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TOWN OF SUFFIELD WATER POLLUTION CONTROL AUTHORITY

TREATMENT PLANT

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844 East Street South Suffield, Connecticut 06078-2402

Policies & Requirements

For

Extensions & Repairs To Existing Sewerage Facilities

Prepared By Consulting Environmental Engineers Inc. West Hartford Ct. September 1990

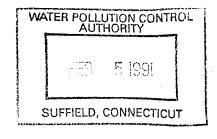
> **Updated By** Suffield W.P.C.A. Commission January 2012

Bruce Remington Chairman Wallace Roger Donald Leis Ann Huntington Mickelson

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Craig M. O'Neil Superintendent / Chief Operator

TOWN OF SUFFIELD



WATER POLLUTION CONTROL AUTHORITY



TREATMENT PLANT PAPER STREET

SUFFIELD, CONNECTICUT 06078

To The Applicant:

The purpose of this manual is to concisely outline the administrative procedures, approval process, and technical requirements that are necessary when proposing to connect to, alter, repair, extend and/or use the Suffield sanitary sewer system. The Suffield Water Pollution Control Authority (WPCA) owns, operates, and manages the sanitary sewer system and treatment facilities. Any proposal that involves a connection to, an extension of, or a repair to the sewer system must go before the WPCA for its review and approval. All activities relative to the system are within the jurisdiction of, and require approval from the WPCA.

Certain proposed connections, repairs, or extensions of the sanitary sewer system may require review and/or approval from various town and state agencies, such as the Planning & Zoning Commission, the Conservation Commission, the Building Department, and the Connecticut Department of Environmental Protection. No attempt is made in this manual to speak on behalf of any agency other than the WPCA. Information regarding other agencies is provided to assist the applicant through the administrative process. The applicant is responsible for the individual requirements from each agency that may have jurisdiction over the proposal.

The manual is divided into four parts explaining the administrative and approval process for permitting new construction, the technical requirements that must be followed, and the standard details that indicate the construction requirements that must be incorporated into the work. All proposed sewer connections, repairs, and extensions must comply with the requirements contained in this manual (latest revision) to be considered by the WPCA.

Any special design considerations or need for clarification of specific points should be directed to the Superintendent of the WPCA before designs and commitments are pursued and completed.

The procedures outlined in this manual are intended to make the application, review and approval process easier for all parties involved. Utilizing this manual will save you, the Applicant, time spent on unnecessary revisions and will enable us to process your application in the most expeditious manner possible.

Sincerely,

Allen E. Ryan

Chairman

WATER POLLUTION CONTROL AUTHORITY'S

POLICIES & REQUIREMENTS

FOR

EXTENSIONS & REPAIRS TO EXISTING SEWERAGE FACILITIES



For The TOWN OF SUFFIELD

CONNECTICUT

PREPARED BY
CONSULTING ENVIRONMENTAL ENGINEERS INC.
100 SHIELD STREET, WEST HARTFORD, CT.

SEPTEMBER 11, 1990

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PART I **ADMINISTRATIVE POLICIES**

PART II ADMINISTRATIVE REQUIREMENTS

DIVISION I. PROCEDURES

A. Planning Application

A Planning Application shall be submitted whenever a <u>sewer</u> extension is necessary to provide sewer service, or if the proposed project will result in an increase in sewage flow equal to or greater than 2 Equivalent Dwelling Units (EDUs) or 476 gpd. A Planning Application is not required for the connection of a single family residence.

The owner and/or agent shall submit a Planning Application along with the required supportive documents to the:

Town of Suffield
Water Pollution Control Authority
83 Mountain Road 844 East 5+ 500th
Suffield, CT. 06078

The application shall be prepared and signed/sealed by a professional engineer licensed by the State of Connecticut.

A sewer extension permit is required for any facility serving or having the potential of serving more than one property.

In all new structures, the Developer agrees to install reduced size toilet tanks which discharge a maximum of 3.5 gallons of water per flush cycle and shower heads which limit the flow to a range of 2.5 to 3.0 gallons per minute.

B. Notification of the Planning Decision

The WPCA will review the submission and notify the Applicant of its decision. The Authority will determine if the proposed sewerage facilities are acceptable and if adequate capacity exists in the sewer system for the proposed development. Planning approval shall be valid for one year from date of approval. A one time extension for a maximum of one year may be granted upon the Applicant's request. All requests must be submitted 60 days prior to the expiration date of the approval and must include written justification of the need for an extension.

The WPCA reserves the right to require reasonable revisions to proposed sewerage facilities and make any determination that it believes is in the best interest of the WPCA and the Town.

DIVISION I. PROCEDURES

C. Notification of Other Applications

Once WPCA planning approval is received, the Applicant shall obtain all other necessary approvals from all other Town Boards and Commissions. The Applicant shall submit evidence that applications have been submitted to the other Boards and Commissions within six months of receiving planning approval from the WPCA. Failure to comply with this requirement shall result in revokation of planning approval.

D. Preliminary Design Report (PDR) For Wastewater Pumping Stations

If the proposed sewage facilities include a wastewater pumping station, the Applicant is required to submit a Preliminary Design Report (PDR). The specific requirements for the report are presented in Division IV of this Part.

The Applicant shall submit a PDR for conceptual approval once the planning application has been approved and prior to submitting a permit application. It is recommended that the Applicant develop the Preliminary Design Report concurrently with the Applicant's submissions to other Town agencies.

The PDR must be prepared and sealed by a professional engineer licensed by the State of Connecticut.

E. Developer's Agreement

The Applicant is required to submit a completed and signed Developer Agreement with the permit application. The agreement sets forth the responsibilities of the Applicant with regards to the construction, operation, and maintenance of the facilities to be constructed. The specific terms of the agreement are described in Division III of this Part.

F. Permit Application

An application shall be submitted to the WPCA whenever:

- A connection is to be made to a WPCA facility or permitted facility;
- 2. The construction of sewerage facilities is necessary to extend the WPCA's facilities to provide sewage service;
- 3. A repair is made to an existing building connection; or
- 4. A repair is made to a permitted sewer extension which has not yet been accepted by the Town.

G. Issuance of Permit

Procurement of one of the following permits is required prior to starting work on any WPCA facility. The permit shall be conspicuously posted at the site during the entire term of construction:

- Connection Permit
- Sewer Extension Permit
- Connection Repair Permit
- Sewer Extension Repair Permit

A Sewer Extension Permit shall not be issued until the following approvals have been obtained:

- Other Town Boards & Commissions
- Preliminary Design Report (PDR) (if required)
- Developer's Agreement
- DEP's review and approval or permit issuance

H. Repair Permits

A repair permit shall be required to repair an existing facility. A planning application will not be required since the nature of the work is to repair existing facilities only. The WPCA reserves the right to require a PDR for any alternations or repairs to pumping stations or other related equipment.

DIVISION II. - PLANNING REQUIREMENTS

A. Submission of Planning Application

The Applicant shall submit two (2) copies of the following:

- 1. Completed Planning Application.
- 2. Brief Project Narrative.
- 3. Location Map, minimum scale 1" = 2000'.
- 4. Site plan, minimum scale 1" = 200'.
- 5. Wastewater flow calculations.
- 6. Pump station justification (if required).

The Applicant shall also remit the application fee (payable to Town of Suffield Water Pollution Control Authority) in the required amount. Application fees are presented in Appendix K.

1. Planning Application

A blank Planning Application is included in Appendix A of this manual.

2. Brief Project Narrative

On a separate sheet of paper, submit a narrative which describes the proposed project.

3. Location Map

Attach a copy of the USGS Quad sheet with a north arrow or equivalent for the general area of the project. The map shall identify the project area, municipal boundaries and sewer district boundaries. A county, municipal or other suitable map may be used provided the location and boundaries of the proposed project are easily identified. All maps shall be 8-1/2" x 11" and shall have a minimum scale of 1" = 2000'.

4. Site Plan

A site plan prepared at a minimum scale of 1" = 200' with a north arrow shall be submitted with the application. The plan shall identify all adjacent property owners and boundaries with the assessor's map, block, and lot numbers; existing and proposed sanitary & storm sewers; roadways; watercourses, wetlands, and floodplains; and contour lines. The plan shall show the location, size and direction of flow of all existing/ proposed sewers and pumping stations.

Any proposed pump station shall be sited so as to provide the maximum sewer service by gravity to the sewershed it occupies. Its location shall be such that service can be provided to the ultimate service area, not just the initial service area.

DIVISION II. - PLANNING REQUIREMENTS

5. Wastewater Flow Calculations

Computations for initial, incremental and ultimate wastewater flows shall be submitted. Wastewater flows are to be determined for both average and peak rates.

a. Flow Periods

Initial flows shall be based upon existing and proposed development in accordance with current zoning and land use requirements.

Compute flows at 5-year, 10-year, 20-year and 50-year increments for both the project and sewershed. The sewershed is defined as the area of land which could be served by the proposed facilities.

Ultimate flows shall be calculated for the entire (100%) developable portion of the area in accordance with current zoning and land use requirements. Developable area accounts for deductions due to wetlands, flood plains, topographical and geological constraints, roadways, sidewalks, open space, etc.

b. Flow Components

Residential flows shall be estimated as follows:

Single Family Dwellings Average daily flow = 3.4 persons/dwelling x 70 gpcd

= 238 gpd/dwelling
This flow figure is referred to as an Equivalent
Dwelling Unit(EDU).

Multi-family units
Average daily flow = 2.5 persons/unit x 70 gpcd
= 175 gpd/unit

Flows generated from projects other than the types mentioned above shall be computed using values presented in Table 1 on the following page. If value not given, Applicant shall consult with WPCA.

c. Undeveloped Lands

Residential flows estimated from residentially zoned areas that are undeveloped shall be computed based on 238 gpd/unit (1 EDU/unit).

Commercial flows shall be calculated based on 1000 gpd/acre.

MARIE 1		
TABLE 1 <u>ESTIMATED_SEWAGE_FLOWS</u> *	AVE. DAILY	
SCHOOLS (PER PUPIL):	FLOW (GALS.)	
Toilet	12	
Kitchen	3	
Showers	3 to 5	
Residential	100	
Kindergarten	100	
Day Care (no meals prepared)	10	
bay date (no meats prepared)	10	
EMPLOYEES (PER EMPLOYEE):		
Factory (without showers)	25	
Factory (with showers)	35	
Office (avg. 150 ft2 per person)	20	
Retail	20	
<u>CAMPS (PER PERSON)</u> :		
Residential Camps (semi-permanent)	50	
Campground with Central Sanitary Facilities	35	
With Flush Toilets	25	
Per Camp Space (water and sewer hook-ups)	100	
Day Camps	15	
Luxury Camps	75	
Picnic Parks (toilet wastes only)	5	
Picnic Parks W/Bath Hses, Showers & Toilets	10	
HENION CARE ENGILTHIEG.		
HEALTH CARE FACILITIES:	0.50	
Hospitals (per bed)	250	
Convalescent Homes (per bed)	150	
Rest Homes (per bed)	150	
Institutions (per person)	100	
RESTAURANTS:		
Per Meal Served (with toilets)	10	
Per Meal Served (without toilets)	5	
Bars, Cocktail Lounges (no meals), Per Patron	5	
	J	
RECREATIONAL FACILITIES:		
Swimming Pools (per bather)	10	
Indoor Tennis Courts (per court)	400	
Outdoor Tennis Courts (per court)	150	
Theaters, Sporting Events (per seat)	3.5	
CHURCHES, SYNAGOGUES:		
Worship Service Only (per seat)	1	
Sunday School (per pupil)	2	
Social Events with meal served (per person)	5	
MICCELL ANEQUE.		
MISCELLANEOUS:	200	
Beauty Salon (per chair)	200	
Auto Service Station (per car serviced)	5	
Kennel/Dog Run With Roof (per run)	25	
Large Shopping Centers (per ft ² of retail area)	11	
Laundromats (per washer)	400	
Motels - No Food or Washing Machines (per room)	75	
* Dept. of Health Services, "Conn. Public Health Code Regulations & Technical Standards for Subsurface Sewage Disposal Sys.", 3/86		
a recumical scandards for subsurface Sewage Disposa	1 5ys.", 3/86	

DIVISION II. - PLANNING REQUIREMENTS

5. Wastewater Flow Calculations (Con't.)

Industrial flows are to be computed based on 1500 gpd/acre.

d. Peak Flows

Peak flows shall be computed by multiplying the daily average flow by a peaking factor. The peaking factor shall be computed as follows:

Peaking Factor =
$$\begin{bmatrix} 14 \\ 4 + \sqrt{p} \end{bmatrix} + 1$$

p = population/1000

- e. The above flow components shall be calculated for both the project area and the sewershed tributary to the project area.
- f. Infiltration/Inflow (I/I)

All of the above flows shall be increased to allow for infiltration and inflow as follows:

Developed Lands:

Infiltration/inflow for the proposed project shall be computed by multiplying the length of sewers (including laterals) by 100 gpd/in dia/mi.

Undeveloped Lands:

Infiltration/inflow for all undeveloped areas shall be calculated at 75 gpd/ac of undeveloped land.

g. Other Flow Computation Methods

If the applicant uses another means of computing the wastewater flows, adequate justification <u>must</u> <u>be</u> provided with the submission. The WPCA reserves the right to require adjustments to the methodology used to compute wastewater flows if they are contrary to those previously stated.

DIVISION II. - PLANNING REQUIREMENTS (Con't.)

B. Wastewater Pump Station Justification

For any type of proposed pumping facility, justification shall be submitted documenting that sewer service can not be provided by gravity sewers.

The WPCA reserves the right to make any changes to the proposed sewerage facilities including the use of gravity sewers in place of pumping facilities should it be deemed to be in the best interest of the WPCA and the Town of Suffield.

DIVISION III. - DEVELOPER'S AGREEMENT

A. Requirements

Prior to the applicant receiving the required permit, a Developer's Agreement must be executed. A completed Agreement shall be submitted with the permit application.

B. Performance Bond

A performance bond shall be required to insure completion and maintenance of the sewerage facilities and shall be not less than 100% of the cost for constructing the proposed sewerage facilities. The bond shall be submitted with the agreement and shall be in a form consistant with the Town of Suffield Performance Bond Policy as shown in Appendix H.

D. Easements For Sewerage Facilities

The standard Developer's Agreement requires the developer to furnish to the WPCA proof, in the form of duly executed and recorded deeds or bonds for deed, that the developer has acquired or has an unconditional right to acquire easements on and through any properties not owned in fee by the developer but which are necessary for the completion of the sewer facilities or the connection of these facilities to the WPCA's collection system.

D. Insurance

As part of the Developer's Agreement between the Applicant and the WPCA, the Applicant will be required to provide insurance in amounts acceptable to the Town.

DIVISION IV - PRELIMINARY DESIGN REPORT FOR WASTEWATER PUMPING STATIONS

A. Purpose

It is the goal of the WPCA to:

- provide for the uniformity, compatibility, and interchangeability of equipment and parts to the maximum extent possible; and
- design and construct facilities that will permit the collection of wastewater from the maximum service area possible.

For developments which have received planning approval for a pumping facility, the Applicant shall submit three (3) copies of the Preliminary Design Report (PDR) for approval to the WPCA along with the review fee established in Appendix K. The Applicant shall modify the basis of design to reflect all comments received from the WPCA. Be advised, if the Applicant proceeds with the final design prior to receiving approval of the PDR, the WPCA's comments may require changes to that design. It is recommended that this report be submitted as soon as possible following planning approval to expedite the WPCA permitting process.

B. Requirements

The PDR shall be prepared, signed and stamped by a professional engineer licensed by the State of Connecticut. The report shall provide the WPCA with the basis of design for the proposed pumping facility and shall include the following:

- 1. A location map as required in the planning application.
- 2. A site plan as required in the planning application. The station shall be located such that it provides maximum service by gravity to its sewershed, not just the initial service area.
- 3. Wastewater flows for the station's sewershed as described in Part II., Division II., 5., "Wastewater Flow Calculations".
- 4. Preliminary construction drawings and details for the proposed pump station.
- 5. Design calculations for wet well/pump chamber storage size; detention time; buoyancy calculations for all underground structures; fuel storage for the emergency generator; and pressure surge analysis on the force main and related structures.
- 6. Address the measures taken to minimize the generation of objectionable odors during the design life of the pump station.

C. Acceptable Types of Stations

Generally, stations shall be either of the wet well/dry well or submersible type depending upon projected sewage flows. Commonly, stations designed for a 20 year flow of greater than 100 gpm are of the wet well/dry well type. Submersible type stations may be proposed for 20 year flows less than 100 gpm; however, wherever possible, the pumping stations shall be the wet well/dry well type.

The use of grinder pumps will only be considered where design constraints prohibit the use of solids handling pumps. Requests to utilize this type of station shall be evaluated on a case-by-case basis. The Applicant will be required to demonstrate the need for this type of station to the satisfaction of the WPCA prior to PDR approval.

D. Wastewater Flows

Wastewater flows shall be submitted for initial, incremental and ultimate years for the pump station. Wastewater flows shall be determined for both average and peak rates. For specific requirements, refer to Part II., Division II, 5.

E. Wet Well/Pump Chamber Storage Volume

The wet well shall be designed to provide for adequate time between pumping cycles to prevent "short cycling" of the pumps under design flow conditions. Calculations shall be provided showing the minimum required wet well volume. A minimum of two (2) pumps shall be provided at each station. For duplex pumping stations, the minimum wet well volume shall be calculated as follows:

$$V = \frac{\Theta q}{4}$$
 where

V = required wet well volume in gallons

- Θ = time between successive pump starts in minutes. For stations with pump motors rated at 100 hp or less, the minimum allowable Θ shall be 15 minutes.

For stations with three or more pumps, calculations shall be submitted showing the minimum wet well volume calculated using the Albert Pincince method.

DIVISION IV - PRELIMINARY DESIGN REPORT

F. Detention Time

Wet well detention time shall be calculated using the following equation:

$$T_{det} = t_f - t_e$$

$$t_f = \frac{V}{i}$$

$$t_e = \frac{V}{q-i} \quad \text{where}$$

 t_f = time to fill the wet well in minutes

 t_e = time to empty the wet well in minutes

q = pump rate in gpm. For duplex stations, the pump rate
 with only one pump running shall be used.

i = wastewater flow into the station in gpm

Maximum detention time shall be calculated for i = minimum dry weather flow. If more than 75% of the total average daily flow is from commercial/industrial sources, the maximum detention time shall be calculated as follows:

$$T_{det} = 24 \text{ hrs/day} - \text{employee shift hrs/day}$$

Calculations shall be provided for initial year and design-year flow conditions.

The desired maximum allowable detention time shall be 10 minutes. If, however, the detention time exceeds 60 minutes, an approved odor control system shall be installed at the station.

G. Buoyancy

Buoyancy calculations shall be provided that verify that the station and other underground structures will not float during periods of high ground water.

1. When computing the weight of the structures, the weight of internal equipment shall be neglected.

DIVISION IV - PRELIMINARY DESIGN REPORT

G. Buoyancy (Con't.)

- 2. When computing the net buoyant force acting on the structures, the frictional force caused by soil acting against the station shall be neglected.
- 3. Buoyant force shall be calculated assuming that ground water elevation is equal to finished grade elevation. The net buoyant force shall be multiplied by a factor of safety of 1.2.
- 4. Additional ballast shall be provided by means of reinforced concrete fill added to the bottom of the wet well/dry well structure(s) as required.

H. EMERGENCY GENERATOR FUEL STORAGE TANK DESIGN:

The fuel storage tank shall be sized to store sufficient fuel to operate the emergency generator for a minimum of 3 days.

I. Force Main Design

Water Hammer Analysis:

- 1. The Applicant shall submit complete hydraulic computations indicating the magnitude of water hammer that may result from the force main system and the ability of the pipe and related structures to withstand this shock. Special consideration shall be given during the design of the force main to minimize or eliminate water hammer and to ensure that all equipment and materials are capable of withstanding the shock loadings that may arise during operation of the system.
- Special equipment such as slow closing check valves, surge tanks, pressure relief valves, etc. shall be used to prevent system damage caused by water hammer.
- 3. The force main pipe shall be selected based upon the magnitude of water hammer that will be generated by the system.

Force Main Size

The force main shall be sized to provide a minimum velocity of 3.5 fps under single-pump operating flows for resuspension of solids.

DIVISION V. - PERMIT REQUIREMENTS

A. Required Approvals

Prior to consideration of final plans and specifications by the WPCA, the Applicant shall submit evidence of approvals from other boards and commissions having jurisdiction. In addition, the Applicant shall apply for and receive DEP's approval and/or permit as required.

B. Permit Application

Separate permit applications are required for: connecting to existing sewers; sewer extensions; connection repairs; and sewer extension repairs. The appropriate permit application shall be submitted to the WPCA. Appendixs B thru F contain copies of each type of permit application.

C. Submission Requirements

The Applicant shall be required to pay any and all fees associated with the permit application. The required fees are presented in Appendix K.

The submission shall also include two copies of each of the following:

- 1. Permit application.
- 2. Plans and Specifications.
- 3. Developers Agreement (if required).

D. Submission of Plans and Specifications

Design plans and specifications shall be submitted addressing every item necessary for the proposed project including construction methods and details.

Plans shall include: Assessor's plat, block and parcel numbers; house and street locations; property lines; existing and proposed ground elevations; type, size, depth and slope of pipe; cover over pipe; location of drain connections and all clean outs; and locations and clearances to all other existing and proposed utilities (i.e., gas lines, storm drains, buried electrical, telephone, and television transmission cables, and wells or water lines). A north arrow shall appear on all plan sheets.

