, or can otherwise endanger life, limb, public property or constitute a nuisance, in forming his opinion as to the acceptability of these wastes, the superintendent will give consideration to such factors as quantities of subject wasted in relation to flows and velocities in the sewers, materials of construction of the sewers, nature of the sewage treatment process, capacity of the sewage treatment plant, degree of tractability of wastes in the sewage treatment plant, and other pertinent factors. The substances prohibited are:
 - a) Any waist or water containing fats, wax, grease or oil in excess of fifty (50) mg/l, as determined by results of the Freon extractable test, and the reasonable interpretation of test results, and/or auxiliary tests, to exclude from the measurement values which do not represent fats, wax, grease and oil. [City Ordinance Sec. 25-119 paragraph (b)]
 - b) Any liquid or vapor having a temperature higher than one hundred sixty (160) degrees Fahrenheit (seventy (70) degrees Celsius).
 - c) Any garbage other than ground residential garbage.
 - d) Any acidic or alkaline wastewaters having pH values outside the range of 6.0 to 10.
 - e) Heavy metals and toxic, refractory, organic chemicals in concentrations or quantities sufficient to limit treatment plant capability or efficiency, adversely affect effluent quality by their presence or effects, or to limit the means of disposal or utilization of treatment plant sludge by their presence. The superintendent may issue lists of prohibited metals and toxic chemicals and guidelines and criteria for limiting their acceptance as required for operation of the treatment system.

- f) Any radioactive wastes or isotopes of such half life or concentrations as may exceed public safety limits or cause the plant effluent of/r sludge to exceed any applicable state or federal regulations.
- g) The use of enzymes, solvents, or emulsifiers (unless permitted by the superintendent).

B. Wastewater pretreatment facilities.

- 1. Persons desiring to discharge to the public sewer industrial wastewaters which are incompatible with the system shall construct and operate pretreatment facilities to bring the wastewater to a condition and quality which is compatible with the sewerage system prior to discharge to the sewer. Facilities such as grease and oil interceptors, grit traps, flow equalization basins and controls, shall be considered pretreatment facilities, as well as all other facilities designated to eliminate incompatible characteristics and/or reduce wastewater loads of compatible characteristics. [City Ordinance Sec. 25-103 paragraph (a)]
- 2. The user shall obtain a wastewater construction permit prior to construction of pretreatment facilities, shall construct such facilities at his expense and shall operate and maintain such facilities to meet conditions of his service permit. [City Ordinance Sec. 25-103 paragraph (b)]

II. Plumbing codes for the City of Seneca adopted from the International Plumbing Code, referred to hereafter as IPC.

A. Grease Traps and Grease Interceptors

- Grease Trap.** A passive interceptor having a rated flow of 50 gpm (189 L/m) or less and that is located inside the building.
 - Grease Interceptor.** A passive interceptor having a rated flow exceeding 50 gpm (189 L/m) and that is located outside the building.
- 1. Traps and interceptors shall be provided to prevent the discharge of fats, oils, grease, sand and other substances harmful or hazardous to the building drainage system, the public sewer, or sewage treatment plant or processes.
 - 2. The size, type and location of each trap and of each interceptor shall be designed and installed in accordance with the manufacturer's instructions and the requirements of this section based on the anticipated conditions of use. Wastes that do not require treatment or separation shall not be discharged into any grease trap or grease interceptor.

3. Grease trap and grease interceptor requirements.
 - a. A grease trap or grease interceptor shall be required to receive the drainage from fixtures and equipment with grease-laden waste located in food preparation areas, such as in restaurants, hotel kitchens, hospitals, school kitchens, bars, factory cafeterias, or restaurants and clubs.
 - b. Food waste grinders must be connect to grease traps or grease interceptors, the grease trap or interceptor shall be sized and rated from the discharge of the food waste grinder.
 - c. A grease trap or a grease interceptor shall not be required for individual dwelling units or any private living quarters.

B. Oil separators required.

1. At repair garages; gasoline stations with grease racks, grease pits or work racks; car washing facilities with engine or undercarriage cleaning capability and at factories where oily and flammable liquid wastes are produced, oil separators shall be installed into which all oil-bearing, grease-bearing or flammable wastes shall be discharged before emptying in the building drainage system or other point of disposal.