Complete construction specifications shall be included either on the plan sheets or as a separate document.

Specific requirements for preparing plans and specifications are presented in Technical Standards, Part III of this manual.

DIVISION V. - PERMIT REQUIREMENTS

- E. Rights & Limitations of Permit
 - 1. The permit shall remain valid for a period of one year from the date of issuance by the WPCA. If work has not started on the project within one year from the date of issuance, the planning approval and permit shall be considered null and void. The Applicant must re-apply for and obtain planning approval and new permit before proceeding with any work.
 - 2. If the work cannot begin within the one-year time period allotted by the permit, the Applicant may petition the WPCA for a one-year extension of the Permit. To be considered by the WPCA, a request for an extension of the permit must be made by the Applicant at least sixty (60) days prior to the date of expiration of the current permit. Only one, 1-year extension shall be considered for each permit.
 - 3. Who Can Do the Work: Only a contractor that holds a valid Drain Layer's license may perform the work. In addition, the contractor is required to post a Drain Layer's bond and provide Certificates of Insurance in amounts acceptable to the Town. Insurance forms are presented in Appendix G.
 - 4. Requirements for Inspection by the Town: All work must be inspected and approved by the WPCA or its representative before permission will be granted to activate the new facilities. The WPCA shall determine the number of inspectors and the amount of inspection required for each project. It is the responsibility of the Applicant to provide a minimum of 7 days' notice to the WPCA of his intent to start construction on the project to enable the WPCA to arrange for inspection services. Under no circumstances shall construction be allowed to begin without the approval of the WPCA.

Prior to final acceptance of the new facilities by the Town, a final inspection shall be conducted by the WPCA. The cost for all inspection performed by the Town shall be borne by the Applicant. The inspection fee shall be established in the Developer's Agreement.

- 5. <u>Penalties</u>: The Applicant shall be fined in the event of any of the following:
 - a. Commencement of construction prior to receipt of a permit from the WPCA;
 - b. Commencement of construction prior to execution of a Developer's Agreement by the WPCA;

DIVISION V. - PERMIT REQUIREMENTS

- E. Rights & Limitations of Permit (Cont't.)
 - c. Commencement of construction prior to notification of the WPCA of any changes to the plans or specifications;
 - d. Failure to properly arrange for or otherwise permit the inspection of newly constructed facilities by the WPCA; or
 - e. Failure to submit as-built drawings to the WPCA within 30 days of final approval by the WPCA.

Penalties shall be assessed in accordance with the schedule presented in Appendix K.

DIVISION VI. - FINAL APPROVAL OF CONSTRUCTED PROJECT

A. Requirements for Final Approval

Prior to placing facilities into operation, the following must occur:

- A final inspection of the completed work by the WPCA or its representative(s);
- 2. Submission of two (2) complete O&M manuals for all pump station equipment; and
- 3. Submission of approved as-built drawings.
- B. Requirements for As-Built Drawings

It is the responsibility of the Applicant to submit as-built drawings of the completed installation within 30 days of completion of the work. No facilities shall be allowed to be placed into operation prior to receipt of approved as-built drawings by the WPCA. The Applicant is advised that the Town will not release the performance bond until such time as the as-built drawings are approved by the WPCA. In addition, the WPCA may assess penalties for failure to submit as-built drawings.

As-built drawings shall be prepared in accordance with the requirements set forth in the Technical Standards, Part III of this manual.

PART I ADMINISTRATIVE POLICIES

DIVISION I - PURPOSE

This manual provides the Town of Suffield Water Pollution Control Authority (WPCA) with a comprehensive wastewater program to insure the prevention, control and abatement of new or existing pollution of the waters of the State. The WPCA has adopted specific administrative policies and procedures for attending to the wastewater needs of the sewage service area. The policies and procedures allow for planned land development and provides a means for the orderly expansion of the existing collection system.

This manual explains the WPCA's administrative policies and procedures necessary to obtain approvals and permits for the construction of new sewers or the connection to existing sewerage facilities. In addition, the WPCA has enacted requirements as provided by Town Ordinance and section 7-346 et seq. of the Connecticut General Statutes to ensure the proper discharge of wastewater. These requirements are provided in Chapter 18, "Utilities" of the Town ordinance and has been attached as Appendix J.

DIVISION II. - POLICIES

A. Connection Permits

Any proposal that involves a connection to the existing sanitary sewer system requires planning approval and a construction permit from the Water Pollution Control Authority (WPCA). Applications for Planning approvals and connection permits can be obtained from the office of the WPCA during normal business hours. In general, there are two classifications of connections:

- 1. The connection of a building to an existing sewer located in a street or other right-of-way (hereinafter referred to as a service connection). This type of connection involves the installation of 6" diameter pipe to connect a new or existing building to the existing Town-owned sewer system. By definition, this type of connection does not require the construction of gravity sewers or other conveyance facilities to enable connection to the existing system. Persons requesting to perform this type of work must secure planning approval and/or a Connection Permit from the WPCA.
- 2. The construction of new collection sewers and appurtenances to enable the connection of one or more buildings, usually as part of a proposed subdivision. This type of connection is referred to as an extension to the existing collection system and involves the construction of 8" or larger collection sewers, manholes, and possibly pumping stations and force main sewers. Persons requesting to perform this type of work must secure planning approval and a <u>Sewer Extension Permit</u> from the WPCA.

The procedure to obtain a <u>Connection Permit</u> is relatively straightforward. If the connection is for a single family home or a building which will generate wastewater flows less than 476 gpd (two equivalent dwelling units) the Applicant only needs to obtain and submit a Connection Permit with the required security documents and fees. However, if the connection will generate equal to or greater than 476 gpd, the

A. Connection Permits (Con't.)

Applicant must first submit a planning application and receive approval prior to submitting a Connection Permit application. At no time shall any work commence prior to the insuance of a Connection Permit.

A facility which is already connected to the WPCA sewer system and is proposing a building expansion which will result in increasing it's discharge to the system by more than 476 gpd must submit and obtain planning approval from the WPCA before any work may proceed.

By contrast, the procedure for obtaining a <u>Sewer Extension</u>

<u>Permit</u> may be more complicated. In most cases, a proposal to construct new sanitary sewerage facilities is part of a larger subdivision plan which must receive approvals from other regulatory agencies (in addition to the WPCA) before construction can begin. <u>The proposal must obtain Planning Approval from the WPCA prior to applying to any other Town agency</u>. The WPCA will determine the acceptability of the proposed sewerage facilities and the adequacy of the existing facilities to convey the project's proposed sewage.

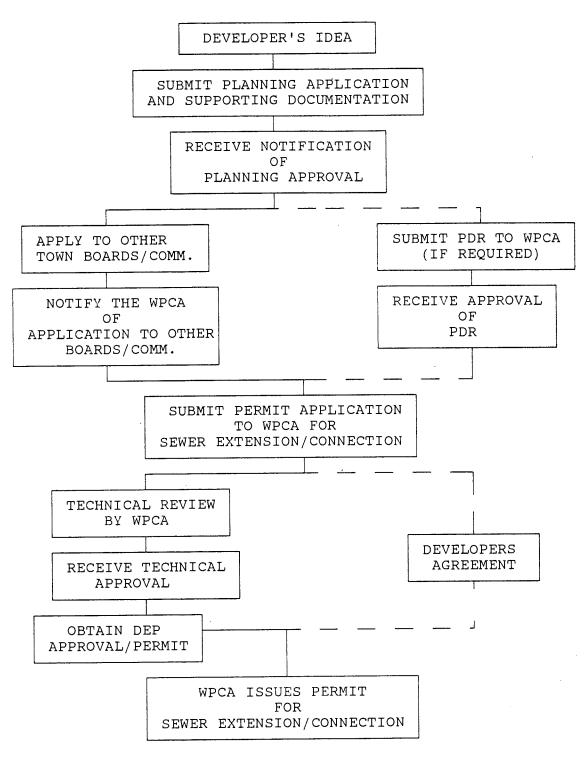
A. Connection Permits (Con't.)

Frequently, the review and approval process by other agencies results in changes to the original concept for the proposed development. These changes can be significant and often indirectly require substantive revisions to the design of the sewerage facilities.

By contrast, once the WPCA has granted planning approval, the revisions brought about by the Authority seldom necessitate large-scale changes to the overall concept of the proposed development. Consequently, the Applicant will obtain a Sewer Extension Permit only after approvals have been granted by the State of Connecticut DEP and all other required Town Boards/Commissions.

Typically a proposed project will follow the steps outlined in the WPCA Administrative Approval/Permit Process diagram on the next page. In addition, an Approval/Permit Process Log has been included on page I - 6 to assist the Applicant.

The Applicant is advised that the use of a <u>low pressure sewer</u> system which uses individual grinder pumps to service his or her project will not be allowed. However, individual grinder pumps which discharge to a <u>gravity</u> sewer will be considered on a case by case bases.



Process Required for all projects.
Also Required for projects with a pump station and/or Sewer Extension Permit.

TOWN OF SUFFIELD WATER POLLUTION CONTROL

APPROVAL/PERMIT PROCESS LOG

NAME OF PROJECT	PERMIT NO.	
OWNER NAME/ADDRESS:	TE	CLEPHONE NO.:
	Date	Date
Procedure	<u>Submitted</u>	Approved/Permit
Planning Application		
Notification of Application to Other Boards/Comm.		
Preliminary Design Report		·
Developer's Agreement		
DEP's Review		
Sewer Extension Permit		
Connection Permit		

B. Repair Permit

A repair permit is required for any repair work to existing sewerage facilities. Planning approval is not required prior to obtaining this type of permit since the nature of the work is to only repair existing facilities. There are two (2) classifications of repair permits:

- Repair to an existing service connection will require the owner to obtain a <u>Connection Repair Permit</u> prior to performing any work. Only a contractor that holds a valid Drain Layer's license may perform the work.
- 2. Any work to repair a sewerage facility constructed under a Sewer Extension Permit and still owned by the Developer will require a <u>Sewer Extension Repair Permit</u>.

Should circumstances be such that it is impossible to obtain a permit prior to performing an emergency repair, the owner/contractor shall make provisions to enable inspection of the completed work by the WPCA at its earliest convenience. The Applicant shall apply for a permit within 10 days after the WPCA has inspected said work.

PART II ADIMINSTRATIVE REQUIREMENTS PART III
TECHNICAL STANDARDS

PART III TECHNICAL SPECIFICATIONS

DIVISION I - GENERAL REQUIREMENTS

A. PLAN SHEETS

- Shall have a location map prepared at a scale 1" = 2000' (minimum) which identifies the project area, municipal boundaries and sewer district.
- 2. Shall have an overall plan of the entire development prepared at a minimum scale 1" = 200' indicating property lines with adjacent property owners, existing and proposed utilities (sanitary & storm sewers, water & gas mains, electric and telephone lines, etc.), roadways, watercourses, wetlands, floodplains and contour lines. The plan shall show the location, size and direction of flow of all existing and proposed sewers.
- Provide a legend, abbreviation table and construction notes.
- 4. A north arrow shall be placed on all plan sheets.
- 5. Identify both vertical and horizontal control points. Each plan sheet shall have a minimum of 2 bench marks based on the National Geodetic Vertical Datum (N.G.V.D.), 1927. The control points shall conform with the town's requirements.
- 6. The plan and profiles sheets of the proposed sewer shall be prepared at a scale of 1" = 4' vertical, and 1" = 40' horizontal. Profile sheets shall indicate all pertinent information including pipe material, class, size, slope; proposed and existing invert elevations; proposed and existing manhole numbers; stationing; existing and proposed grades; existing and proposed utilities (where crossing the sewer); areas of concrete encasement and sheeting; building laterals (minimum to right of way); etc.
- 7. Number all manholes in both the plan and profile views.
- 8. The town's existing manhole number(s) shall be used to identify existing manholes.
- 9. Pipe slopes shall be given and expressed as a decimal equivalent and calculated to four decimal places.

B. DETAIL SHEETS

- 1. Include all necessary details for construction of the proposed project.
- Details shall present a sufficient number of views at a suitable scale showing the dimensions.
- Individual equipment shall be called out by manufacturer's model number and, where applicable, dimensioned.

DIVISION II - SANITARY SEWER

A. PIPE

- 1. Gravity sewers shall be Polyvinyl Chloride (PVC),
 Ductile Iron Pipe (DIP), or Reinforced Concrete Pipe
 (RCP). Clay or tile pipe shall not be allowed.
- 2. PVC pipe shall be SDR-35 and shall comply with the requirements of ASTM D-3034 (latest revision) or ASTM F-679 (latest revision) as applicable.
- 3. DIP shall meet the requirements of ANSI/AWWA C150/A21.51-76 and shall be a minimum thickness of Class 52. DIP shall be cement lined in accordance with ANSI/AWWA C104/A21.4-80 and shall be bituminous coated. Fittings shall be bell conforming to requirements C110/A21.10-82 and shall be the same pressure classification as pipe.
- RCP shall meet the requirements of ASTM C-76, Class V, Wall B.
- 5. Pipe joints shall be of the push-on or mechanical type. Push-on joints shall be of the bell and spigot type utilizing O-ring gaskets.
- 6. No sewer shall be less than 8 inches in diameter.
- 7. Sewers shall be designed deep enough to prevent freezing. However at no time shall the sewer be less than 5.0' in depth measured from the top of the pipe to finished grade.
- 8. Sewers shall be laid with straight alignment between manholes. The maximum distance between manholes shall be 325'.
- 9. Where possible the sewer shall be laid at a slope greater than 1.0%. However, all sewers shall be designed and constructed to give mean velocities, when at ultimate peak design flow, of not less than 2.0 feet per second. However at no time shall they be constructed at less than the following slopes:

<u>Sewer Size</u>	<u>Minimum Slo</u>
8"	0.004
10 "	0.0028
12"	0.0022
15"	0.0015
18"	0.0012
21"	0.0010
24"	0.0008
27"	0.00067
30 "	0.00058
36"	0.00046

10. At location where different size sewers are connected to a manhole, the invert of the larger sewer shall be lowered sufficiently to maintain the same energy gradient. An approximate method of designing is to construct the 0.8 depth point of both sewers at the same elevation.

DIVISION II - SANITARY SEWER

A. PIPE

11. Minimum horizontal separation distances are as follows:

An 18" minimum vertical separation shall be required at sewer crossings with storm drains or water mains.

- 12. Sewers located along streams shall be located outside of the stream bed and sufficiently removed therefrom to provide for future possible stream widening.
- 13. All sewers crossing streams shall be encased in class A concrete. The top of the encasement shall be a minimum of 12" below the natural stream bottom. The concrete encasement shall be as shown in the Pipe Trench/Stream Crossing detail.
- 14. Metallic coated plastic underground pipe marking tape shall be installed 18" below finish grade over all sewer pipes. The tape shall be 3" wide with the words "Caution Buried Sewer Pipe Below" in 1" high letters repeated along the entire length.

B. BEDDING

- 1. Class 1 bedding shall be 1/2" angular stone meeting Section M.01.01, Conn. DOT, Form 814 shall be installed around the pipe as shown in the Trench Details.
- 2. Filter fabric shall be wrapped around the stone and the joint overlapped a minimum of 12". The fabric shall be non-woven polyethylene material as manufactured by Miafi, Amoco or equal. See Filter Fabric Trench Detail.
- 3. Class 2 bedding shall be coarse sand and gravel meeting Section M.03.01-2C, Conn. DOT, Form 814 above the pipe as shown in the Trench Detail.
- 4. Backfill material shall be random material meeting Section 2.07.02, or processed gravel meeting requirements M.02.06, gradation "A" of Conn. DOT, Form 814 specifications.

C. INSTALLATION

- Trenching shall comply with appropriate OSHA Regulations. The minimum trench width shall be 4 feet.
- 2. The foundation stone and sand cushion shall be compacted to at least 95% per ASTM I 1557.
- 3. The random backfill or processed gravel shall contain no stone greater than 5" in diameter. The soil shall be within 3% of it's optimum moisture content.
- 4. Backfill shall be compacted by ramming or manual vibrators; jetting or pudding will not be allowed. Compaction shall be to not less than 95% per ASTM I 1557.

DIVISION II - SANITARY SEWER

D. TESTING REQUIREMENTS

Equipment:

- 1. Pressurizing equipment used for low pressure air testing shall include a regulator or relief valve set no higher than ten (10) psig to avoid over-pressurizing and displacing temporary or permanent plugs. As an added safety precaution, the pressure in the test section should be continuously monitored to make certain that it does not, at any time, exceed ten (10) psig. (The Contractor shall note that it may be necessary to apply a higher pressure than ten (10) psig at the control panel to overcome pressure loss in the air supply hose.)
- 2. Low pressure air testing equipment shall meet the following minimum requirements:
 - a. Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe to be inspected.
 - b. Pneumatic plugs shall resist internal test pressures without requiring external bracing or blocking.
 - c. All air used shall pass through a single control panel.
 - d. Three (3) individual hoses shall be used for the following connections:
 - 1) From control panel to pneumatic plugs for inflation.
 - 2) From control panel to sealed line for introducing the low pressure air.
 - 3) From sealed line to control panel for continually monitoring the air pressure rise in the sealed line.

D. TESTING REQUIREMENTS

General Requirements

1. The maximum allowable rate of infiltration into or leakage out of (exfiltration) all gravity sewers including all building connection laterals and appurtenant structures, shall be at a rate of not greater than:

fifty (50)

gallons per inch of pipe diameter per mile of sewer pipe per twenty-four (24) hour period. If any inconsistency exists in these specifications regarding the maximum allowable infiltration/exfiltration rate, the rate stated in this paragraph shall govern.

- 2. The phrase "per mile of sewer pipe" shall be construed to mean the total length of all sewers including that distance measured through manholes and all building service laterals.
- 3. The testing methods shall be used as specified below and shall be made as soon as possible upon completion of all pipe placement including service laterals.

Low Pressure Air Test:

- 1. Seal Plugs Pre-Test:
 - a. All pneumatic plugs shall be seal tested before being used in the actual test installation. One length of (1) pipe shall be laid on the ground and sealed at both ends with the pneumatic plugs to be used in the testing.
 - b. Air shall be introduced into the test plugs to twenty-five (25) psig.
 - c. The sealed pipe shall be pressurized to ten (10) psig. The plugs shall hold against this pressure without bracing and without movement of the plugs out of the pipe.
- 2. Immediately prior to the performance of the Line Acceptance Test, the groundwater elevation shall be determined by removing the pipe cap, blowing air through the pipe nipple into the ground so as to clear the line, and then connecting a clear plastic tube to the nipple. The plastic tube shall

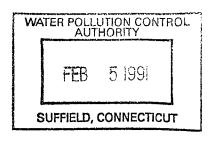
D. TESTING REQUIREMENTS

Low Pressure Air Testing

- 2. be of a length equal to the height of the manhole. The clear plastic tube shall be set vertically and a measurement of the height of water (in feet) over the invert of the pipe shall be taken. The measurement shall be taken only after the level of the water has stabilized in the plastic tube. Refer to Division III for requirements of installing capped pipe nipple.
- 3. After a manhole-to-manhole reach of pipe has been cleaned, the trench backfilled, and the pneumatic plugs are checked by the procedure specified in D., Low Pressure Air Test, 1. immediately above, the plugs shall be placed in the line at each manhole and inflated to twenty-five (25) psig. Bracing on the plugs shall be provided, as required, as a safety precaution.
- 4. Low pressure air shall be introduced into this sealed line until the internal air pressure in the section of pipe under test reaches four (4) psig minimum greater than the average back pressure of the groundwater that can be expected to occur over the pipe. At least two (2) minutes shall be allowed for the air pressure to stabilize.
- 5. Groundwater back pressure shall be determined by measuring the average height of the groundwater table (in feet) above the invert of the section of pipe being tested. The height (in feet) shall be divided by two point three (2.3) to determine the pounds of pressure (psi) that shall be added to all test pressures.
- 6. In no case shall the starting test pressure in the pipe exceed ten (10.0) psig. If the average vertical height of groundwater above the pipe invert is more than thirteen point eight (13.8') feet, the section of pipe so submerged shall be tested using ten (10.0) psig as the starting test pressure.
- 7. After the temperatures have been equalized and the pressure in the pipe section stabilized at four (4.0) psig (greater than the average groundwater back pressure), the air hose from the control panel to the air supply shall be shut off and disconnected.

D. TESTING REQUIREMENTS

Low Pressure Air Testing



- 8. The continuous monitoring pressure gauge shall then be observed while the pressure in the pipe section is decreased to no less than three point five (3.5) psig (greater than the average back pressure of any groundwater over the pipe). At a reading of three point five (3.5) psig, or any convenient observed pressure reading between three point five (3.5) psig and four (4.0) psig (greater than the average groundwater back pressure), timing shall commence with a stop watch or other acceptably accurate timing device.
- 9. If the time shown below for the designated pipe size and length elapses before the air pressure drops one (1.0) psig, then the section of pipe undergoing test shall be deemed to be "ACCEPTED" and shall be presumed to be free of defects. The test may be discontinued once the prescribed time has elapsed even though a one (1.0) psig drop has not occurred.

SPECIFICATION TIME REQUIRED FOR A ONE (1.00) PSIG PRESSURE DROP FOR SIZE OF PIPE INDICATED

PIPE DIA. (inches)	MIN. TEST DURATION (min:sec)	LENGTH FOR MIN. TIME (feet)	TIME FOR LONGER LENGTHS (sec)
6	5:40	398	0.854 x length
8	7:34	298	1.520 x length
10	9:26	239	2.374 x length
12	11:20	199	3.418 x length
15	14:10	159	5.342 x length
18	17:00	133	7.692 x length
21	19:50	114	10.470 x length

- 10. If a given section of pipe fails to meet the above test requirements, the Contractor shall, at his own expense, determine the source of leakage and then repair or replace all defective materials and/or workmanship or otherwise correct the deficiency. The extent and type of repair(s) which may be required shall be subject to the approval of the Town.
- 11. After the Contractor has located and repaired all sources of leakage, the Contractor shall again conduct the test specified above. The repair and retesting procedure shall continue until each and every section of the sewer line meets the minimum standards specified above.

D. TESTING REQUIREMENTS

Acceptance Requirements

- 1. Should one or more pipe sections under test fail to meet the requirements, the Contractor shall do all work of locating and repairing leaks and retesting the failed line(s), as the Town may require. Gushing or spurting leaks which are evident shall be repaired regardless of whether the leakage is within the specified limits. All repaired or replaced sections shall be retested in accordance with the requirements of this Section.
- 2. All testing shall be conducted in the presence of the Town's inspector. Any tests conducted in the absence of the Town's representative shall not be considered to be valid.

E. FLUSHING OF SEWERS

- 1. Upon the completion of construction of sewers and appurtenances but prior to testing, all pipe lines shall be thoroughly flushed out with water. Flushing shall be executed in such a manner that dirt or other material will not be discharged into the existing sanitary sewers. Pumps and a supply of clean water shall be provided for this purpose where required.
- 2. The Contractor shall take every precaution to prevent, in the course of his flushing operations, solids, mud, and/ or debris from entering existing or recently constructed sewerage facilities (especially wastewater pumping stations). The Contractor shall, upon completion of all flushing operations, completely clean all dirt, mud, solids, and/or other debris from the existing facilities and shall dispose of same in an approved manner.

F. GREASE, OIL, AND OTHER DISPOSAL CRITERIA

- 1. If a food service establishment is to be located in the proposed development, a grease trap interceptor is required.
- 2. With the use of floor drains connecting to sanitary sewers, an oil separator will be required. A detail which complies with WPCA Standards must be submitted.
- 3. The DEP may require that the discharge from an oil separator be permitted by the agency.
- 4. The applicant is required to notify the Hazardous Materials Unit of the DEP of the installation of an underground oil separator.

A. PRECAST MANHOLES

- 1. Manholes must be pre-cast concrete (5000 psi) with rubber boot and stainless steel clamp connections. Manholes shall be made waterproof by exterior shop application of 2 bituminous coats of Super Service Black as manufactured by Koopers Co. or equal. All manhole joints shall be parged with a non-shrink, water-proof grout on both the inside and outside. All lift holes shall be filled with non-shrink, water-proof grout.
- 2. Each manhole base, riser, transition section and top shall be constructed with bell-and-spigot or tongue-and-groove joints and manufactured by the centrifugal, roller suspension or vertical cast process.
- 3. Neoprene gaskets of the "O-ring" type conforming to ASTM C-443 (latest revision) shall be provided for all joints.
- 4. Manhole pipe connections shall be mechanical seals as manufactured by "Link-Seal" for pipes sizes less than six inches. For pipes sizes from 6" to 12", flexible rubber manhole sleeves shall be cast into the wall during manufacturing. For pipe sizes larger than 12", a prefabricated mechanical type joint seal meeting ASTM C-361 (latest revision) shall be provided which is cast into the wall during manufactured.
- 5. Brick shall conform to ASTM C-32, Grade SM (latest revision), size 2-1/2" thick by 3-3/4" by 8.
- 6. Cement shall conform to Portland Cement, ASTM C-150 latest revision), Type I for brick work and Type II for precast concrete.
- 7. Manholes shall be equipped with polypropylene steps 12" on center to permit access to the structure. The top step shall be installed not more than 18" from the frame and cover.
- 8. Manholes shall be constructed with 30" diameter openings. All frames and covers shall meet requirements of ASTM A-48, Class 30 and be compatible with the town's frames and covers. The cover shall have the words "Sanitary Sewer stamped on it. Frames and covers shall be manufactured by Campbell Foundry Co. with the following pattern numbers or an approved equal:

DIVISION III - SANITARY MANHOLES A. PRECAST MANHOLES

8.

Application_

Pattern No.

Paved Areas 1107 Unpaved Areas 1460B (locking) Areas of flooding or surcharge 1539B (watertight)

For further information, see the section on manhole details.

- 9. A drop manhole is required where there is 24" or more between the invert elevation of the incoming sewer and the manhole invert. When manhole drops are proposed, the Applicant shall submit a separate detail showing all appurtenances. Inside drops shall not be allowed. Where the elevation difference is less than 24", the invert shall be filleted to prevent solids from depositing.
- 10. Manholes shall have a 4' minimum inside diameter and a 5" wall thickness.

B. INSTALLATION

- A 12" maximum <u>brick</u> leveling coarse shall be allowed to raise the frame and cover to finish grade. Precast concrete riser rings shall not be used.
- 2. Manhole shelves and channel inverts shall be constructed of brick. The shelf shall slope to the invert at 1"/ft. The depth of the invert channel shall equal the diameter of the largest pipe and the cross-section shaped to conform with sewers; changes in size shall be made gradually and evenly.
- 3. A 1/2" capped pipe nipple shall be cast 6" above the crown of the sewer entering the manhole and extend 10" beyond the outside wall.
- 4. Manholes shall be placed on a 12" minimum 1/2" foundation stone conforming to Section M.01.01, Conn DOT, Form 814 compacted to at least 95%.
- 5. Filter fabric shall be wrapped around the foundation stone with a 12" minium of overlap at the joint.

A. LATERALS

- 1. Laterals shall be identified on the plan to show location, length, slope, pipe material and invert. Laterals shall be extend beyond the roadway but at a minimum to the street right of way.
- 2. All laterals shall be capped until service is required. The location of the end of each building lateral shall be identified with a house connection maker in accordance with the detail.
- 3. No lateral shall serve more than one single family residence
- 4. Laterals shall generally be laid at right angles to the sanitary sewer main, from wye branches on the sewer by means of 45-degree wyes and 45-degree bends. No 90-degree bends shall be used.
- 5. Laterals shall be connected to the sanitary sewer with the use of wyes or tees. Sidewall tapping to an existing sewer will only be considered on a case-by-case basis.

6. Laterals shall not be connected directly to a manhole:

- 7. All laterals greater than 100' or in locations where direction changes occur shall be provided with an exterior cleanout to grade as per detail. Cleanouts shall be equipped with water-proof, vandal-proof locking caps.
- 8. Laterals shall be PVC, ASTM D-3040, SDR 35, 6" diameter pipe with a minimum slope of 2% (1/4" per foot). Vitified clay lines will not be allowed. Where existing vitrified clay pipe is encountered, the pipe shall be upgraded to a material acceptable to the WPCA.
- 9. Building drains shall be Heavy Duty cast iron or ductile iron pipe and shall extend to five feet outside of the foundation walls. Per Building Inspector PVC C
- 10. 4" x 6" rubber reducing donuts and Fernco-type banded couplings shall be used in conjunction with the transition from 4" diameter building drain to 6" diameter service laterals.

DIVISION IV - BUILDING LATERALS

A. LATERALS

- 11. In areas where laterals may be too deep, chimneys shall be installed to lessen the severity of the slope from the building to the main line.
- 12. Laterals shall be located as far from wells, springs and water suction pipes as possible. Laterals shall not be located within 10' of water lines and 75' of wells/water supplies or within 18" vertically of a water main.
- 13. The Applicant shall comply with all requirements of the State of Connecticut Health Code.
- 14. Laterals install under paved travelways (including parking areas and driveways) shall have a minimum cover of 5 feet, unless technically not feasible in which case the Applicant shall consult with the WPCA for specific direction as to how to proceed.
- 15. Metallic coated plastic under ground pipe marking tape shall be installed 18" below finish grade over all sewer pipes. The tape shall be 3" wide with the words "Caution Buried Sewer Pipe Below" in 1" high letters repeated along the entire length.

B. BEDDING

- 1. Class 1 bedding shall be 1/2" angular stone meeting Section M.O1.O1, Conn. DOT, Form 814 shall be installed around the pipe as shown in the Trench Details.
- 2. Filter fabric shall be wrapped around the stone and the joint overlapped a minimum of 12". The fabric shall be non-woven polyethylene material as manufactured by Miafi, Amoco or equal (see Filter Fabric Trench Detail).
- 3. Class 2 bedding shall be coarse sand and gravel meeting Section M.03.01-2C, Conn. DOT, Form 814 above the pipe as shown in the Trench Detail.
- 4. Backfill material shall be random material meeting Section 2.07.02, or processed gravel meeting requirements M.02.06, gradation "A" of Conn. DOT, Form 814 specifications.

DIVISION IV - BUILDING LATERALS

C. INSTALLATION

- Trenching shall comply with appropriate OSHA regulations. The minimum trench width shall be 4 feet.
- 2. The foundation stone and sand cushion shall be compacted to at least 95% per ASTM I 1557.
- 3. The random backfill or processed gravel shall contain no stone greater than 5" in diameter. The soil shall be within 3% of its optimum moisture content.
- 4. Backfill shall be compacted by ramming or manual vibrators: jetting or pudding will not allowed. Compaction shall be to not less than 95% per ASTM I 1557.

E. TESTING REQUIREMENTS

Refer to the pipe testing section, Division II,D. for requirements.

F. EMERGENCY REPAIRS TO EXISTING LATERALS

- All repairs to service laterals shall require a Connection Repair Permit Connection prior to the work being performed. Persons performing any repair work must verify that, excluding the required repair work, the remainder of the lateral is in satisfactory condition.
- 2. All other requirements of Division IV shall apply to repairs of existing laterals.

Should circumstances be such that it is impossible to obtain a permit prior to performing the work, the contractor shall make provisions to enable inspection of the completed work by the WPCA and shall apply for a permit within 10 days after the WPCA has inspected said work.

DIVISION V. FORCE MAIN

A. PIPE

- 1. Force main pipe shall be either PVC pipe or DIP.
 - a. PVC pipe shall meet the requirements of AWWA C-900 for Class 200 pipe, SDR-14. Fittings shall be mechanical joints Class 53 DIP (working pressure 350 psi) conforming to AWWA C-110/ ANSI A21.10 (latest revision).
 - b. DIP shall meet the requirements of ANSI/AWWA C151/A21.51 for Class 53 pipe.
- 2. Whenever possible, force mains shall be laid at a uniform slope towards the wastewater pumping station. Every effort shall be made to avoid sudden changes in the alignment (either vertically or horizontally) of the main.
- 3. At design average flow, a velocity of at least 3.5 fps shall be maintained.
- 4. An automatic air relief valve shall be constructed at high points in the force main to prevent air locking.
- 5. A clean out manhole shall be installed at low points in the force main to prevent solid deposition.
- 6. A termination manhole shall be constructed at the end of the force main. The force main shall be no more than 24" above the invert channel.
- 7. The force main and fittings (including thrust blocks) shall be designed to with stand normal pressure and pressure surges
- 8. Metallic coated plastic underground pipe marking tape shall be installed 18" below finish grade over all sewer pipes. The tape shall be 3" wide with the words "Caution Buried Sewer Pipe Below" in 1" high letters repeated along the entire length.
- 9. There shall be at least a 10' horizontal separation between water mains and force mains. In addition, there shall be a minimum vertical separation of 18" between the outside of the force main and the outside of the water main.

B. THRUST BLOCKS

1. Where significant changes in direction occur and at all bends, thrust blocks shall be installed to adequately brace the pipe and avoid shifting. Thrust blocks shall be concrete and shall be properly sized to withstand the thrust that will occur at the bend.

DIVISION V. FORCE MAIN

B. THRUST BLOCKS

- 2. Horizontal thrust blocks shall be installed between the pipe wall and the undisturbed wall of the trench. In no case shall the thrust block be installed against previously disturbed earth.
- 3. Vertical thrust blocks shall be installed as follows:

At the top and base of vertical bends, the thrust block shall be installed between the pipe and the undisturbed trench bottom. Steel straps shall be installed around the pipe and embedded into the concrete thrust block to physically anchor the pipe to the thrust block.

C. BEDDING

- Class 1 bedding shall be 1/2" angular stone meeting Section M.01.01, Conn. DOT, Form 814. Bedding shall be installed around the pipe as shown in the Trench Details.
- 2. Filter fabric shall be wrapped around the stone and the joint overlapped a minimum of 12". The fabric shall be non-woven polyethylene material as manufactured by Miafi, Amoco or equal. See Filter Fabric Trench Detail.
- 3. Class 2 bedding shall be coarse sand and gravel meeting Section M.03.01-2C, Conn. DOT, Form 814 above the pipe as shown in the Trench Detail.
- 4. Backfill material shall be random material meeting Section 2.07.02, or processed gravel meeting requirements M.02.06, gradation "A" of Conn. DOT, Form 814 specifications.

D. INSTALLATION

- 1. Trenching shall comply with appropriate OSHA Regulations. The minimum trench width shall be 4 feet.
- 2. The foundation stone and sand cushion shall be compacted to at least 95% per ASTM I 1557.
- 3. The random backfill or processed gravel shall contain no stone greater than 5" in diameter. The soil shall be within 3% of it's optimum moisture content.
- 4. Backfill shall be compacted by ramming or manual vibrators; jetting or pudding will not allowed. Compaction shall be to not less than 95% per ASTM I 1557.

E. TESTING REQUIREMENTS

- 1. All force mains shall be subjected to a hydrostatic test to verify the integrity of pipes and joints.
- 2. As part of the test, the pipe shall be filled with clean water and all air removed. If necessary, an air bleed-off valve shall be installed at the high point of the pipe to remove trapped air.
- 3. When the pipe has been completely filled and each end properly sealed and braced, the pressure in the pipe shall be increased to 200% of the actual operating pressure of the force main system.
- 4. When this pressure is achieved, the pressurizing pump shall be completely disconnected and the system shall be allowed to stand undisturbed for 2 hours. During this time, the pressure in the force main shall be monitored. At the end of the test period, the residual pressure in the force main shall be noted. Additional water shall then be introduced into the force main to re-pressurize the pipe to the original test pressure and the volume added shall be recorded.
- 5. The force main shall be deemed to have passed the test provided:
 - a. The pressure drop that occurred during the test period does not exceed 5% of the test pressure; and
 - b. The additional water added to re-pressurize the pipeline does not exceed the following:

Nominal	5.0	essure in psi	-		
Pipe	50	100	150	200	250
Size	Allowable	Leakage Per	1,000 Ft. or 5	<u>50 Joints</u>	(Gal./Hr.)
4" 6" 8"	0.19 0.29 0.38 0.48	0.27 0.41 0.54 0.68	0.33 0.50 0.66	0.38 0.57 0.76 0.96	0.43 0.64 0.85 1.07
12"	0.57	0.81	0.99	1.15	1.28

6. All testing shall be conducted in the presence of the Town's inspector. Any tests conducted in the absence of the Town's representative shall not be considered to be valid.

A. GENERAL REQUIREMENTS

- 1. Three copies of the Preliminary Design Report shall be submitted to the WPCA for review and approval prior to submitting the permit application.
- 2. Sewage pump stations must be situated at least 150' from any existing or proposed occupied structure.
- 3. Accessways, entrances, hatchways, superstructure floor slabs, and all equipment including control panels, emergency generators, etc. must be constructed at least 1' above the 100 year flood elevation at the site.
- 4. The property of the pump station shall be deeded to the town.
- 5. Landscaping and other means shall be used to provide a buffer between the pumping station and other structures and to shield the station from public view.
 - a. Site shall be graded and landscaped so as to be aesthetically pleasing.
 - b. Existing vegetation supplemented by new planting shall be used as screening.
- 6. A 6' high chain link fence shall be installed around the perimeter of the pumping station site to prevent access by the general public.
 - a. The fence shall be equipped with a 12' wide (minimum) gate to enable access by maintenance vehicles. The gate shall be of the sliding type mounted on rollers to facilitate opening during winter months.
 - b. The fence and all components shall be fabricated of galvanized steel or aluminum.
- 7. Access to the station and the fenced area shall be paved to allow vehicle entry.
- 8. Lighting shall be provided to illuminate the site at night.
- 9. Pump station facilities shall include pumping chamber(s), meter & valve chamber and emergency generator.
- 10. At least 2 pumps shall be provided. Each pump shall be capable of handling flows in excess of the expected 20 year maximum flow.

A. GENERAL REQUIREMENTS

- 11. Pumps shall be capable of passing a 3" sphere without clogging or otherwise damaging the pump.
- 12. All exterior surfaces of the pumping station shall be waterproofed, including the underside of the precast base sections. The waterproofing system shall be a field applied, continuous, seamless waterproof membrane system which employs the mineral bentonite encapsulated in a tight matrix.
- 13. The pump chamber shall be equipped with an aluminum access hatch as manufactured by the Bilco Door Company or equal. The hatch shall be of sufficient size to permit access to the chamber and removal of all equipment contained therein. All hardware for the hatch shall be stainless steel. The hatch shall be provided with a locking mechanism that is compatible with the WPCA's master key system.
- 14. A control building may be required by the WPCA that conforms with the surrounding neighborhood.
- 15. A space heater shall be installed in the dry well or control building (if required).
- 16. A fire alarm system conforming to the Town requirements and a fire extinguisher will be required in the control building.
- 17. Explosion-proof, flood-proof lights shall be installed in the dry well, wet well, pump chamber and valve/meter chamber(s).
- 18. Interior surfaces of precast concrete structures shall be rubbed completely smooth at the factory. At least one factory coat of epoxy primer and two finish coats shall be applied to the interior of valve/meter chamber and dry well.
- 19. A supply of sufficient quantity of all factory applied coating shall be provided to the WPCA for touch ups and imperfections.
- 20. A sufficient number of Duplex grounding GFI type utility receptacles for 120 V, 1-phase, 60Hz power shall be installed in the control building(if required), valve/meter chamber(s) and dry well. They shall be located to provide for maximum accessibility to the pump station site.

A. GENERAL REQUIREMENTS

- 21. Water service with a non-freeze, post type yard hydrant with 1-inch National Pipe Straight Hose discharge shall be provided at the pump station site.
- B. WET WELL/DRY WELL TYPE STATIONS

General

- 1. The wet well and dry well structures shall be fabricated out of class A reinforced concrete or fiberglass.
- 2. Preference shall be given to factory-built pumping station structures.
- 3. The wet well and dry well shall be installed on a reinforced concrete slab (min 8"thick) to prevent differential settlement between units. Both sections shall be bolted to the base slab by means of stainless steel anchor bolts.
- 4. Joints between sections of the wet well and dry well shall be waterproofed to prevent leakage of water into either structure.
- 5. The walls at the bottom of the wet well shall slope towards the center of the wet well for improved solids handling. The minimum allowable sidewall slope shall be 1:1.
- 6. For larger stations, wet wells shall be compartmentalized using sluice gates to enable portions of the wet well to be taken out of service for routine maintenance.
- 7. Sleeves shall be cast for all wall penetrations (i.e., influent sewer, suction piping, etc.) and the space between the pipe and sleeve shall be sealed using a Link-Seal device manufactured by Thunderline Corp. or approved equal.
- 8. Explosion-proof, flood-proof lights shall be installed in the wet well. Operating switches shall be installed at the entrance to the wet well. Lights shall be wired to enable them to automatically turn on when the entrance to the wet well is open.

B. WET WELL/DRY WELL TYPE STATIONS

General

- 9. Aluminum grating shall be installed at the bottom of the wet well to provide a deck surface for operators to stand on while performing maintenance the station. The grating shall be treated with a "hard coat" anodized finish for corrosion resistance.
- 10. Depending upon station configuration, a stairway, access ladder, or steps shall be installed in the wet well to permit access to all levels of the structure. All access stairs shall be designed in accordance with OSHA standards.
- 11. Pump curves shall be provided for the specific pumps to be used. The curves shall plot head (in feet of $\rm H_2O$) along the ordinate and flow (in gallons per minute) along the abscissa. The design operating point of the pumps shall be clearly indicated. The curves shall show:
 - a) flow rate vs. operating head
 - b) efficiency
 - c) brake horsepower

Wet Well - Bar Racks

- 1. A bar rack with drain plate shall be installed at the inlet to the wet well to screen gross solids from the wastewater entering the station.
- 2. The spacing between bars shall range from 1" to 2-1/2".
- 3. A rake shall be provided with teeth matching the spacing between bars and shall be suitably hung within the wet well.

Wet Well - Comminuters

1. The need for comminution shall be determined by the WPCA and shall be based upon the volume and nature of the wastewater received at the station.

B. WET WELL/DRY WELL TYPE STATIONS

Wet Well - Comminuters

- 2. A minimum of 2 units shall be provided at each station. Each unit shall be capable of handling the design flow at the station and shall be installed in a separate channel to permit removal for maintenance purposes. Flow channels shall be designed to account for the head loss caused by the comminuters to prevent surcharging of upstream sewers.
- 3. A separate channel with a bar rack shall be installed to enable the continuous screening of flow during periods when the comminuters are taken out of service. Each flow channel shall be equipped with hand operated slide gates located upstream of the comminuter/bar rack to permit the diversion of flow to any channel.
- 4. Comminuters shall be powered by hydraulic motors located in the dry well structure to prevent damage caused by flooding.
- 5. Separate disconnect switches for each comminuter unit shall be installed within the wet well. Switches shall be explosion-proof and shall be mounted in a NEMA 4X rated enclosure.