C. Access and maintenance of interceptors, separators and traps.

1. Access shall be provided to each interceptor, separator or trap for service and maintenance. Interceptors, separators and traps shall be maintained by periodic removal of accumulated grease, scum, oil, or other floating substances and solids deposited in the device.

III. The current policy regarding food preparation facilities.

- A. All commercial food service and preparation facilities that have a grill and/or fryer shall be required to have no less then a 1000-gallon capacity grease interceptor.
 1. Where a commercial food service and/or preparation facility does not have a grill or fryer, such as an ice cream parlor or sweet shop, the SL&WP Water and Sewer Superintendent may wavier the requirement for a grease trap or grease separator. If a wavier of the grease trap or grease separator requirement on any establishment, as described in Sec. 1-2 II-A-3 paragraph (a) of this document, is allowed, a binding agreement shall be entered into between the owner of the business and the Oconee County Sewer Commission. (See Pages 10-11)

Sec. 1-3 Seneca Light and Water Plant Minimum Standard for Grease Trap And Grease Interceptor Design And Maintenance

Introduction

Improperly designed and maintained grease traps and/or grease interceptors pose a significant threat to the sanitary operation of sewage treatment and disposal systems serving restaurants and other food service facilities. Failure to pump/clean grease traps and/or grease interceptors at frequent intervals has resulted in many instances where the flow capacities of the sewage collection system are greatly reduced or completely obstructed, thereby interrupting service to customers as well as causing sewage spillage damaging the environment. Influent to grease traps and/or grease interceptors are typically very hot and contain extremely high organic loads including grease, oils, fats, and dissolved food particles, as well as detergents and suspended solids. It is therefore imperative that grease traps and/or grease interceptors be properly designed and maintained to minimize the impact of these materials on the treatment capacity of the system.

I. New Food Service Facilities

1. All new food service facilities (i.e. restaurants, retail food stores, schools, nursing/retirement homes, day care centers, armories and other institutions) must comply with this standard in its entirety. The SL&WP Water and Sewer Superintendent in some cases may grant exception where the quantity of grease-laden wastewater is minimal.
2. Plumbing
 - a. All new food service facilities listed above must be provided with two separate plumbing stub-outs, one serving the food preparation area, and the other serving the rest rooms.
 - b. The stub-out from the food preparation area must carry only wastewater from the sinks, floor drains, dishwasher, and can wash, and must discharge directly into a properly designed grease trap or grease interceptor. Effluent from the grease trap and/or grease interceptor should be discharged into the inlet portion of the public sewage collection system link up.
 - c. The stub-out from the rest rooms must discharge directly into the public sewage collection system link up.
 - d. To enhance grease separation while the liquids are hot, the grease trap and/or grease interceptor must be placed as close as permissible to the source of wastewater.
3. Appurtenances
 - a. All external grease interceptors, whether singular, double or in series, must be directly accessible from the surface and must be fitted with an extended outlet sanitary tee terminating 6-12 inches above the tank floor. The minimum access opening dimensions shall be 18 inches.

- b. All grease interceptors serving facilities where the total sewage flow exceeds 1500 gpd must either be two-chambered or individual tanks in series. If two chambered, the dividing wall must be equipped with an extended elbow or sanitary tee termination 6-12 inches above the tank floor. An extended outlet sanitary tee must also be provided at the outlet of the second chamber. Both chambers must be directly accessible from the surface. If individual tanks in series are used, then refer to C.1. above.

II. *Determination of the minimum net liquid capacity of grease traps.

1. Sizing of grease traps is based on wastewater flow and can be calculated from the number and kind of sinks and fixtures discharging to the trap. In addition, a grease trap should be rated on its grease retention capacity, which is the amount of grease (in pounds) that the trap can hold before its average efficiency drops below 90%. Current practice is that grease-retention capacity in pounds should equal at least twice the flow capacity in gallons per minute. In other words, a trap rated at 20 gpm should retain at least 90% of the grease discharged into it until it holds at least 40lb of grease. Most manufacturers of commercial traps rate their products in accordance with this procedure.
2. Recommended minimum flow-rate capacities of traps connected to different types of fixtures are given in following table.