Wet Well - Suction Piping

- 1. Separate suction pipes shall be installed for each wastewater pump provided.
- 2. Suction piping between wet well and dry well structures shall be Ductile Iron Pipe (DIP) with flanged fittings. Pipe shall be a minimum of 4" in diameter.
- 3. Suction pipes shall be designed to maintain a velocity of between 3 to 5 fps in the pipe.
- 4. Flared suction elbows shall be installed at the inlet to the suction pipe. The bottom of the flared elbow shall be a minimum of d/3 and a maximum of d/2 (where d = pipe diameter) above the bottom of the wet well.
- 5. Mechanical joint or Dresser-type couplings shall be installed on each suction pipe between the wet well and the dry well structures to allow for vibrations and/or differential settlement.

B. WET WELL/DRY WELL TYPE STATIONS

Wet Well - Ventilation

- 1. Separate intake and exhaust vents shall be provided for ventilation of the wet well.
- 2. Internal ventilation piping shall be fabricated out of PVC piping.
- 3. External vents shall be a minimum of 4" in diameter and shall be fabricated out of DIP with flanged joints
- 4. The above ground portion of the vents shall terminate with a 180-degree bend formed by two 90-degree bends bolted together.
 - a. An insect screen fabricated out of stainless steel mesh with not less than 100 openings per inch shall be mounted vertically between the faces of the two 90-degree bends.
 - b. The vent pipes shall be factory coated inside and out with an epoxy paint compound to prohibit rust.
- 5. An exhaust fan shall be installed on the exhaust vent capable of providing a complete air change every 2 minutes. The fan shall have a Hand/Off/Automatic (HOA) switch located at the entrance to the wet well to permit the automatic operation of the unit when the entrance hatch is opened.

Dry Well - Wastewater Pumps

- 1. Wastewater pumps shall be of the non-clog, vertical centrifugal type. Pumps shall be capable of passing a 3" sphere without clogging or otherwise damaging the pump. The pump's volute type casing shall be one piece with integral suction and discharge flanges. The casing shall be designed to permit removal of the impeller, shaft, stuffing box and flanges, seals, bearing housing, and all related equipment without the nee to disconnect the suction or discharge pipes.
- 2. Pressure gauges shall be installed on the suction and discharge port of each pump. Gauges shall be of the liquid filled, Bourdon-tube type with diaphragm type chemical seals. Pressure shall be transmitted through a corrosion resistant diaphragm in a stainless steel capsular housing. Gauge faces shall be 4-1/2" in

B. WET WELL/DRY WELL TYPE STATION

Dry Well - Wastewater Pumps

- diameter and shall be liquid filled. Gauge case and bezel shall be stainless steel. Gauge accuracy shall be guaranteed to 1% accuracy over the full range of reading. Holes shall be drilled and tapped on the horizontal face of the pump ports to prevent clogging by grease or other floatables Each tap shall be fitted with a 3/4" brass nipple, brass tee, and two plug valves with nipples for connection to the gauge and drain line, Gauge on the discharge side shall read in feet of water to a minimum of 10' greater than the pump shut-off head. Gauges on the suction side shall read from 20' of water of vacuum to 40' of water of positive pressure. Gauge faces shall indicate that they are calibrated in feet of water.
- 3. Pumps shall be mounted on six-inch minimum concrete pedestals to provide protection during flooding.
- 4. Each pump shall be provided with a non-resettable, 6-digit totalizer indication pump running hours. The totalizer shall report elapsed pump running time to the nearest one-tenth of an hour. Totalizers shall be mounted in the control panel.

Dry Well - Pumps Motors

- Motors shall be constructed to operate with 3-phase, 60 HZ, 230/460-volt power supply unless the voltage available in the field requires otherwise.
- 2. Motor starting current shall not exceed 600% of the motor full load current. Motors shall be high efficiency type with a minimum nominal full load efficiency of 93.60% and a minimum guaranteed full load efficiency of 92.40% in compliance with NEMA specification MG 1-12.53b for high efficiency motors.
- 3. Motor ratings shall be based upon a maximum 40°C temperature rise above an ambient temperature of 40°C when operating under full load conditions.
- 4. Selection of the motor bearing sizes required shall be on the basis of a minimum 20-year average life or a B-10 life of 100,000 hours. Motors shall be designed with thrust bearings on top to allow inspection and/or replacement without requiring disassembly of the motor.

B. WET WELL/DRY WELL TYPE STATIONS

Dry Well - Pumps Motors

- 5. Motors shall be commercially balanced.
- 6. Motor nameplates shall be stainless steel and shall be securely fastened to the motor frame with pins of like material. The nameplate shall contain, as a minimum, the following information:
 - a) rated horsepower
 - b) full load speed
 - c) frequency
 - d) NEMA kVa code and design letter
 - e) rated voltage
 - f) manufacturer's serial number
 - g) service factor
 - h) insulation class
 - i) maximum ambient temperature
 - j) maximum temperature rise
 - k) full load current at nameplate voltage
 - 1) frame size designation
- 7. Main motor leads shall have EPDM or equal type jackets and shall be permanently tagged for identification. The relationship between the lead markings and the direction of the rotation shall be indicated on a separate motor nameplate.
- 8. A lifting eye shall be welded or otherwise attached to the top of the motor housing to permit lifting and removal of the pump and motor assembly.

Dry Well - Dehumidifier

1. A dehumidifier unit shall be installed in the dry well to remove moisture from the station. The unit shall be of the hermetically sealed, freon refrigerant type. The unit shall be controlled with an adjustable humidistat with a setting range from 0-100% with an adjustable low air temperature cutout. Condensate shall be piped to the floor sump.

Dry Well - Sump Pumps

1. The dry well shall be equipped with duplex, non-clog, submersible type pumps capable of passing 1" spheres. Pumps shall have a minimum capacity of 30 gpm under installed operating conditions. Pump motors shall be

B. WET WELL/DRY WELL TYPE STATIONS

Dry Well - Sump Pumps

- oil filled and lubricated and shall operate on 120V, single phase, 60 Hz power. Pumps shall be equipped with shaft seals to exclude water from the motor housing.
- 2. The pumps shall be controlled by mercury float switches mounted to the wall of the station. A separate switch shall be provided for each of the following operating points:
 - 1) high water alarm
 - 2) lag pump on
 - 3) lead pump on
 - 4) all pumps off
- 3. The level control system shall be provided with an HOA switch that will allow the selection of pump utilization. In the automatic mode, an alternator relay shall first energize one pump at the start of a pump cycle and, at the start of the next cycle, energize the second pump. Alternation shall occur only at the end of a pumping cycle.
- 4. A gate valve and two check valves shall be installed on the discharge from each sump pump. The check valves shall be separated by a minimum of 5' straight pipe. Piping shall have union connections to facilitate disassembly.

Dry Well - Control Panel

- 1. A control panel shall be installed within the dry well to house all electrical control components for the station.
- 2. The panel shall be of the NEMA Type 4X, dead front type.
- 3. A separate, removable back panel shall be mounted within the panel enclosure on which shall be mounted all motor starters, breakers, relays, timers, wiring raceways and other control components.
- 4. HOA switches, running lights, alarm indicating lights and the like shall penetrate the front of the panel enclosure and shall be clearly labeled.

B. WET WELL/DRY WELL TYPE STATIONS

Dry Well - Lifting Hoist

- 1. The dry well shall be equipped with a lifting hoist capable of removing all equipment contained in the station.
- 2. Suitable openings shall be provided between decks to permit the removal of all equipment from the station. Slide rail(s) with lifting eyes shall be mounted on the ceiling as necessary to facilitate removal of large equipment items.

C. SUBMERSIBLE TYPE STATIONS

General

- The structural components of the submersible station shall consist of a pump chamber, valve chamber, and a meter chamber.
- 2. Chambers can be fabricated from either reinforced concrete or fiberglass. Preference shall be given to factory-built pumping station structures.
- 3. The valve chamber can be enlarged to house the flow meter if sufficient space is provided to meet all installation requirements of the flow meter.
- 4. Joints between sections of the chambers shall be sealed and the exterior of each chamber shall be waterproofed to prevent moisture from entering the chambers.
- 5. Design plans and specifications shall be prepared showing <u>ALL</u> components of the proposed pumping station.
- 6. A sufficient number of views shall be presented at a suitable scale showing the dimensions and all components of each chamber to permit a comprehensive review by the WPCA.
- 7. Individual equipment items shall be called out by manufacturer's model number and, where applicable, dimensions.
- 8. Details shall be provided for all components of the station.

C. SUBMERSIBLE TYPE STATIONS

General

- 9. Pump curves shall be provided for the specific pumps to be used. The curves shall plot head (in feet of $\rm H_2O$) along the ordinate and flow (in gallons per minute) along the abscissa. The design operating point of the pumps shall be clearly indicated. The curves shall show:
 - a) flow rate vs. operating head
 - b) efficiency
 - c) brake horsepower
- 10. The WPCA may require either a comminuter and/or automatic bar rack to be installed upstream of the pumping chamber in order to insure the proper operation of the station.

Pump Chamber

1. The pump chamber can be either rectangular or circular in cross section. If a circular chamber is used, the minimum diameter shall be 6'-0".

Wastewater Pumps

- 1. A minimum of two wastewater pumps shall be furnished. Each pump shall be capable of handling the 20-year, wet weather design flow for the station.
- 2. Pumps shall be of the submersible, non-clog type capable of passing a 3" sphere.
- 3. Pumps shall be identical in all respects, supplied by the same manufacturer, and shall be completely interchangeable.
- 4. Pump suction and discharge ports shall be a minimum of 4" in diameter.
- 5. Pumps shall be provided with a disconnect at the discharge port to permit the entire pump/motor assembly to be removed from the pump chamber via the pump slide rail assembly without the need to unbolt the pump from the discharge pipe.

C. SUBMERSIBLE TYPE STATIONS

Pump Motors

- 1. The pump motors shall be integral to the pump and designed for submersible operation. The motor shall be squirrel cage induction type with Class F insulation, NEMA B design, with a minimum service factor of 1.25. The motor shall be filled with dielectric transformer oil containing no PCBs and positively cooled incorporating a circulating oil pump attached to the shaft within the stator housing. The circulating oil pump shall discharge cooling oil through a closed labyrinth heat exchanger to transfer motor heat to the pumped fluid. All castings shall be machine fit utilizing metal-to-metal contact. All machine fits shall be additionally protected with Buna-N O-rings.
- 2. The motor stator shall be capable of withstanding a heat rise to 155°C as defined in NEMA standard MG-1. The motor rotor shall be constructed of laminated steel plates with poured aluminum shorting bars. The rotor shall be both statically and dynamically balanced. The NEMA starting code shall be G or less.
- 3. Protection against excessive temperature shall be by heat sensor thermostats attached to the stator windings and wired to control and alarm contacts within the control panel.
- 4. Motor power and control cables shall terminate at corrosion resistant NEMA 7 junction boxes located in the wetwell access hatchway. Cable terminations shall be provided with compression seals and strain relief.

Pump Slide Rail Assembly

1. Each pump shall be equipped with a pump slide rail assembly provided by the pump manufacturer. The slide rail assembly shall be fabricated from Type 304 stainless steel and shall consist of upper guide rail brackets and pump guide rail. The stationary and movable parts of the discharge coupling assemblies shall be cast iron. The upper guide rail brackets shall be affixed to the wet well roof or hatch and shall be positioned over the upper end of the stainless steel guide rails while the discharge base elbow positions the lower end of the guide rails.

C. SUBMERSIBLE TYPE STATIONS

Pump Slide Rail Assembly

- 2. Each stainless steel rail shall support the pump at a distance of approximately four inches from the bottom of the pump chamber to provide unrestricted flow of material into the pump. Each cast iron movable fitting, when in position, shall be held against the stationary fitting by the construction of the stainless steel rail, aligning the movable fitting to the base elbow for proper sealing of the two surfaces under pressure.
- 3. Each pump shall be equipped with a stainless steel lifting cable for pump installation and removal. The minimum breaking strength of the cable shall be 2,100 pounds.
- 4. Intermediate supports shall be provided for the discharge piping and for the pump slide rail brackets. Supports shall be fabricated of Type 304 stainless steel with Type 316 stainless steel anchor bolts.
- 5. All fastening hardware, including anchor bolts, shall be Type 316 stainless steel.

Access Hatch

1. The pump chamber shall be equipped with an aluminum access hatch as manufactured by the Bilco Door Company or equal. The hatch shall be of sufficient size to permit access to the chamber and removal of all equipment contained therein. All hardware for the hatch shall be stainless steel. The hatch shall be provided with a locking mechanism that is compatible with the WPCA's master key system.

Ventilation

- An exhaust vent shall be provided for ventilation of the pump chamber. The vent shall be a minimum of 4" in diameter and shall be fabricated out of Ductile Iron Pipe with flanged joints.
- 2. The vent shall terminate with a 180° bend formed by two 90° bends bolted together. An insect screen fabricated out of stainless steel mesh with not less than 100 openings/in² shall be mounted vertically between the faces of the two 90° bends.

C. SUBMERSIBLE TYPE STATIONS

Ventilation

3. The vent pipes shall be factory-coated inside and out with an epoxy paint compound to prohibit rust.

Control Panel

- 1. All electrical components for the station shall be mounted in an above-ground, weatherproof, vandal-proof, electrical control cabinet. The panel shall be factory built by a manufacturer regularly engaged in the fabrication of electrical control cabinetry.
- 2. The panel shall be equipped with a set of locking outer doors to prevent unauthorized access to the panel.
- 3. The electric meter for the station shall be mounted to the exterior of the control panel to permit reading by utility company employees without the need to open the panel.

Valve Chamber

- A separate reinforced concrete structure shall be provided to house process control valves and pressure gauges. The chamber shall be of adequate size to permit easy access to the valves and to provide sufficient space for routine maintenance and/or removal.
- 2. The bottom of the valve chamber shall be sloped to a 1'x 1'x 6" floor sump located at one end of the chamber. A 3" drain shall be installed in the sump to convey liquid to the pump chamber.
- 3. Wall penetrations for process piping and the floor drain shall be sealed using a Link-Seal or equal device.
- 4. Pressure gauges shall be installed on each discharge pipe within the valve chamber between the pump and the shut-off valve.
- 5. The valve chamber structure shall be adequately designed to prevent flotation of the unit.

C. SUBMERSIBLE TYPE STATIONS

Meter Chamber

- A separate reinforced concrete structure shall be provided to house the flow meter. The chamber shall be of adequate size to permit easy access to the meter and to provide sufficient space for routine maintenance and/or removal.
- 2. The bottom of the meter chamber shall be sloped to a 1'x 1'x 6" floor sump located at one end of the chamber. A 3" drain shall be installed in the sump to convey liquid to the pump chamber.
- 3. Wall penetrations for process piping and the floor drain shall be sealed using a Link-Seal or equal device.
- 4. The meter chamber structure shall be adequately designed to prevent flotation of the unit.

D. CONTROL SYSTEM - ALL STATIONS

Operation

- Normal operation of the wastewater pumps shall be controlled automatically by an air operated bubbler-type control system or mercury float switches. The system shall be capable of monitoring the liquid level in the pump chamber and operating each of the wastewater pumps.
- 2. The bubbler system shall consist of two air compressors, a two-gallon pressure storage tank, a pressure regulator, PVC bubbler piping, and a pressure switch for each pump.
- 3. The bubbler control system shall be designed to accomplish the following:
 - a. continuously monitor the wet well liquid level;
 - b. start and stop the wastewater pumps at preset levels;
 - c. select the operation of one or both pumps;
 - d. select the sequence of pump operation upon manual command or automatic alternation;
 - e. provide alarm indications upon occurrence of pre-established malfunctions;
 - f. upon restoration of primary power after a power outage, delay the operation of the lag pump by a preset length of time; and
 - g. shut down one or both pump motors when the motor temperature reaches a pre-established level.

D. CONTROL SYSTEM - ALL STATIONS

Operation

- 4. Under the automatic mode of operation, the liquid level controller shall continuously monitor the liquid level in the pump chamber and indicate the level on an easily readable display.
- 5. At a manually preset level, the system shall automatically energize the lead pump motor when the liquid level in the pump chamber rises to the level set for "LEAD PUMP START LEVEL". When the liquid level falls to the preselected level "LEAD PUMP STOP LEVEL", the level controller shall de-energize the lead pump motor.
- 6. At a second manually preset level, the system shall automatically start the lag pump motor when the liquid level in the pump chamber continues to rise to the level set for "LAG PUMP START LEVEL". When the liquid level falls to the preselected level "LAG PUMP STOP LEVEL", the level controller shall de-energize the lag pump motor.
- 7. All level control points shall be manually adjustable.

Level Controls

1. The level control system shall be provided with an HOA switch that will allow the selection of pump utilization. In the automatic mode, the alternator relay shall first energize one pump at the start of a cycle and, at the start of the next cycle, energize the second pump first. Alternation shall only occur at the end of a pumping cycle.

Lag Pump

1. A Lag Pump Delay circuit shall be provided in the level controller to prevent the simultaneous motor start of both pumps. The delay circuit shall be manually adjustable from 0.5 seconds to 10.0 seconds. Such adjustment shall not require hard wiring or the use of electronic test equipment.

Liquid Level Alarm

1. High and Low Liquid Level alarm and Low Liquid Shutdown capability shall be provided in the level controller to warn of unplanned wet well liquid levels. The High Liquid Level alarm, Low Liquid Level alarm, and Low Liquid Level Shutdown shall each be additional setpoint integral to

D. CONTROL SYSTEM - ALL STATIONS

Liquid Level Alarm

other devices in the level controller. Each shall be independently adjustable, face mounted and accessible without opening the control panel or any cover panel on the level controller. Such adjustments shall not require hard wiring or the use of electronic test equipment.

Level Fault

- 1. High Liquid Level or Low Liquid Level fault shall cause the illumination of a red indicator and the activation of a general alarm relay. The indicator and the general alarm relay shall remain in the alarm mode until the circuit is manually reset.
- 2. A Low Liquid Level fault shall also cause the interruption of power to both wastewater pump motors. Restoration of power shall occur automatically (without manual reset) when the liquid level in the pump chamber rises above the preset Low Liquid Level.

Alarm Silencer

1. An alarm silencing switch shall be provided to disable the external alarm device while service is underway.

E. ALARM ANNUNCIATOR SYSTEM - ALL STATIONS

- 1. An alarm annunciation system shall provided for each pumping station. For wet well/dry well type stations, the alarm annunciation system shall be installed in the control panel located in the dry well; for submersible type stations, the system shall be installed in the control panel enclosure. The alarm annunciator system shall be comprised of a rear of panel mounted solid state alarm annunciator logic chassis and panel door mounted alarm indicator lights.
- 2. The alarm annunciator system shall include alarm indicator lamps and panel front mounted NEMA 4X silence, acknowledge, reset, and test push-buttons.
- 3. The alarm annunciator logic chassis shall also include a remote common alarm output where any point in the system going into alarm will energize a common relay for remote alarm transmission.

- E. ALARM ANNUNCIATOR SYSTEM ALL STATIONS
 - 4. The alarm annunciator system shall be configured with five columns of lamps across and three rows of lamps down. All alarm lamps shall be clearly labeled for rapid identification. The alarm annunciator system shall annunciate the following conditions:
 - 1. Wastewater Pump No. 1 Seal Failure
 - 2. Wastewater Pump No. 1 Overload
 - 3. Wastewater Pump No. 1 High Temperature
 - 4. Wastewater Pump No. 2 Seal Failure
 - 5. Wastewater Pump No. 2 Overload
 - 6. Wastewater Pump No. 2 High Temperature
 - 7. High Pump Chamber Level
 - 8. Low Pump Chamber Level
 - 9. Ground Fault
 - 10. Generator Failure
 - 11. Loss of Bubbler Air Pressure
 - 12. Low Voltage/Phase Reversal
 - 13. Valve Chamber Flooding
 - 14. Active Spare
 - 15. Active Spare
 - 5. Additional alarm relays shall be provided for retransmission of the following alarms via the Town's Radio Remote Telemetry System:
 - 1. Common Alarm
 - 2. High Pump Chamber Level
 - 3. Low Pump Chamber Level
 - 4. Valve Chamber Flooding
 - 5. Loss of Power
 - 6. Generator Failure
 - 7. Loss of Bubbler Air
 - 8. Common Pump Failure
 - 6. A minimum of eight spare un-installed lamp assemblies shall be provided.
 - 7. A radio transmitter unit as manufactured by the Motorolla Corporation that is compatible in all respects with the Town's remote radio telemetry system shall be installed in a separate enclosure within the control panel enclosure. A separate antenna shall be installed at a suitable location on the pumping station site to enable transmission of alarm signals to the Town's remote radio telemetry system. The contractor shall be required to

E. ALARM ANNUNCIATOR SYSTEM - ALL STATIONS

- apply for any and all permits and/or licenses that may be required to operate the transmitter unit on behalf of the Town.
- 8. A NEMA 4X encapsulated electronic solid state alarm horn shall be mounted on the side of the control panel enclosure. The alarm horn shall produce a minimum of 85 dB at a distance of ten feet.
- 9. A separate common alarm output circuit shall be provided to power an external alarm light on the exterior of the outer enclosure.
- 10. The separate alarm circuit shall be comprised of a 120-volt AC circuit actuated by the alarm annunciator system.
- 11. The external alarm light circuit shall be rated for 200 watts minimum at 120 volts AC.
- 12. The external alarm circuit shall have a dim glow option which illuminates the alarm light at reduced intensity during normal operation. The external alarm shall flash brightly when any alarm is actuated and shall return to a dim glow mode when the alarm condition is acknowledged by an operator.

F. EMERGENCY GENERATOR - ALL STATIONS

- 1. An emergency generator unit shall be installed at each wastewater pumping station. The generator shall be capable of providing sufficient electrical current to operate the entire pumping station and all appurtenant equipment in the event of an interruption of primary power to the station.
- 2. The generator shall be a brushless, revolving field alternating current type with full amortisseur winding. The engine shall be a four cycle, naturally aspirated, spark ignited, and be capable of satisfactory performance on low pressure vaporized liquid propane gas fuel. Generator units utilizing diesel fuel or gasoline as a fuel supply shall not be permitted.

F. EMERGENCY GENERATOR - ALL STATIONS

- 3. Lubrication system: Lubrication for the engine unit shall be provided by a gear-type lubricating oil pump. The lubricating system shall be equipped with an easily accessible full-flow filter with a spring loaded by-pass valve to insure oil circulation if filters become clogged.
- 4. Battery charger: A float-type battery automatic battery charging unit shall be provided.
- 5. Automatic exerciser: The generator unit shall be equipped with an automatic exerciser to automatically run the unit at a selected interval for a selected length of time.
- 6. Automatic Transfer Switch: The unit shall be equipped with an automatic transfer switch to provide for the automatic transfer of power from line to emergency generator in the event of a power outage, and from generator to line when normal power service is returned. The switch shall be equipped with an adjustable timer circuit to lock in the emergency generator as the primary power source for a selected time interval (0-60 min.) after start-up to protect the generator from damage caused by momentary power interruptions.
- 7. Fuel Tank: A buried, steel fuel tank shall be provided at the site for storage of liquid propane fuel. The tank shall be sized to store sufficient fuel to maintain operation of the generator unit for a minimum of three days. The tank shall be equipped with a locking fill cover to grade and a pressure gauge shall be installed on the fill port to indicate tank pressure.
- 8. If natural gas is available at the site, consideration shall be made for its use as the fuel supply.

G. FLOW METER & RECORDER- ALL STATIONS

1. A magnetic flow meter shall be installed within the dry well on the discharge piping immediately prior to where it leaves the station. The meter shall be installed in accordance with the manufacturer's recommendations and shall be preceded with a straight length of pipe (spool piece) a minimum of five pipe diameters in length to minimize turbulences at the meter.

G. FLOW METER & RECORDER - ALL STATIONS

- 2. Gate valves shall be installed on either side of the meter to permit its removal for maintenance purposes.
- 3. A separate spool piece with a length equal to that of the meter shall be provided and suitably stored in the dry well to permit insertion and the continuation of flow at the station when the meter is removed.
- 4. The magnetic flow meter flow tube shall be equipped with an ultrasonic electrode cleaning assembly which shall apply continuous ultrasonic vibrations to the electrode to remove deposits and fouling. Electrode cleaning assembly and control boxes shall be permanently wall mounted near the flow meter and shall operate automatically.
- 5. A wall-mounted signal converter and flow transmitter shall be furnished and installed with the flow meter. The signal converter shall provide the alternating current excitation for the flow meter field coils and shall convert the low level, high impedance alternating current signal from the magnetic flow meter to an industry standard, 4-20 mAdc current, proportional transmission signal with an accuracy of not less than 1% of its reference span. The signal converter shall also provide a low rate pulsed output in which pulse frequency is proportional to flow quantity for display by electromagnetic counter. The signal converter unit shall be housed in a NEMA 4X enclosure.
- 6. The signal converter shall include a face-mounted output indicator with a 0-100 percent scale and an accuracy of ±2% of span. The signal converter shall also include a non-resetable, 7-digit, electromagnetic totalizer.
- 7. Recorder shall be a 2 pen wall mounted circular chart recorder and shall have a NEMA 4X case installed in the pump chamber.
- 8. Recorder shall accept 4-20 mAdc outputs from the magnetic flow meter flow transmitter. The unit shall be capable of recording 2 points on a ten inch circular chart.
- 9. It shall be fully programmable in order that the recorder can be configured to accept dc voltages, thermocouple and RTD inputs. All non-linear inputs shall be linearized and special linearizations shall be provided.

- G. FLOW METER & RECORDER ALL STATIONS
 - 10. The unit shall record the pumping rate with one pen and the wet well liquid level with the second pen.
- H. SPARE PARTS ALL STATIONS
 - At a minimum the following spare parts shall be provided:
 - 1. one entire pump unit
 - 2. one set of impeller wear rings and attachment hardware for each pump.
 - 3. one set of valve packing for each <u>different</u> type and size valve in the station.
 - 4. one starter
 - 5. 8 alarm lamps assemblies
 - 6. one year supply of 7-day chart paper and pens for the flow recorder.

DIVISION VII. - REQUIREMENTS FOR AS-BUILT DRAWINGS

A. GENERAL REQUIREMENTS

- 1. Upon completion of construction and prior to final acceptance by the Town, the Applicant shall prepare final as-built drawings which show the actual installed locations of all structures, equipment, and piping and changes in pipe and equipment sizes. The as-built drawings shall be submitted on mylar transparencies of the approved project drawings. The Applicant shall furnish all as-built records to the Owner in a manner and completeness which is satisfactory to the Owner and his Engineer.
- 2. When locating structures in plan view (especially building service laterals, buried valves, manholes, tee/wyes, etc.), a minimum of three tie dimensions from fixed, permanent objects shall be provided.
- 3. As-Built drawings shall be labeled as "RECORD DRAWINGS" and shall be dated and initialled by the Applicant.

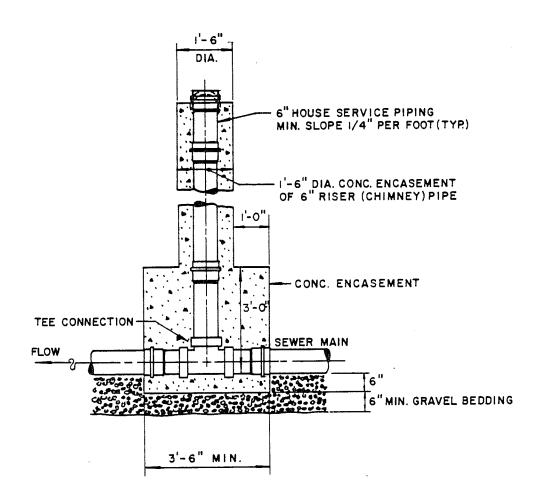
B. REQUIREMENTS FOR SANITARY SEWERS AND FORCE MAINS

- 1. The as-built construction records shall be prepared as follows:
 - a. Areas having bedding, temporary sheeting or permanent sheeting shall be shown. Areas where ledge is encountered shall be shown. Concrete encasement shall be shown. High water tables shall be shown.
 - b. At least two (2) bench marks shall be indicated on each Plan. The locations of the bench marks shall be close to the area covered on the Drawing.
 - c. All wyes, tees, chimneys, thrust blocks, and building service laterals shall be located in both plan and profile views. All facilities shown in plan view shall be located by not less than three tie points to permanent, fixed objects. The terminus of all building service laterals shall reference a depth to the invert of the pipe. As-built stations shall be noted in profile view for all items installed.
 - d. Manholes in plan view shall be located by angles and distances to permit their later relocation in the field should they become obscured or buried.
 - e. For areas involving excavation below grade or backfilling with substitute backfill, these areas shall be shown in profile view (including the limits of the excavation).

DIVISION VII. - REQUIREMENTS FOR AS-BUILT DRAWINGS

- B. REQUIREMENTS FOR SANITARY SEWERS AND FORCE MAINS
 - f. All correct invert elevations, manhole rim elevations, locations of manholes, wyes, chimneys, building service laterals, etc. shall be indicated and shown to scale.
 - g. All building structures shall be shown in proper scale and location.
 - h. Drawings shall indicate type of pipe and manufacturer's name.
- C. REQUIREMENTS FOR WASTEWATER PUMPING STATIONS
 - 1. The as-built construction records shall show the following:
 - a. the installed locations, sizes, and type of all piping (internal and external to the station) including all valves, fittings, and supports;
 - b. the installed location of all equipment including, but not necessarily limited to, all pumps, flow metering equipment, and emergency generation equipment (including buried fuel tank and piping);
 - c. the installed location of all electrical equipment including, but not necessarily limited to, all conduits, control panels, disconnects, pull boxes, outlets, switches, and lights (emergency and otherwise). A complete wiring diagram shall also be submitted showing the electrical power distribution and control wiring systems;
 - d. all buried equipment, including fuel storage tanks and appurtenant piping, force main (including fittings, valves, thrust blocks, etc.), utility piping, water supply wells or piping, dewatering wells left in place, concrete support slabs, and all utilities and conduits; and
 - e. the installed location of all HVAC equipment including, but not necessarily limited to dehumidifiers, heaters, vents, duct work, fans, thermostats, and humidistats.

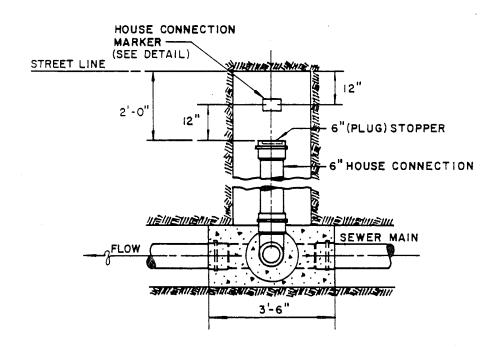
PART IV
TECHNICAL DETAILS



LONGITUDINAL SECTION

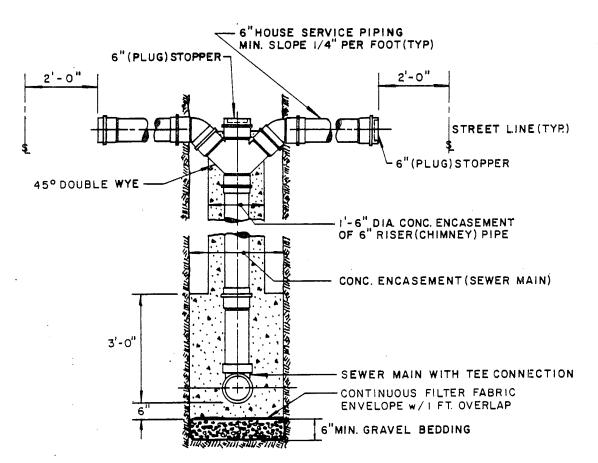


TOWN OF SUFFIELD, CONNEC	TICUT I-1
TITLE:	REVISION DATE:
ISTANDARD DETAIL	Ì



PLAN

TOWN OF SUFFIELD, CONNECTICUT I-2 TITLE: REVISION DATE: STANDARD DETAIL

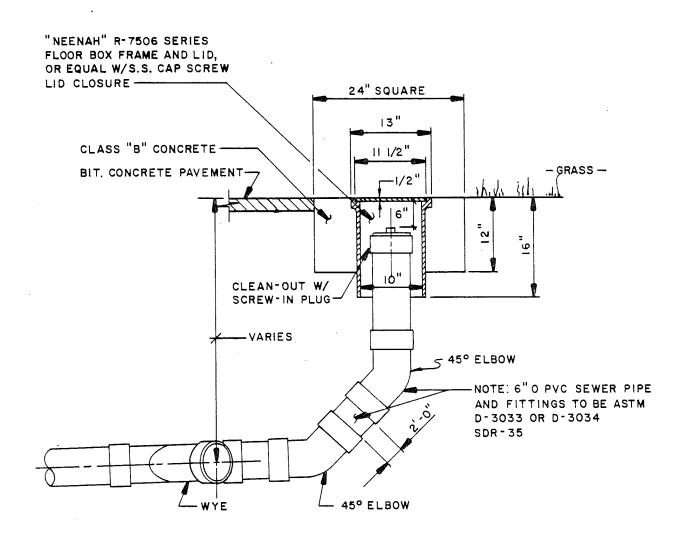


(DOUBLE CHIMNEY)

CROSS-SECTION

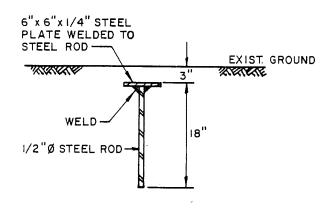
TOWN OF SUFFIELD, CONNECTICUT I-3

TITLE: REVISION DATE:



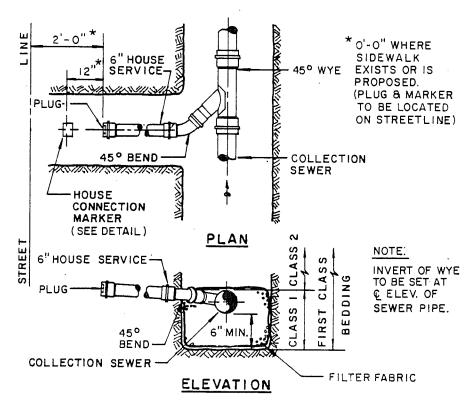


TOWN	OF		CONNECTICUT	DETAIL NO. $I\!-\!4$
TITLE:	ARI	DETAIL		REVISION DATE:



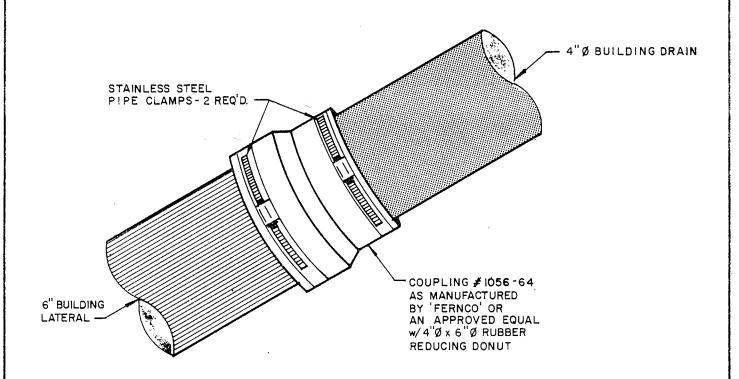
HOUSE CONNECTION MARKER DETAIL

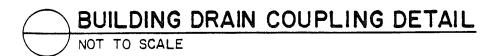
NOT TO SCALE



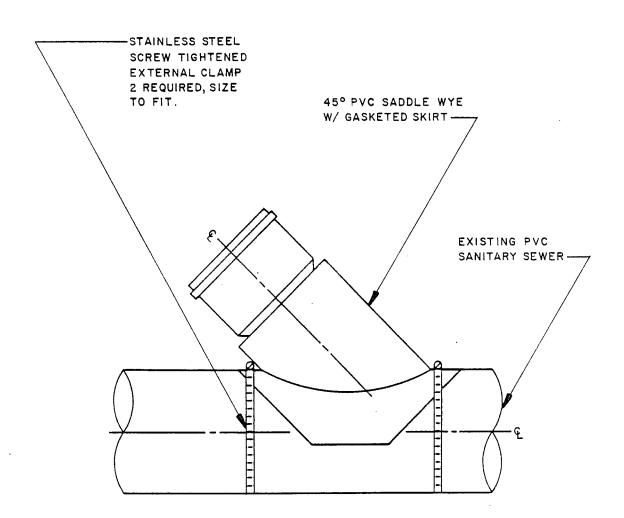
SERVICE CONNECTION DETAILS NOT TO SCALE - SEE NOTE NO. SHEET NO.

TOWN OF SUFFIELD, CONNECTICUT	DETAIL NO. I-5
TITLE: STANDARD DETAIL	REVISION DATE:





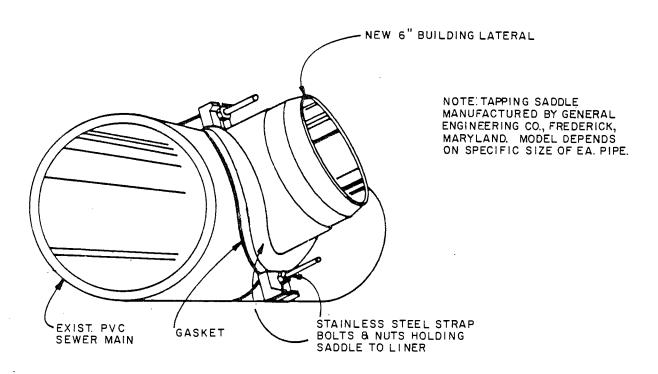
TOWN OF	SUFFIELD,	CONNECTICUT	DETAIL NO. I—6
TITLE:	DETAII	COLUMN TO THE CO	REVISION DATE:



TAPPING SADDLE DETAIL

(FOR CONNECTION OF NEW BUILDING LATERAL TO EXISTING PVC SEWER) NOT TO SCALE

TOWN OF SUFFIELD, CONNECTICUT	DETAIL NO. I-7
	REVISION DATE:
STANDARD DETAIL	

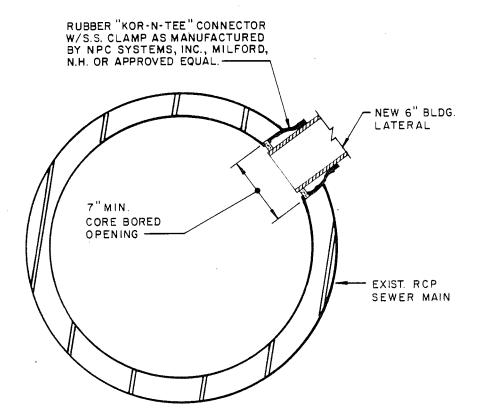


TAPPING SADDLE DETAIL

(FOR CONNECTION OF NEW BUILDING LATERAL TO EXIST. PVC SEWER) NOT TO SCALE

TOWN OF SUFFIELD, CONNECTICUT I-8

TITLE: REVISION DATE: STANDARD DETAIL

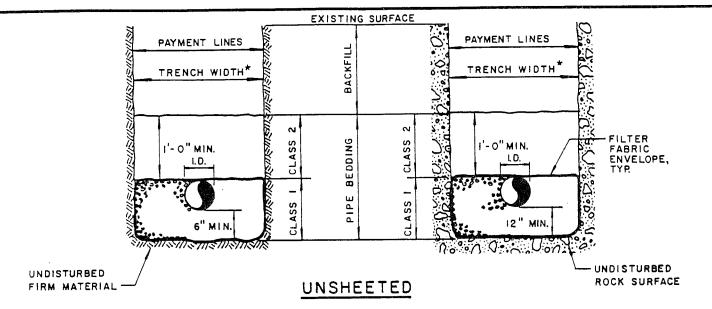


CORE BORED LATERAL DETAIL

(FOR CONNECTION OF NEW BUILDING LATERALS TO EXIST. RCP SEWER) NOT TO SCALE

TOWN OF SUFFIELD, CONNECTICUT	
	REMSION DATE:

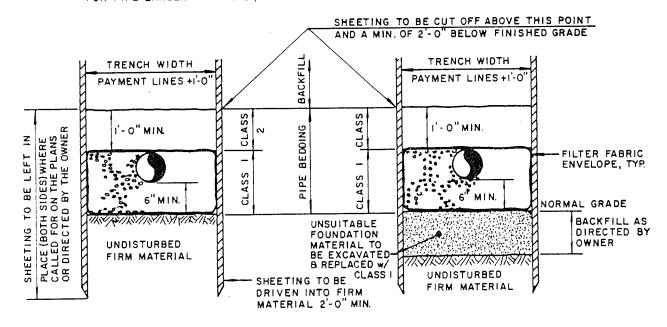
DIVISION II
TRENCHES



EARTH TRENCH

ROCK TRENCH

* FOR PIPE 12"Ø OR SMALLER, TRENCH WIDTH = 4'-0"
FOR PIPE LARGER THAN 12"Ø, TRENCH WIDTH = PIPE 1.D. + 3'-0"



SHEETED

EARTH TRENCH

UNSUITABLE MATERIAL (TO BE USED ONLY WHERE DIRECTED)



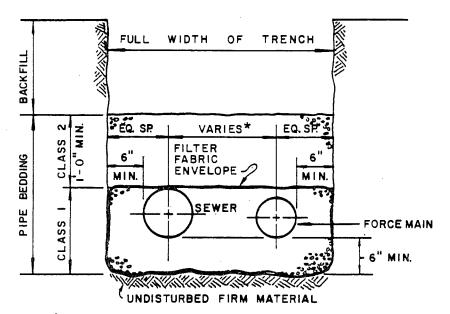
TRENCH DETAILS

NOT TO SCALE-SEE NOTE NO.

SHEET NO.

NOTE: FILTER FABRIC ENVELOPE SHALL BE PLACED AROUND PIPE & STONE BEDDING PRIOR TO PLACEMENT OF SAND IN ALL TRENCHES UNDER PAVED AREAS. LAP ALL JOINTS 12" MIN.

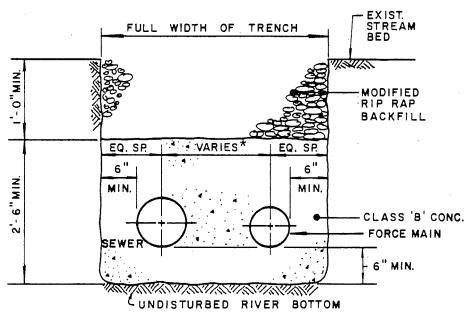
TOWN OF SUFFIELD, CONNECTICUT	DETAIL NO. II — 1
ππε:	REVISION DATE:
STANDARD DETAIL	



*NOTE: MIN. WIDTH = 2'+1/2 F.M. DIA. +1/2 SEWER DIA.