Recommended Ratings For Grease Traps

Type of Fixture	Flow Rate	Minimum Grease Retention Capacity Rating
• Restaurant kitchen sink	15 gpm	30 lb
• Single-compartment scullery sink	20 gpm	40 lb
• Double-compartment scullery sink	25 gpm	50 lb
• 2 single-compartment sinks	25 gpm	50 lb
• 2 double-compartment sinks	35 gpm	70 lb
• Dishwashers for restaurants:		
▶ Up to 30 gal water capacity	15 gpm	30 lb
▶ Up to 50 gal water capacity	25 gpm	50 lb
▶ Up to 100 gal water capacity	40 gpm	80 lb

III. Determination of the minimum net liquid capacity of grease interceptors.

1. The following two equations are used for restaurants and other types of commercial kitchens:

a. Restaurants: $(D) \times (GL) \times (ST) \times (HR/2) \times (LF) = \text{Size of Grease Interceptor (gal.)}$

- ◆ D = Number of seats in dining area
- ◆ GL = Gallons of wastewater per meal, normally 5 gal.
- ◆ ST = Storage capacity factor – minimum of 1.7
- ◆ HR = number of hours open
- ◆ LF = Loading factor:
 - 1.25 interstate freeways
 - 1.0 other freeways
 - 1.0 recreational areas
 - 0.8 main highways
 - 0.5 other highways

b. Hospitals, Nursing Homes, other type commercial kitchens with varied seating capacity. $(M) \times (GL) \times (ST) \times (2.5) \times (LF) = \text{Size of Grease Interceptor (gal.)}$

- ◆ M = Meals per day
- ◆ GL = Gallons of wastewater per meal, normally 4.5 gal.
- ◆ ST = Storage capacity factor – minimum of 1.7
- ◆ LF = Loading factor
 - 1.25 garbage disposal and dishwashing
 - 1.0 without garbage disposal
 - 0.75 without dishwashing
 - 0.5 without dishwashing and garbage disposal

a. No grease interceptor shall have a net liquid capacity of less than 1000 gallons.

IV. Maintenance requirements and recommendations

1. All grease traps and/or grease interceptors shall be maintained by the user at the user's expense. Maintenance shall include the complete recovery of all contents, including floating materials, wastewater and bottom sludge and solids. All grease recovery systems, including localized interior devices, passive exterior devices, and any other

grease recovery devices, shall be properly and adequately maintained by the user so as to achieve the intended purpose of the device.

2. In the maintaining of an exterior grease interceptor system, the user shall be responsible for proper recovery, removal and disposal by appropriate, approved means of the captured material by a licensed waste disposal or rendering firm.
3. It is recommended that the owner/manager provide and frequently use a device for the measuring of grease accumulation to insure that the grease interceptor does not exceed its maximum holding capacity (see page 17).
4. If the owner/manager chooses not to provide a measuring device, it is recommended that he enter into a contract with a licensed waste disposal or rendering firm. The contract should specify that the hauler will make periodic inspections of the grease interceptor to determine the level of grease, and that the interceptor will be pumped at whatever intervals are necessary to ensure that the level of grease does not extend to within two feet of the bottom of the interceptor.
5. When a grease interceptor has been pumped / cleaned it is the responsibility of the owner/manager to notify, in writing, SL&WP within 5 business days (a copy of the receipt from the waste disposal company is acceptable). For all interior localized grease traps, whether active or passive, a continuous log indicating each cleaning or maintenance for the previous 12 months shall be maintained by each user of a grease recovery system. This log shall be kept in a conspicuous location where it can be inspected by the Health Department and SL&WP personnel upon request. (See page 12).
 - a. Failure to adhere to Sec 1-3 II-5 above will result in the interruption of water and/or sewer services until all grease traps and/or grease interceptors have been properly serviced (pumped/clean) and inspected by appropriate SC&WP personal.

V. Existing food service facilities.

1. All existing food service facilities listed in Sec. 1-3 I. A. which were permitted prior to June 3, 1998, may be required to comply with this standard if upon inspection it is found that the waste water exiting the facility does not meet the minimum standards as stated in the City of Seneca Code of ordinance Sec. 25-119 paragraph (b).
2. Existing food service facilities which close and then reopen, thereby requiring a new permit, will be required to comply with this standard.