TYPICAL DOUBLE PIPE TRENCH DETAIL

NOT TO SCALE

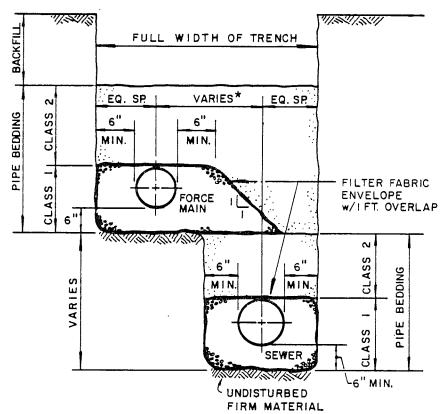


*NOTE: MIN. WIDTH= 2'+1/2 F.M. DIA. + 1/2 SEWER DIA.

DOUBLE PIPE TRENCH STREAM CROSSING

NOT TO SCALE

TOWN OF SUFFIELD, CONNECTICUT	
	REMSION DATE:



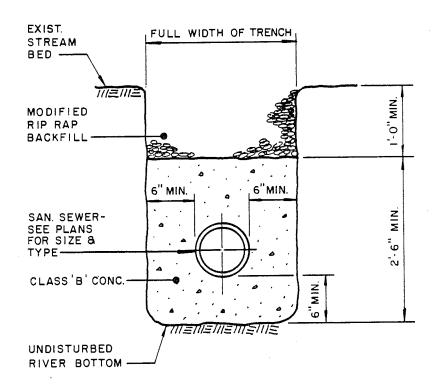
* NOTE: MIN. WIDTH = 2 + 1/2 FM. DIA. + 1/2 SEWER DIA.



BENCHED TRENCH DETAIL

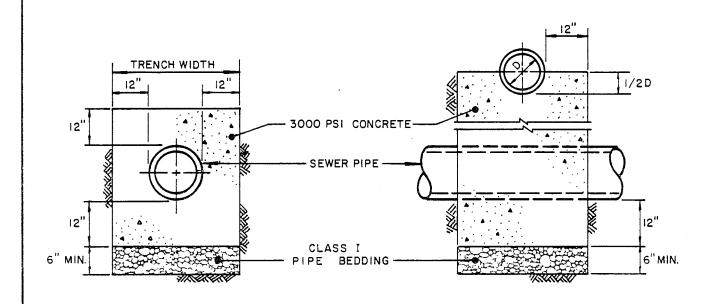
NOT TO SCALE

TOWN OF SUFFIELD, CONNECTICUT II-4 revision date: STANDARD DETAIL





	DETAIL No.
TOWN OF SUFFIELD, CONNECTIOU	
ππε:	REVISION DATE:
STANDARD DETAIL	



PIPE ENCASEMENT

CROSSING PIPE CRADLE

NOTE:

WHERE NEW SEWER CROSSES UNDER OR OVER, WITHIN 12" OF EXISTING UTILITIES. CONCRETE CRADLE SHALL BE USED WHERE DIRECTED BY THE ENGINEER.

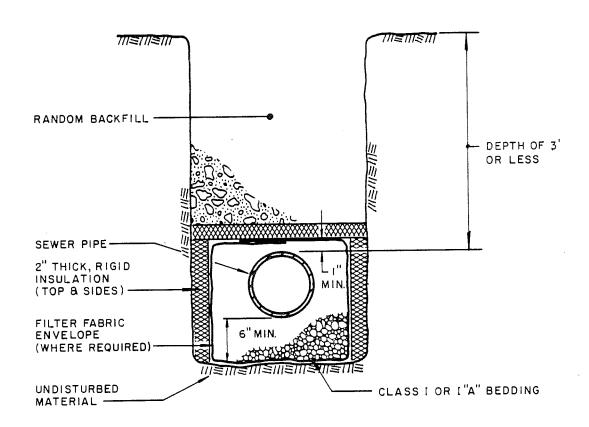


CONCRETE CRADLE & ENCASEMENT DETAILS

NOT TO SCALE

TOWN OF SUFFIELD, CONNECTICUT II-6

TITLE: REVISION DATE:





TOWN OF SUFFIELD, CONNECTICUT

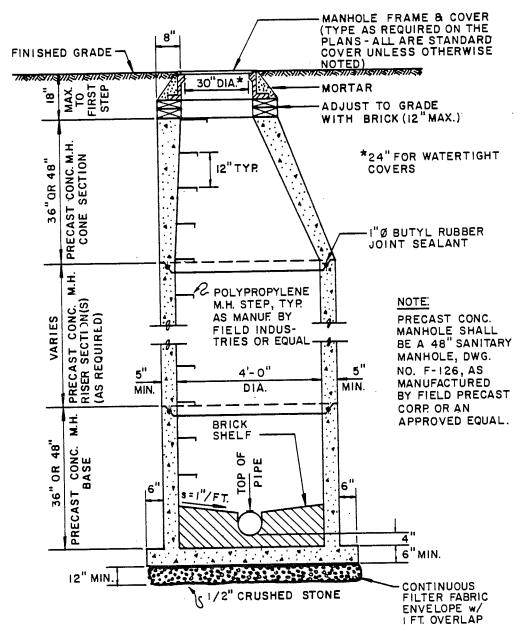
DETAIL No. II-7

TITLE:

STANDARD DETAIL

REVISION DATE:

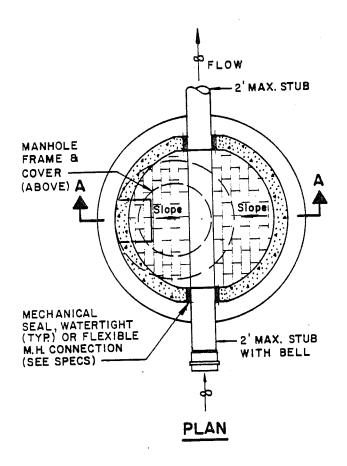
DIVISION III
SANITARY MANHOLES



SECTION "A-A"

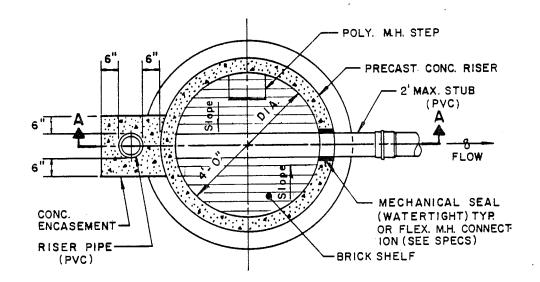


	DETAIL No.
TOWN OF SUFFIELD, CONNECTICUT	III-1
TITLE:	REMSION DATE:
STANDARD DETAIL	



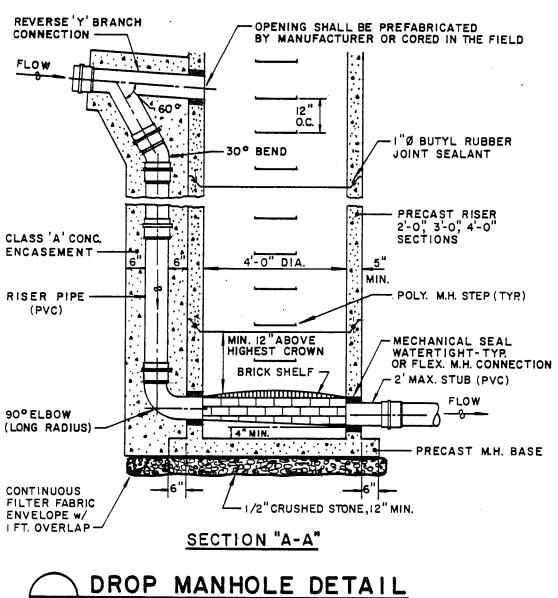
TOWN OF SUFFIELD, CONNECTICUT III-2

TITLE: REVISION DATE:



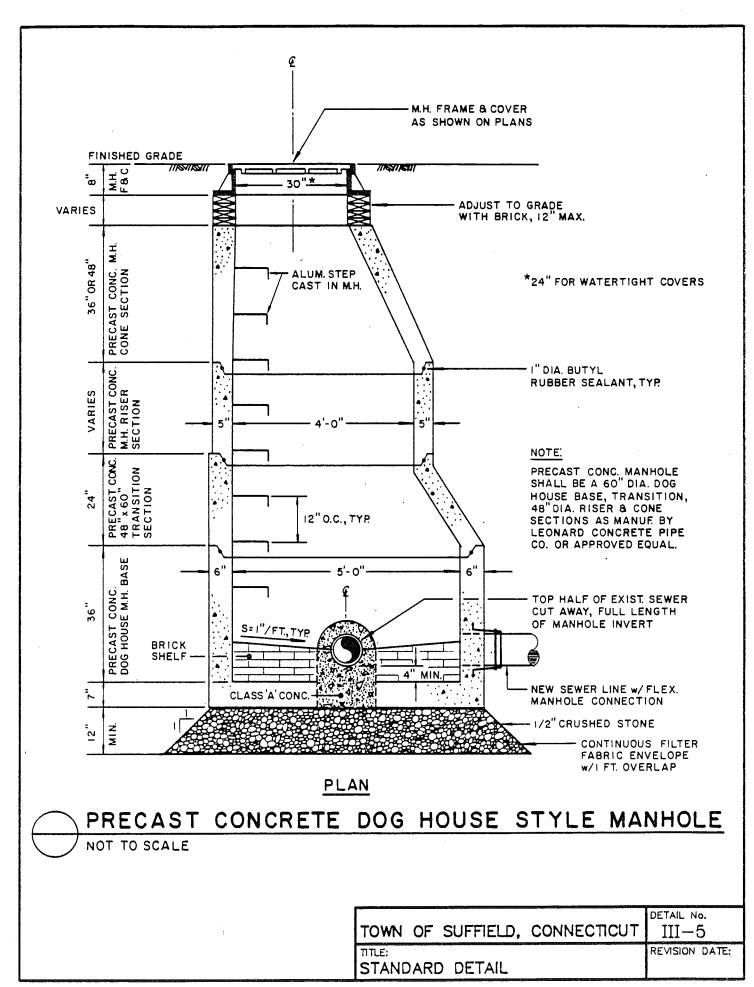
<u>PLAN</u>

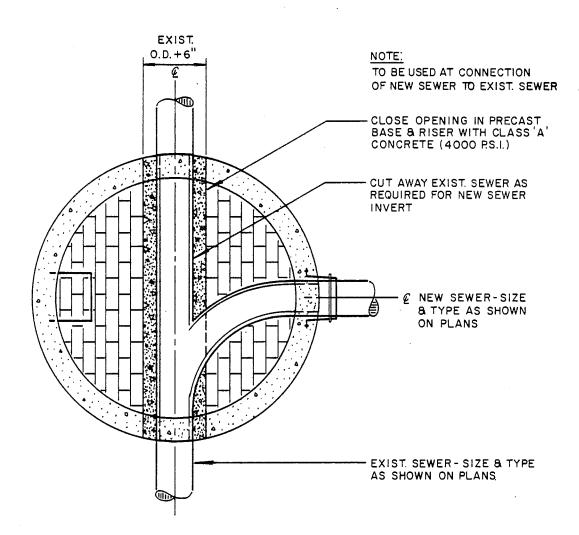
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	DETAIL No.
TOWN OF SUFFIELD, CONNECTICUT	III-4
INTE:	REVISION DATE:
STANDARD DETAIL	





DETAIL No. TOWN OF SUFFIELD, CONNECTICUT III-3TITLE: REVISION DATE: STANDARD DETAIL



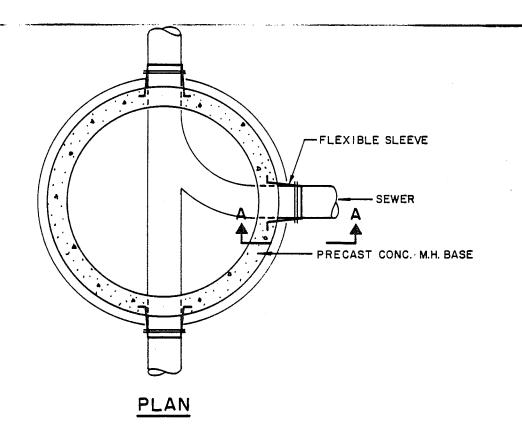


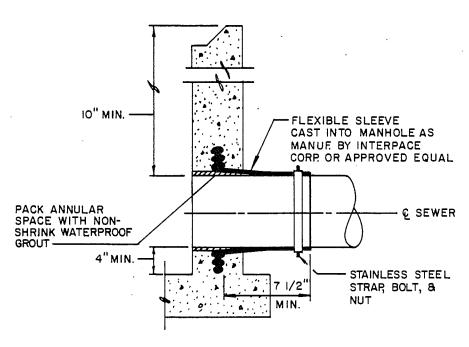
PLAN VIEW AT INVERT

TOWN OF SUFFIELD, CONNECTICUT III-6

TITLE: REVISION DATE:

STANDARD DETAIL

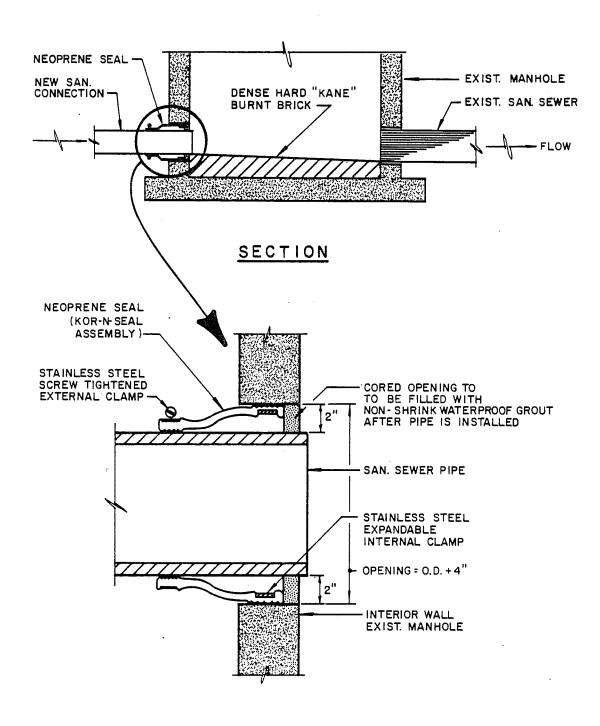




SECTION

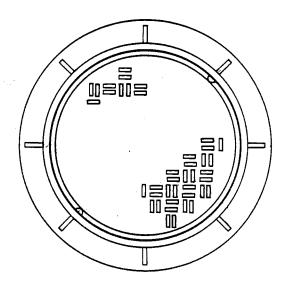


				DETAIL No.
TOWN	OF	SUFFIELD,	CONNECTICUT	III-7
TITLE:	game en grant film en de mei	anaga ayaniin aadan ah <u>iii aaya ay ii jirga ah ayayaya</u> ah ah iyo ga haa ah aa aa aa ah aa ah ah aa aa ah ah	reconnection is a symbol contracted by the engage of a first on a transmission and a first of the engage of the en	REVISION DATE:
		DETAIL		





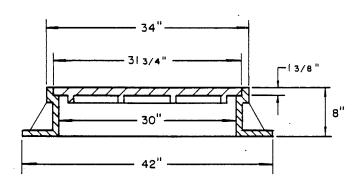
TOWN OF SUFFIELD, CONNECTICUT	DETAIL NO. III—8
TITLE:	REMSION DATE:
STANDARD DETAIL	



HEAVY DUTY
MANHOLE FRAME
8 COVER, PATTERN
No. 1107, AS MANUE
BY CAMPBELL
FOUNDRY CO. OR
APPROVED EQUAL

NOTE: ALL MANHOLE COVERS SHALL BE STAMPED WITH THE WORDS "SANITARY SEWER."

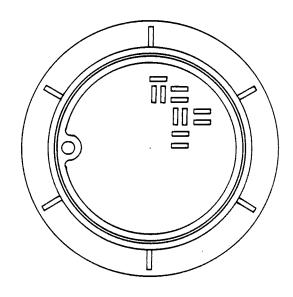
PLAN



SECTION

STANDARD MANHOLE FRAME & COVER DETAIL NOT TO SCALE

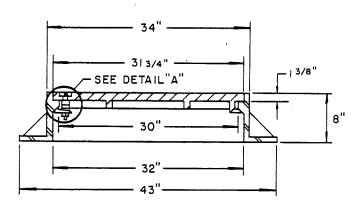
TOWN OF SUFFIELD, CONNECTICUT	DETAIL NO. III-9
TITLE: STANDARD DETAIL	REVISION DATE:



LOCKING MANHOLE FRAME & COVER PATTERN NO. 1460 B AS MANUF. BY CAMPBELL FOUNDRY CO. OR APPROVED EQUAL.

PLAN

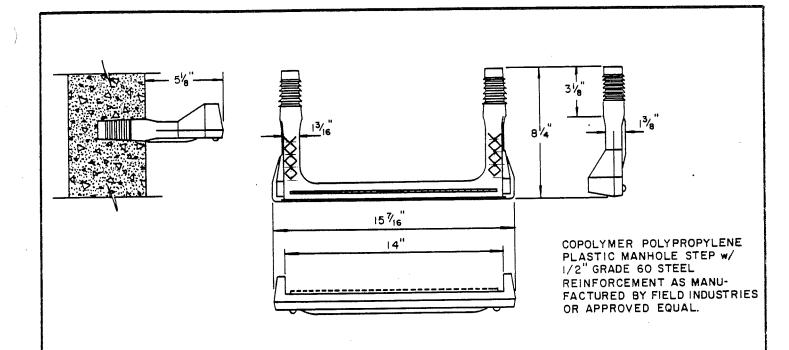
SEE NOTE ON DETAIL NO.



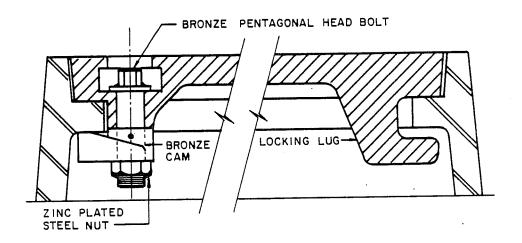
SECTION



TOWN OF SUFFIELD, CONNECTICUT	DETAIL NO. III-10
	REVISION DATE:
STANDARD DETAIL	

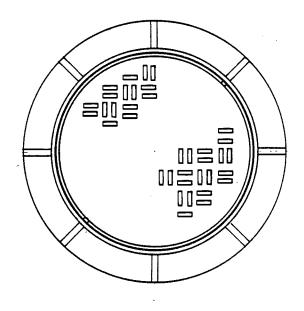








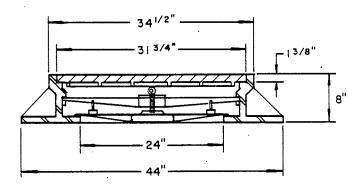
TOWN OF SUFFIELD, CONNECTICUT	DETAIL No. III-11
TITLE: STANDARD DETAIL	REVISION DATE:



WATERTIGHT M.H. FRAME & COVER PATTERN No. 1539B AS MANUF BY CAMPBELL FOUNDRY CO., OR APPROVED EQUAL.

SEE NOTE ON DETAIL NO. ___

PLAN

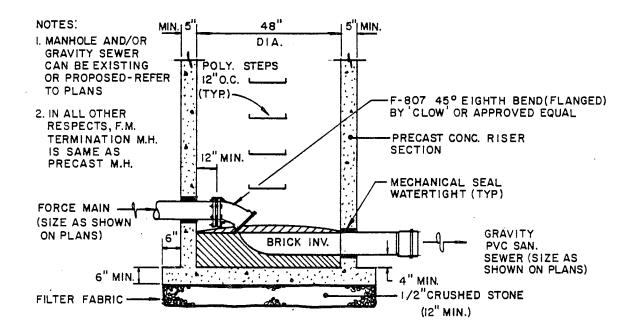


SECTION

WATERTIGHT MANHOLE FRAME & COVER NOT TO SCALE

TOWN OF SUFFIELD,	DETAIL NO. III-12
TITLE: STANDARD DETAIL	REMSION DATE:

DIVISION IV
FORCE MAIN RELATED





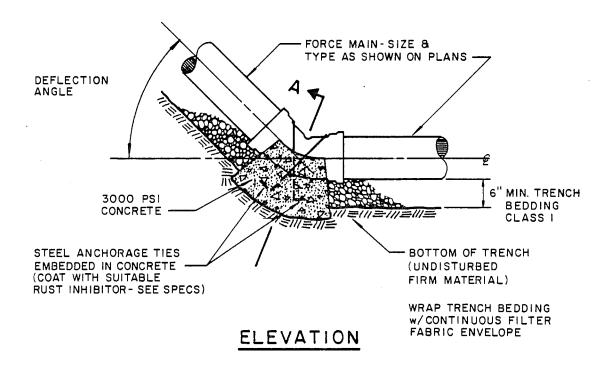
TOWN OF SUFFIELD, CONNECTICUT IV-1

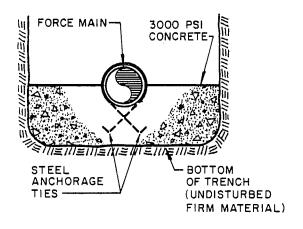
TITLE:
STANDARD DETAIL

DETAIL No.