*The South Carolina Department of Health and Environmental Control Minimum Standard for Grease Trap Design and Maintenance as well as the U.S. Environmental Protection Agency Design Manual for Onsite Wastewater Treatment Systems were used as a guide for Sec. 1-3.

Sec. 2-1 Administration and Enforcement (taken from the City of Seneca Code of Ordinance Sec. 25-69, 70, 71 and 72)

I. Powers, duties and authority of inspectors.

- A. The superintendent of the city and other duly authorized employees properly identified by credentials of appointment and identification, shall act as inspectors. It shall be the duty of the inspectors to make inspections, observations, measurements, sampling and testing in accordance with the provisions of this article. Such inspectors shall have no authority to inquire into any industrial process or to require or request the disclosure of any trade secrets beyond that point having a direct bearing on the kind or source of discharge to the sewers or waterways or other facilities of the commission.
- B. Such inspectors shall have the right to enter upon real property over and through which the county has acquired an easement for the installation and maintenance of the sewer lines and facilities, and in addition, they shall have, along with proper city inspectors, the right to go upon the property of individuals or industrial users of the system as provided in the service agreement mentioned hereafter, for the purpose of determining compliance with the provisions of this article. All non-municipal water-sewer users shall execute, as requirement for service, an agreement allowing sewer inspectors to enter upon the premises for the purpose of inspecting individual sewer collector lines, during reasonable times, so as to verify compliance with the terms and conditions of such service. All city users shall require their individual sewer customers to execute an agreement granting to the city inspectors, as well as those of the commission, the right to go upon their premises to determine compliance with the provisions of this article, as well as any appropriate county ordinance.
- C. While performing the necessary work on private properties referred to herein, any inspector shall observe all safety rules applicable to the premises, established by any commercial user, and the commission shall indemnify any user for any loss or damage to its property occasioned or caused by the city inspectors or employees. Any user shall be held harmless for any injury or death to any city employee or for and against liability claims for personal injury or property damage growing out of such gauging or sampling operations, except as may be caused by the negligence or failure of such user to maintain his premises in a safe condition.

II. Damaging or tampering with facilities.

- A. It shall be unlawful and a violation of this article for any person to damage, destroy or tamper with any gauges, meters, lines, manholes, and their comers, equipment, pumps, electrical connections, lift stations, or any appurtenances to the sewer lines of the city, and in addition, to the civil responsibility for any damage caused or occasioned by such person(s), such offender shall be liable for the imposition of the penalties as provided herein. It shall likewise be a violation of this section for any person to aid, assist, abet or permit a minor child to violate the provisions of this section, and such person shall be liable as a principal and subject to the identical penalties as any violator hereof would be liable.

III. Penalties

- A. Any person found guilty of violating section 25-70 (Sec. 2-1 II.A.) hereof shall be guilty of a misdemeanor, may be tried by any magistrate or city recorder in Oconee County and, upon conviction of such violation, shall be subject to punishment as provided in section 1-15 of this Code for each violation (Sec. 1-15 City Code of Ordinance).
- B. Any person found violating the provisions of this article as to the induction into the system of prohibited materials or other prohibited acts other than section 25-70 (City Code of Ordinance) hereof, shall be set by the city with written notice, stating the nature of the violation and including a reasonable time limit for the satisfactory correction thereof not to exceed sixty (60) days from the date of the notice, within the discretions of the superintendent. Such offender shall, within the period of time stated in the notice, permanently cease all such violations, and the failure to do so will subject such offender to punishment as provided in section 1-15 (City Code of Ordinance) of this Code for correction shall be deemed a separate offense.

Sec. 2-2 General Penalty (taken from the City of Seneca Code of Ordinance Sec. 1-15)

Whenever in this Code or in any ordinance or resolution of the city, or rule, regulation or order promulgated by any officer or agency of the city under authority duly vested in him or it, any act is prohibited or is made or declared to be unlawful or an offense or misdemeanor, or the doing of any act is required, or the failure to do any act is declared to be unlawful or an offense or misdemeanor, where no specific penalty is provided for the violation thereof, the violation of any such provision of this Code, ordinance, resolution, rule, regulation, or order shall be punished by a fine not exceeding two hundred dollars (\$200.00) or by imprisonment, for a period not exceeding thirty (30) days. In addition, the court may assess costs against the defendant, if convicted.

Each day of violation of this Code or ordinance, resolution, rule, regulation or order promulgated within the duly authorized scope of this Code shall constitute a separate offense unless otherwise provided.

STATE OF SOUTH CAROLINA)
)
COUNTY OF OCONEE)

AGREEMENT

WHEREAS the Oconee County Sewer Commission (hereinafter referred to as County) requires grease traps for all business establishments which discharge grease into the Coneross Creek Wastewater Treatment Facility and,

WHEREAS, the City of Seneca by formal agreement with the County requires its sewer customers to comply with the City and County Sewer Ordinances, and,

WHEREAS, _____ (hereinafter referred to as Owner) owns and/or operates a business establishment, dba _____, located at _____, whose sewer is provided by the City of Seneca, and,

WHEREAS, the County has determined that under present use, and based upon the menu and the “Limited Food Service” permit issued by SCDHEC, no grease will be discharged into the sewer system.

NOW, THEREFORE, for ten (\$10.00) dollars paid by owner, receipt of which is acknowledged by the County, covenants herein below, and other good and valuable consideration, the parties agree as follows:

1. County hereby grants to Owner a waiver for the requirement of the installation of a grease trap on premises herein above stated.

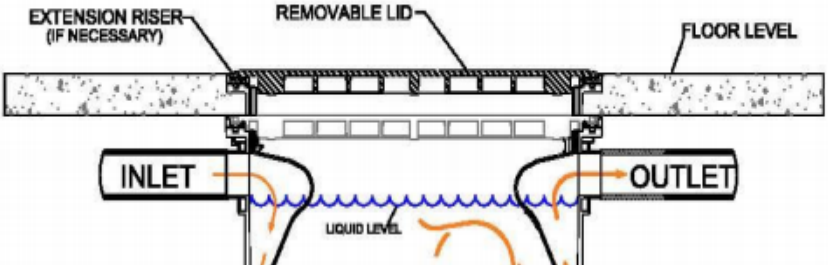
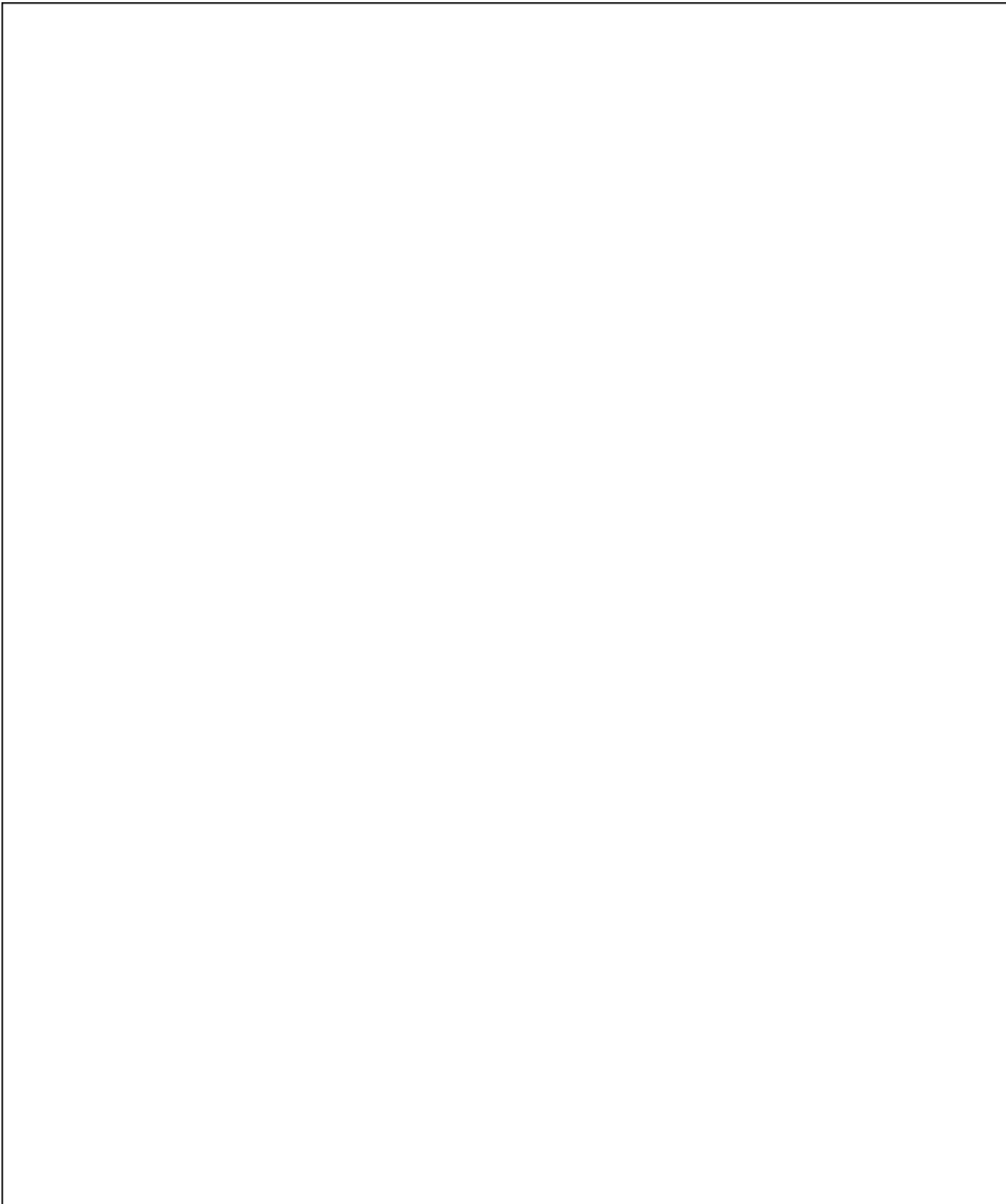
2. Owner certifies that no grease is now nor will in the future be discharged into the sewer system.
3. Owner will provide a cleanout or sampling point on the discharge from the food preparation area for the purpose of analysis. This sampling point shall be prior to the mixing with the rest room wastes.
4. owner agrees that if in the future any grease will be discharged into the sewer system, that prior to said discharge, Owner at his/her/its expense, will install a grease trap to County's specifications, inspection, and approval.
5. Owner agrees to notify the City and County thirty (30) days prior to any discharge of grease.
6. Parties agree that failure by the Owner to abide and comply with any of the covenants stated herein above shall result in the following:
 - A. City shall immediately and without further notice terminate and disconnect sewer service to Owner at location herein above stated.
 - B. Sewer service shall not be reconnected until Owner installs a grease trap at his/her/its own expense and has the same inspected and approved by the City of Seneca and Oconee County Sewer Commission. Owner agrees to further pay any and all reconnect fees, and to reimburse the City for any and all expenses (including but not limited to attorney's fees and inspection fees) caused by Owner's failure to abide by the covenants herein.
7. This agreement shall be binding on the parties, their successors, heirs and assigns, and contains the entire agreement, and shall not be changed or modified except in writing signed by all parties.

This agreement entered into this _____ day of _____, _____.

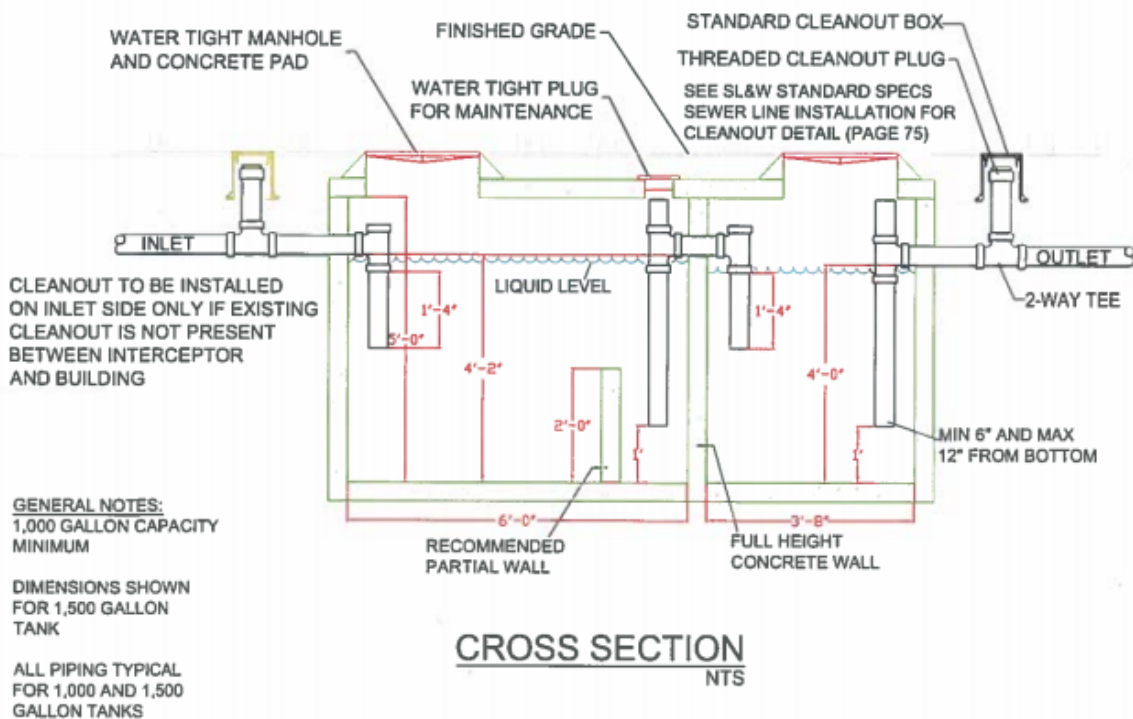
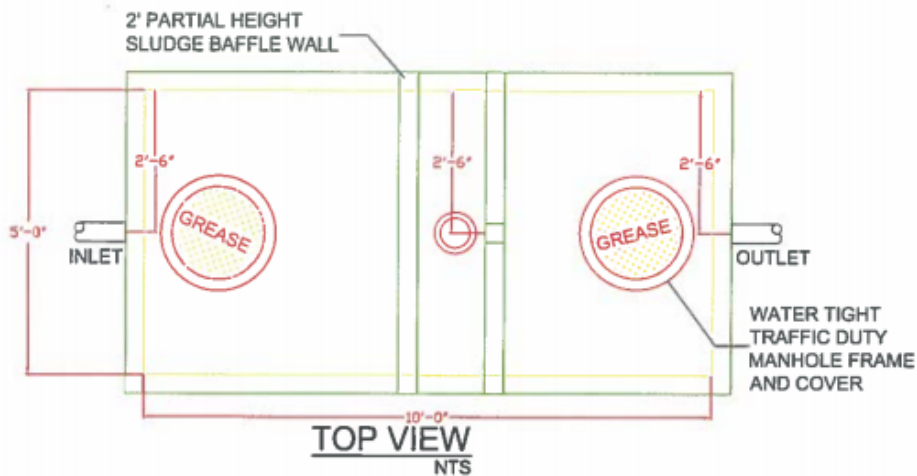
Witnesses

Owner

City of Seneca



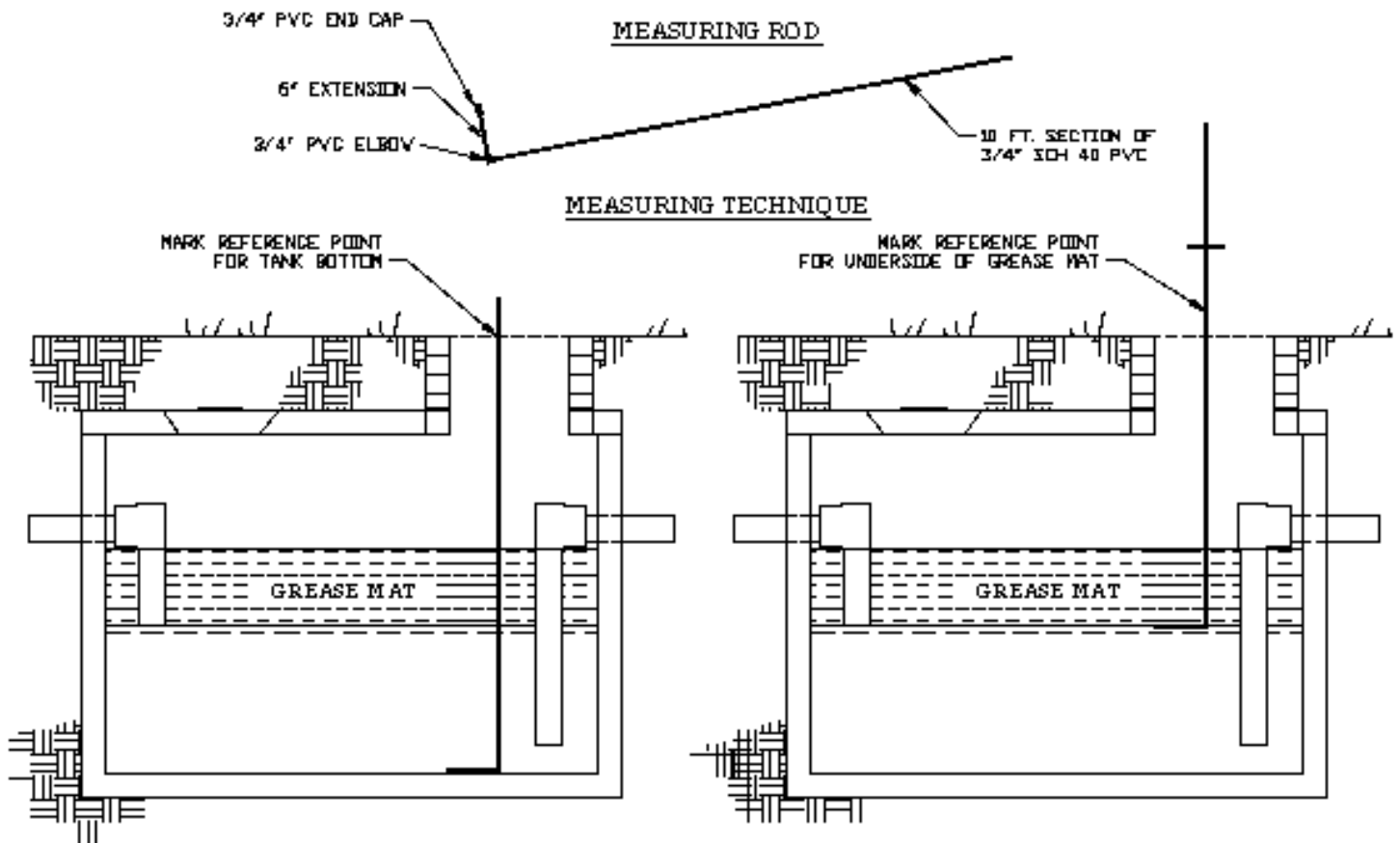
1500 Gallon Grease Interceptor



GREASE INTERCEPTOR DETAIL

SENECA LIGHT & WATER 2016

METHOD FOR MEASURING GREASE ACCUMULATION



1. REMOVE ACCESS OPENING AND PUSH MEASURING ROD THROUGH GREASE MAT UNTIL CONTACT IS MADE WITH TANK BOTTOM.
2. MARK A REFERENCE POINT ON MEASURING ROD TO INDICATE LEVEL OF TANK BOTTOM.
3. ROTATE MEASURING ROD 1/4 TURN AND SLOWLY RAISE UNTIL CONTACT IS MADE WITH UNDERSIDE OF GREASE MAT.
4. MARK A REFERENCE POINT ON MEASURING ROD TO INDICATE LEVEL OF GREASE MAT UNDERSIDE.
5. MEASURE DISTANCE BETWEEN TWO REFERENCE POINTS. THIS INDICATES THE DISTANCE OF THE GREASE MAT ABOVE THE TANK BOTTOM.
6. IF IT IS DETERMINED THAT THE GREASE MAT HAS ACCUMULATED TO WITHIN 2 FOOT OF THE TANK BOTTOM, THEN THE OWNER/MANAGER SHALL BE REQUIRED TO THOROUGHLY REMOVE THE GREASE FROM THE TANK(S).
7. IF IT IS IMPOSSIBLE TO PENETRATE THE GREASE MAT AS SPECIFIED IN ITEM 1, THEN THE OWNER/MANAGER SHALL BE REQUIRED TO THOROUGHLY REMOVE THE GREASE FROM THE TANK(S).