IV-1

REVISION DATE:

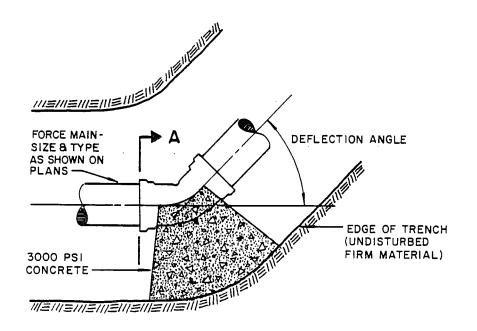




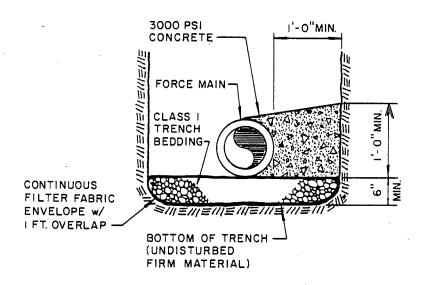
SECTION



TOWN OF SUFFIELD,	
TITLE: STANDARD DETAIL	REVISION DATE:



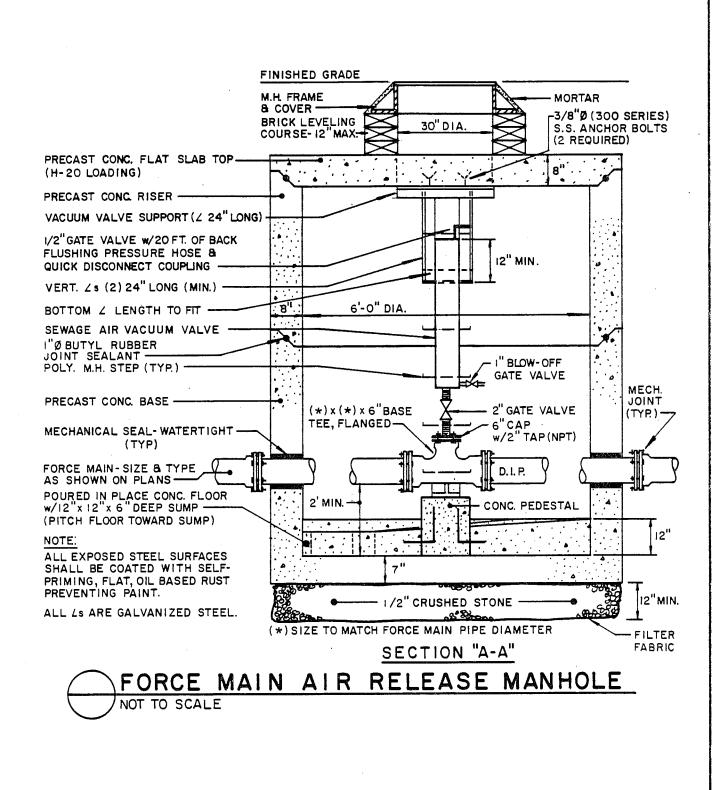
PLAN



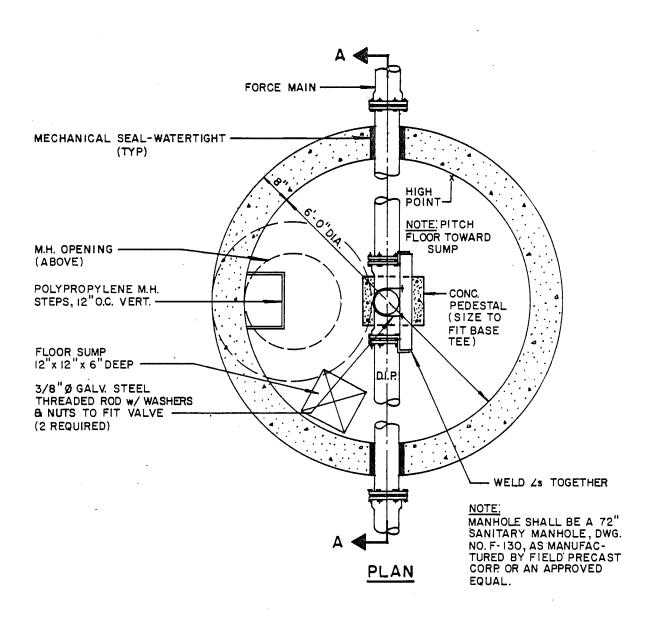
SECTION



TOWN OF SUFFIELD, CONNECTICUT	DETAIL NO. IV—3
TITLE: STANDARD DETAIL	REMSION DATE:



				A second to the second
				DETAIL No.
TOWN	OF	•	CONNECTICUT	IV-4
TITLE:) A Ø f) DETAIL		REVISION DATE:



TOWN OF SUFFIELD, CONNECTICUT IV-5

TITLE:

STANDARD DETAIL

DETAIL No.

IV-5

REVISION DATE:

STANDARD

DETAIL

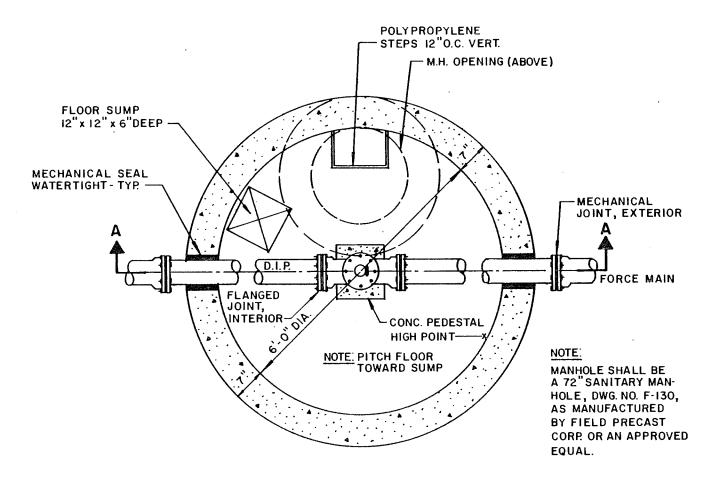
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SUFFIELD,

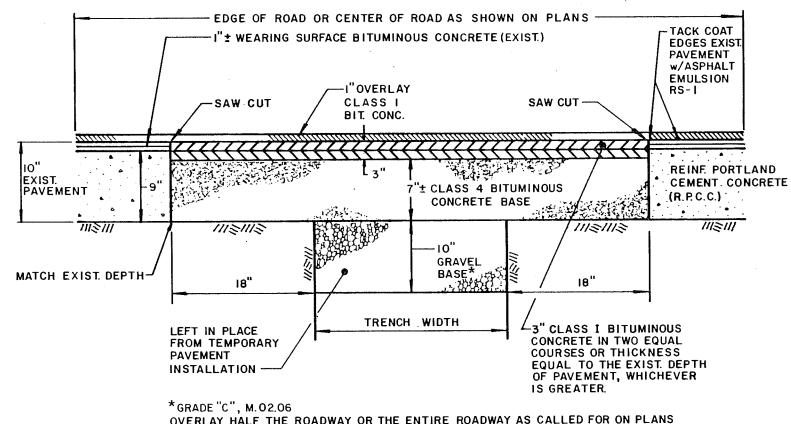
CONNECTICUT

REVISION DATE:



PLAN

DIVISION V **ROADWAY & RESTORATION**



OVERLAY HALF THE ROADWAY OR THE ENTIRE ROADWAY AS CALLED FOR ON PLANS

HALF ROADWAY OVERLAY - CLASS 12 MIX, I" THICK FULL ROADWAY OVERLAY - CLASS 2 MIX, I" THICK

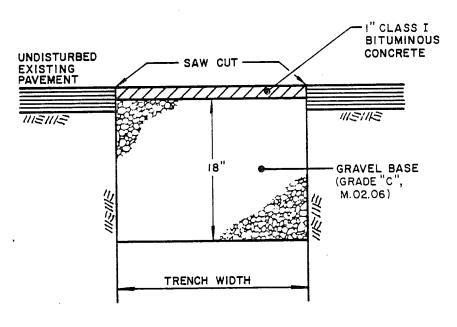
PERMANENT PAVEMENT DETAIL

NOT TO SCALE

(FOR AREAS WHERE THERE IS REINFORCED PORTLAND CEMENT CONCRETE)

STANDARD **M**OT ■ 읶 SUFFIELD, DETAIL CONNECTICUT

REVISION



SECTION



TOWN OF SUFFIELD, CONNECTICUT V-2

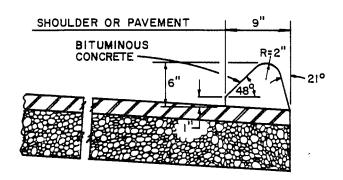
TITLE:

STANDARD DETAIL

DETAIL No.

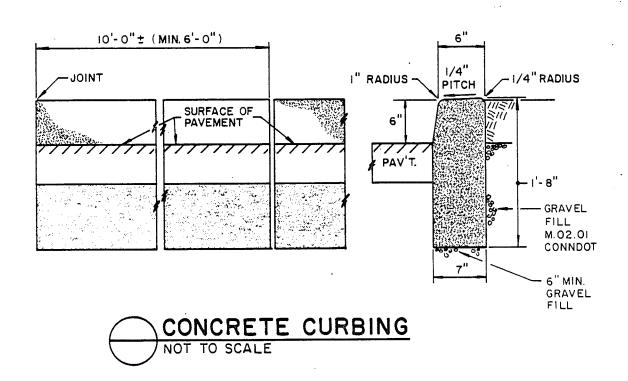
V-2

REVISION DATE:

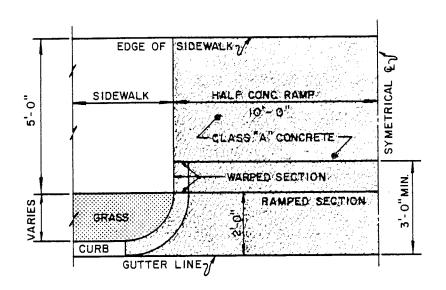


NOTE: ALL CONSTRUCTION DIMENSIONS ARE NOMINAL.

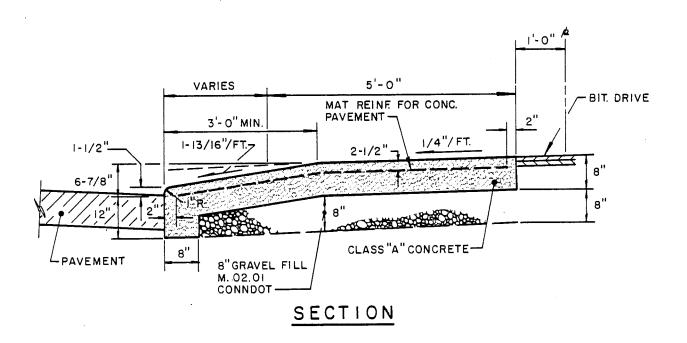




TOWN OF SUFFIELD, CONNECTICUT	DETAIL NO. V-3
TITLE: STANDARD DETAIL	REVISION DATE:

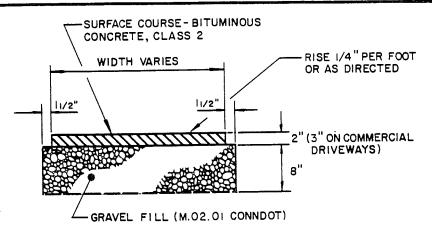


HALF PLAN





TOWN OF SUFFIELD, CONNECTICUT	
TITLE: STANDARD DETAIL	REVISION DATE:



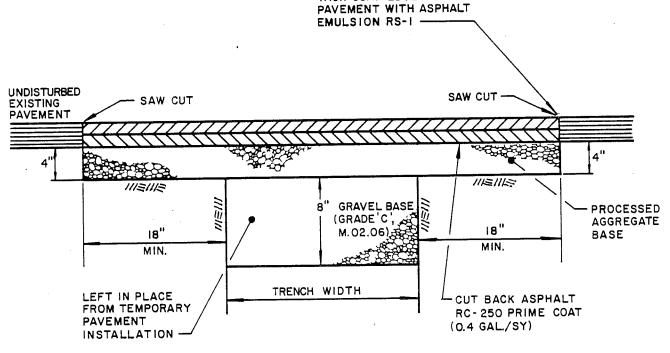
TACK COAT EDGES OF EXISTING

8" IN DEPTH AFTER COMPACTION PLACED IN TWO COURSES

SECTION

BITUMINOUS CONCRETE SIDEWALK & DRIVEWAY

NOT TO SCALE



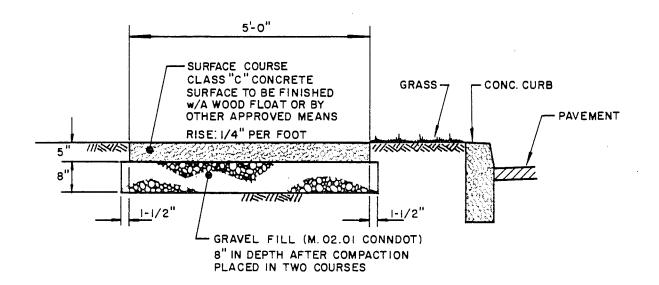
SECTION

PERMANENT PAVEMENT DETAIL

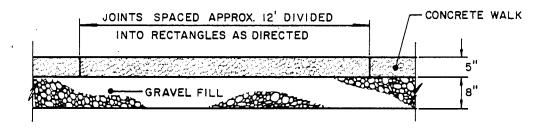
NOT TO SCALE

(TOWN ROADS)

Т	OWN	OF	SUFFIELD,	CONNECTICUT	DETAIL No. V—5
1 ''	TLE:	AR	DETAIL		REVISION DATE:



CROSS SECTION

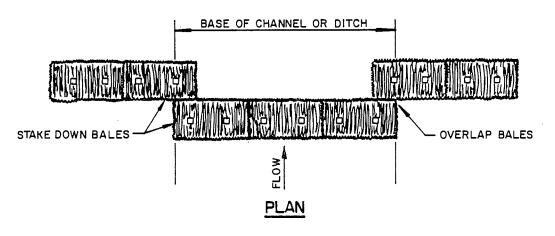


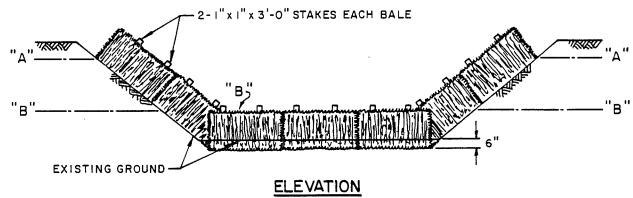
LONGITUDINAL SECTION



TOWN OF SUFFIELD, CONNECTICUT	DETAIL NO. V-6
STANDARD DETAIL	REVISION DATE:

DIVISION VI **EROSION CONTROL**



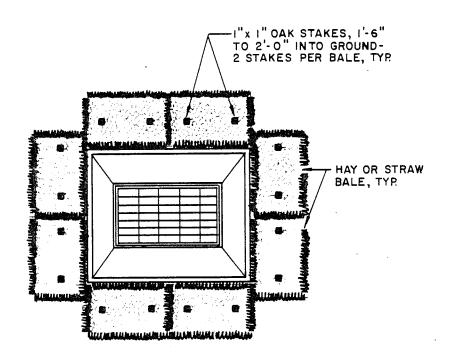


NOTE:

- I. HAY BALE CHECK DAMS TO BE USED IN LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER AND WILL BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION.
- 2. NUMBER OF BALES NEEDED WILL VARY TO MEET FIELD CONDITIONS.
- 3. BALES WILL BE ALLOWED TO ROT IN PLACE.
- 4. THE HAY SHALL BE TIED TO FORM A BALE WITH WIRE AND NOT ROPE OR TWINE.
- 5. ELEVATIONS OF POINTS "A" SHALL BE HIGHER THAN POINTS "B".



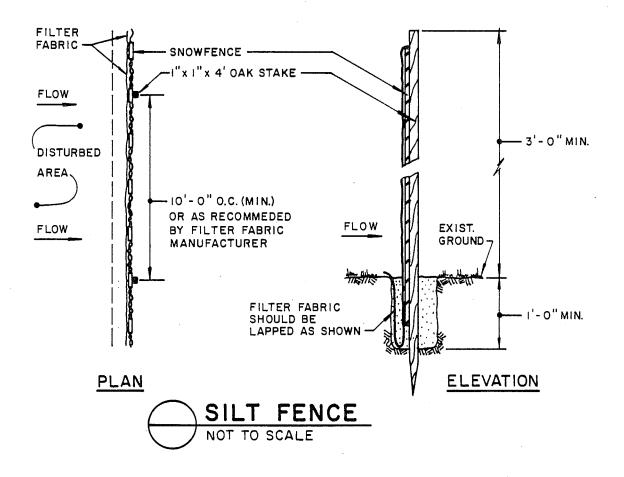
	DETAIL No.
TOWN OF SUFFIELD, CONNECTICUT	VI-1
TITE:	REVISION DATE:
STANDARD DETAIL	



NOTE: HAYBALES TO BE INSTALLED A'ROUND ALL CATCHBASINS.



		•		DETAIL No.
TOWN	OF	SUFFIELD,	CONNECTICUT	VI-3
TITLE:	and the state of t	and the second s		REVISION DATE:
STANDARD		DETAIL		



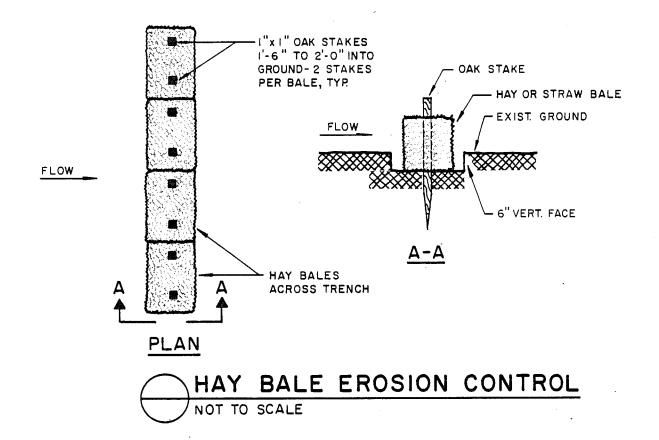
TOWN OF SUFFIELD, CONNECTICUT VI-2

TITLE:

STANDARD DETAIL

DETAIL No.
VI-2

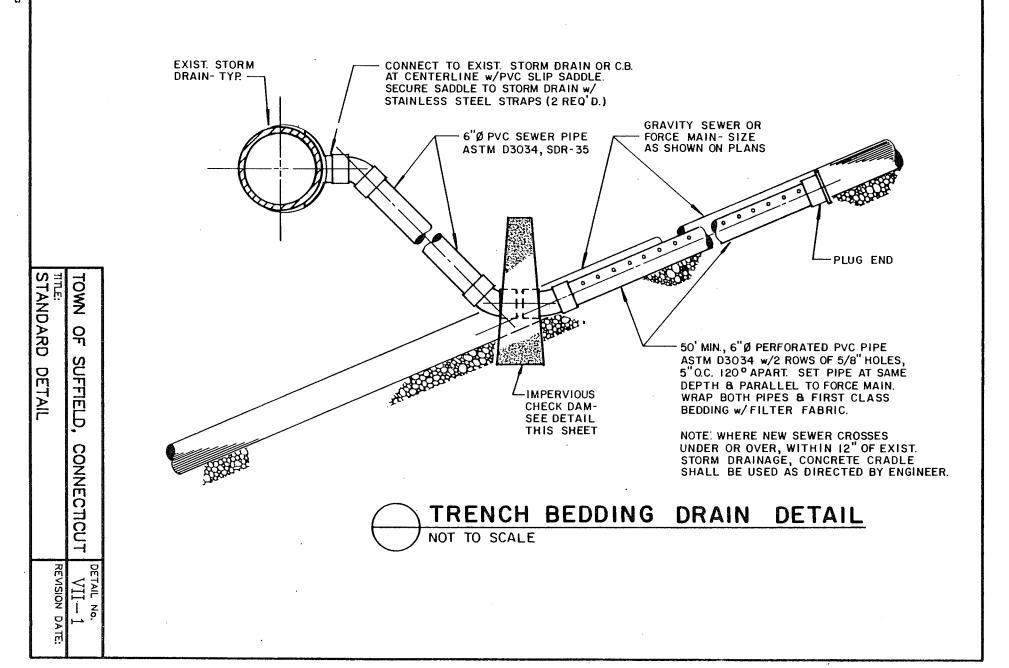
REVISION DATE:

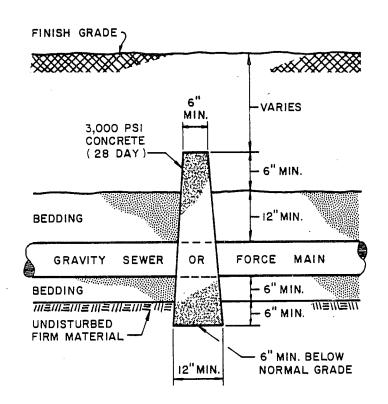


TOWN OF SUFFIELD, CONNECTICUT VI-4

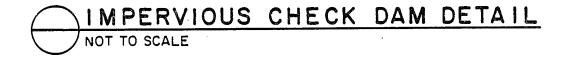
TITLE: REVISION DATE:

DIVISION VII
MISCELLANEOUS





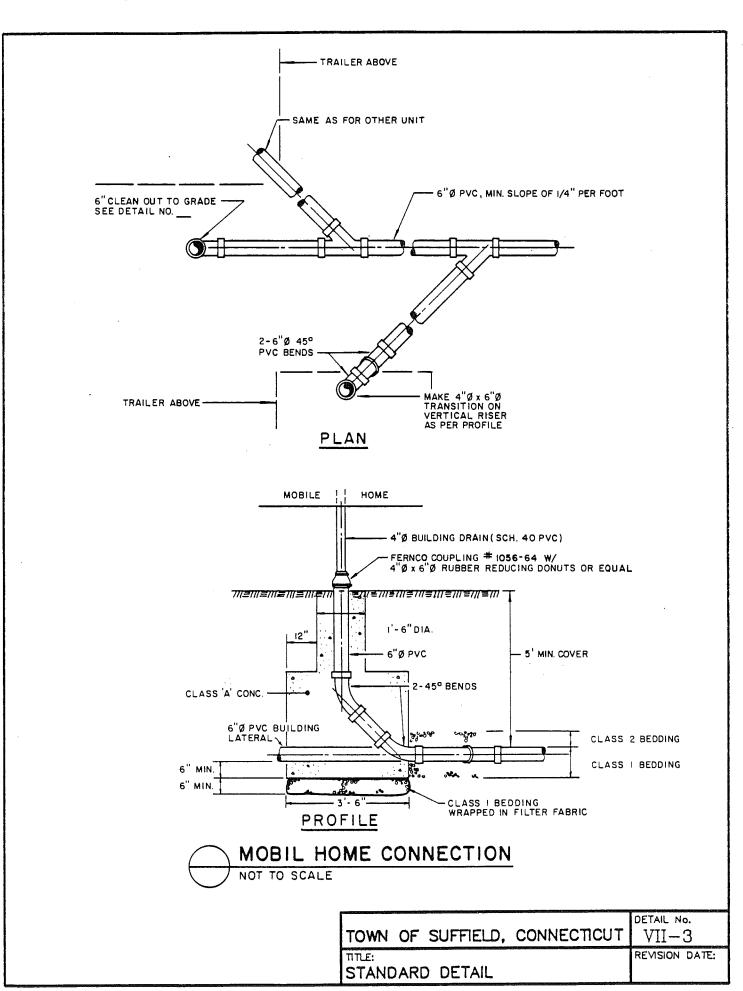
NOTE: CHECK DAM/CONCRETE SHALL EXTEND TO THE FULL WIDTH OF THE TRENCH

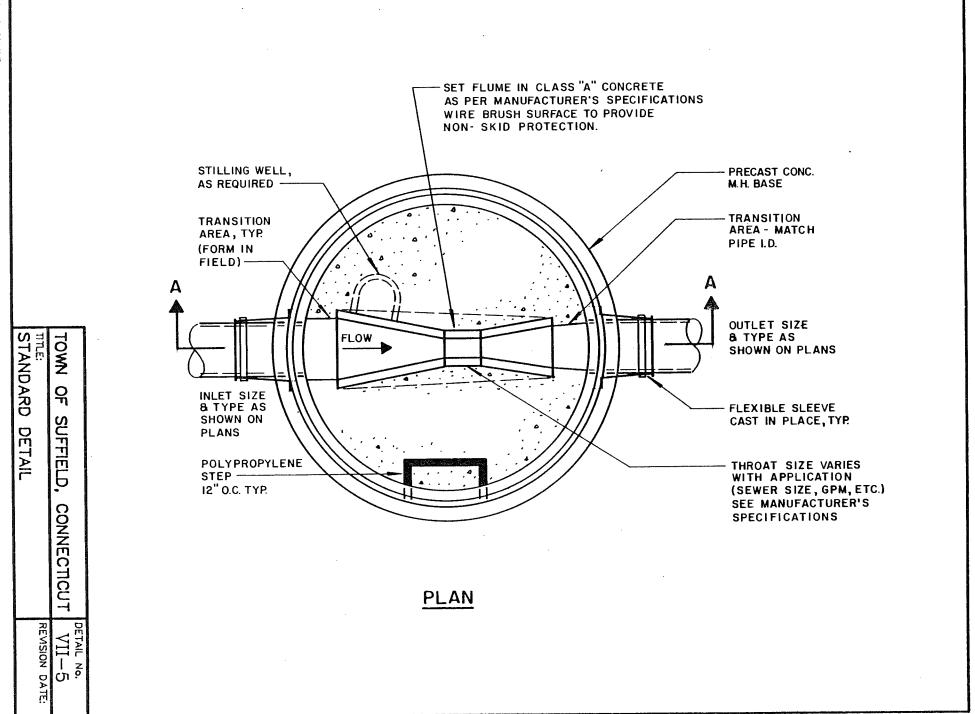


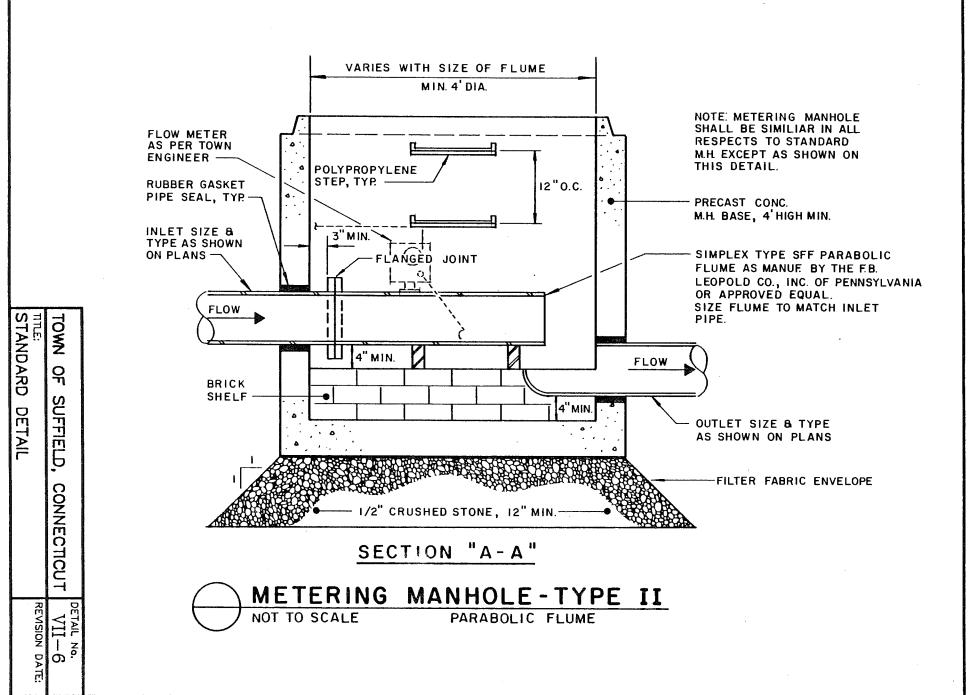
TOWN OF SUFFIELD, CONNECTICUT VII-2

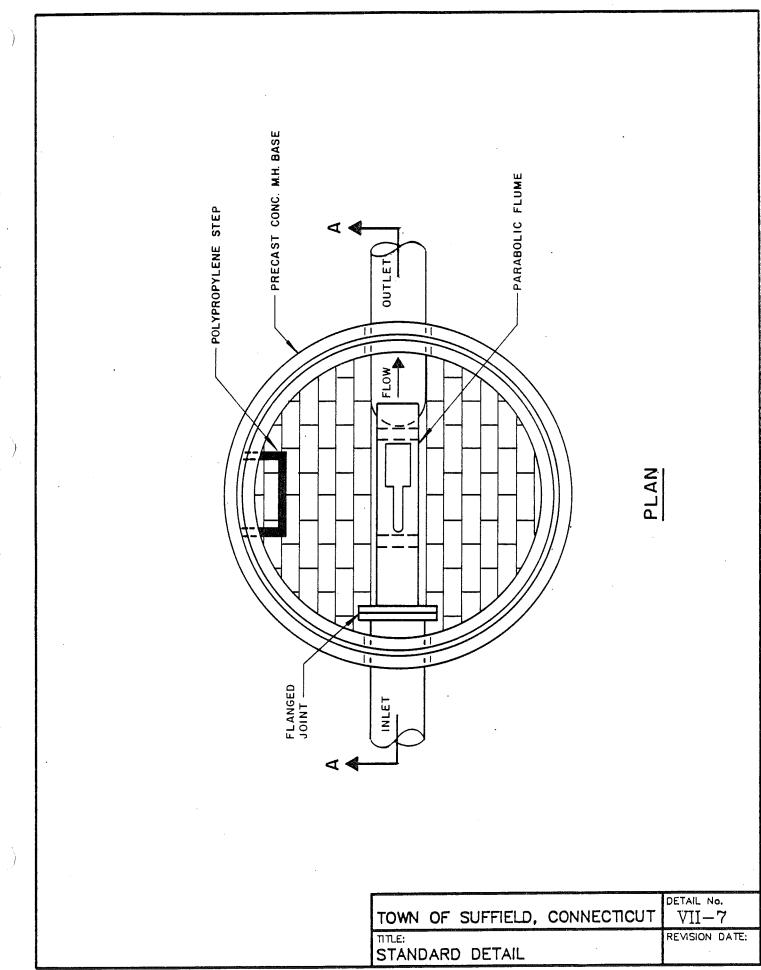
TITLE:

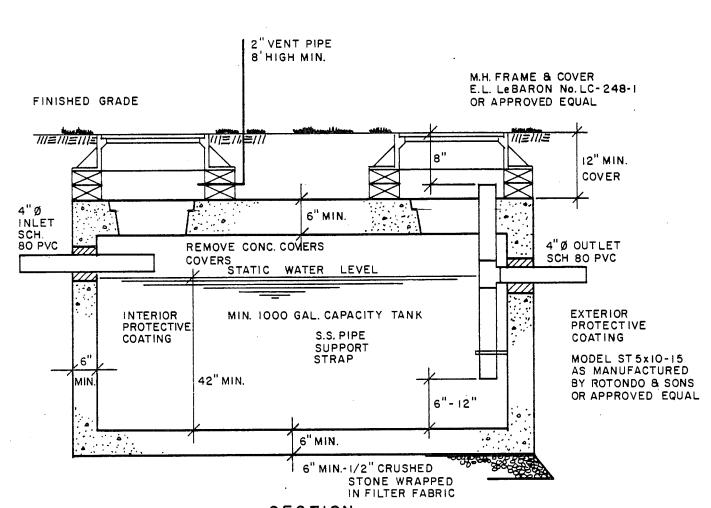
STANDARD DETAIL









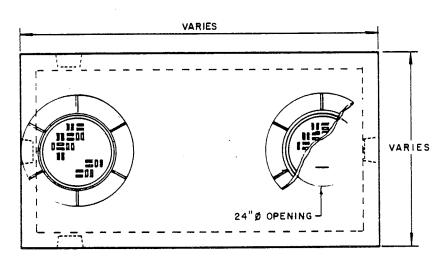


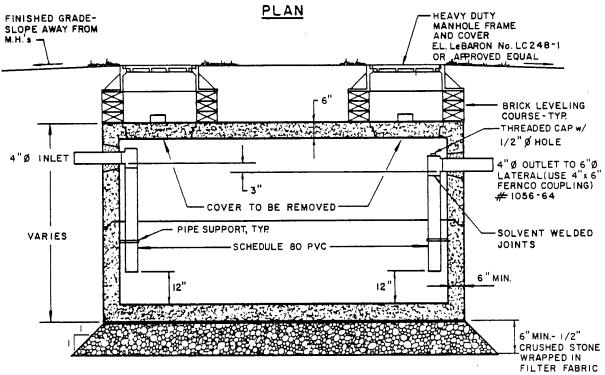
SECTION

NOTE: NO STRUCTURAL JOINTS SHALL BE ALLOWED BELOW INLET & OUTLET ELEVATIONS. ALL PIPE PENETRATIONS & JOINTS TO BE MADE WATERTIGHT W/NON-SHRINK WATER-PROOF GROUT.
PROVIDE 24 HOUR DETENTION TIME.



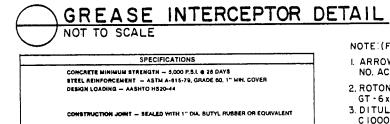
TOWN OF SUFFIELD, CONNECTICUT	DETAIL No. VII-8
TITE:	REVISION DATE:
STANDARD DETAIL	





SECTION

NOTE: ALL JOINTS & PIPE PENETRATIONS TO BE MADE WATERTIGHT WITH NON-SHRINK WATERPROOF GROUT.



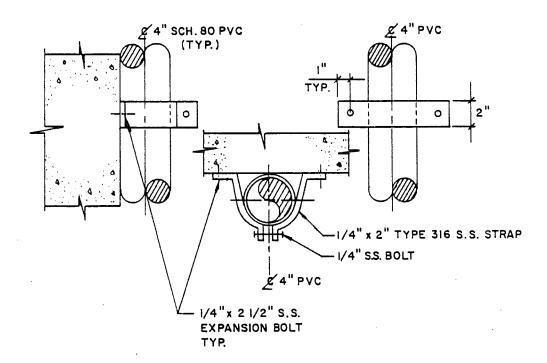
NOTE: (FOR 1000 GAL, SIZE)

- I. ARROW CONC. PRODUCTS DWG. NO. AC-GT-1000-6
- 2. ROTONDO & SONS, INC. MODEL GT - 6 x 6 - 1000
- 3. DITULLIO & SONS, INC. MODEL C 1000

TOWN OF SUFFIELD, CONNECTICUT VII-9

TITLE: REVISION DATE:

NOTE: STRAPS MANUFACTURED BY SUPERIOR METAL PRODUCT NEW BRITAIN, CT., OR APPROVED EQUAL.



INLET & OUTLET PIPE SUPPORT DETAIL

NOT TO SCALE

TOWN OF SUFFIELD, CONNECTICUT	DETAIL NO. VII — 10
TITLE: STANDARD DETAIL	REVISION DATE:

APPENDIX A **PLANNING APPLICATION**

WATER POLLUTION CONTROL AUTHORITY TOWN OF SUFFIELD APPLICATION NO.

ATTEMATION NO.
PART I CHECK LIST
SUBMIT TWO (2) COPIES OF THE FOLLOWING DOCUMENTS, INCLUDING THIS APPLICATION.
Project Narrative Proposed Pump Station Alternative Evaluation Site plan, min. scale 1" = 200' Flow Computations
APPLICATION HAS BEEN SIGNED BY THE OWNER.
APPLICATION HAS BEEN STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT.
PART II NAME OF SUBDIVISION, COMMERCIAL OR INDUSTRIAL FACILITY:
OWNERSHIP OF LAND DEVELOPMENT (NAME, ADDRESS & TELEPHONE NO.). RESPONSIBLE AGENT OR PERSON OWNER: COMPLETING APPLICATION:
TYPE OF OWNERSHIP:
INDIVIDUAL. DOMESTIC CORPORATION. REGISTERED TO DO BUSINESS IN CT. FOREIGN CORPORATION. PARTNERSHIP. OTHER.
IF CORPORATION OR PARTNERSHIP GIVE NAMES AND TITLES OF PRINCIPAL OFFICERS AND PRINCIPAL PLACE OF BUSINESS.
NAMES: TITLE:
OWNER'S SIGNATURE: AGENT/PERSON COMPLETING APPL.:
OFFICIAL USE ONLY
IS PROJECT APPROVED: YES NO REVIEWED BY:
DATE:SIGNATURE

WATER POLLUTION CONTROL AUTHORITY TOWN OF SUFFIELD APPLICATION NO.

PART III. - PROPOSED DEVELOPMENT

Ī	pe of Develor Identify the restaurant, o	type of develop	oment (for dustry, mok	example: residential, pile home park).
	100			
B. Pop	oulation serv	ved by this deve	elopment's	sewage facilities
5	5 year :		50 yea	r: r:
C. Equ	nivalent Dwel	ling Units (ED	Us) & Waste	ewater Flow
F	Provide all a proposed deve	applicable inforelopment. NOTI	rmation and E: 1 EDU =	l justification for the 238 gpd.
b years 10 years 20 years	Project : :	Sewershed		Peak Daily Flow (gpd
5 years 10 years 20 years	Project	Commercial ly Flow (gpd) Sewershed	Flows Project EDUs	Peak Daily Flow (gpd) Project Sewershed
ō years 10 years	Project:::::			Peak Daily Flow (gpd) Project Sewershed

WATER POLLUTION CONTROL AUTHORITY TOWN OF SUFFIELD APPLICATION NO.

WATER POLLUTION CONTROL AUTHORITY TOWN OF SUFFIELD APPLICATION NO.

PART V	- PROPOSED WATER SUPPLY	
A. Wa	ater Supply Method	
	Explain the water supply for proposed development:	
B. A	vailability of Public Water	
	Estimated water usage for this proposal	gpd
	Location and name of nearest public water supply:	
	Projects shall use only water-saving plumbing fixtures.	
PART VI.	- ENGINEER'S SIGNATURE AND SEAL	
	TO THE BEST OF MY KNOWLEDGE AND BELIEF THE INFORMATION CONTAINED IN THIS APPLICATION IS TRUE AND ACCURATE.	
	DATE: SEAL IGNATURE OF REGISTERED	
PI	ROFESSIONAL ENGINEER	

APPENDIX B
SEWER EXTENSION PERMIT

TOWN OF SUFFIELD WATER POLLUTION CONTROL AUTHORITY

SEWER EXTENSION PERMIT

PERMIT	NO.	S-	

PERMIT NO. 5-	
PART I CHECK LIST:	
EXCLUDING THE CHECK FOR PAYMENT, SUBMIT TWO FOLLOWING DOCUMENTS, INCLUDING THIS APPLICATE	(2) COPIES OF THE
APPLICATION FEE PLANS & SI APPLICATION DEVELOPER	
PART II APPLICANT NAME & ADDRESS:	
	TELEPHONE NUMBER:
PART III APPROVAL OF PLANS FOR CONSTRUCTION OF	₹:
SEWERS AND APPURTENANCES COST OF PROPERTY	OPOSED ACILITIES:
PART IV APPROVALS AND PERMITS HAVE BEEN OBTAIN (Submit evidence of approvals/permits) WPCA PLANNING TOWN PLANNING & ZONING COMMISSIONS PRELIMINARY DESIGN REPORT (IF REQUIRED) DEVELOPERS AGREEMENT	VED FOR: DEP CONN. DOT SUFFIELD P.W CONSERVATION COMMISSION
PART V WASTEWATER CHARACTERISTICS: Describe wastewater characteristics of efflue into sewer system if other than residential s (Attached additional sheets if necessary) Pollutant	ent being discharged sanitary wastewater. Concentration (mg/l)
OFFICIAL USE ONLY	
PERMIT ISSUED: YES NO REVIEWED BY:	
	SIGNATURE

TOWN OF SUFFIELD WATER POLLUTION CONTROL AUTHORITY

SEWER EXTENSION PERMIT

PERMIT NO. S-

		<u>. </u>	ltimate Popul	lation:
Pipe Size	e(s), Lenght	(s) & Material(s)	
5 ye 10 ye 20 ye 50 ye	Average ial:	ge Daily (gpd)		
	PUMPING FACI	LITIES		
Location	:			
Type (Con Initial popularies of the control of the	nventional, sopulation sopulation &	Submersible): erved:		
Type (Cor Initial p Design po Force Ma: Design In	nventional, sopulation sopulation & size(s), in Size(s), information: Flow: al Flow:	Submersible): erved: year: Lenght(s) & Mate	rial(s)	MAX(GPD)
Type (Cor Initial p Design po Force Ma: Design In	nventional, sopulation sepulation & young to size (s), in	Submersible): erved: year: Lenght(s) & Mate	rial(s)	MAX(GPD)
Type (Con Initial posign posign In Domestic Industrial Infiltration Design File Effective Detention Design Av	rventional, sopulation sepulation & sopulation & sopulati	Submersible): erved: year: Lenght(s) & Mate	AVG(GPD) GAL) (MIN) orce Main) t.	MAX(GPD)

- B. During construction and prior to acceptance of the sewer line by the AUTHORITY, the DEVELOPER may from time to time and upon submission of sufficient evidence of actual construction, request that the amount of the bond be reduced as construction progresses, but the amount of the bond remaining shall at all times be sufficient to insure completion of the sewer line in accordance with the approved plan and shall never be less than 30% of the original bond amount.
- C. Following acceptance of the sewer line by the AUTHORITY, the bond shall remain in effect in at least 20% of its original amount for the maintenance period required under Section 10 of this Agreement, but in any event for no less than one (1) year from the date of acceptance of the sewer line.
- D. A performance bond shall be maintained throughout the term of this Agreement and the DEVELOPER shall not allow a bond provided hereunder to expire without providing the AUTHORITY with a subsequent bond effective on or before the expiration date of the bond being replaced. If any bond expires and a subsequent bond has not been provided to the AUTHORITY, this Agreement shall be deemed revoked, without further act by the AUTHORITY and the DEVELOPER shall cease construction. In addition to any other remedy, the AUTHORITY may seek enforcement of this provision by injunction.
- E. Nothing in this Agreement shall be interpreted as requiring the AUTHORITY or the Town of Suffield to complete construction of the sewer line or to accept the sewer line as part of the municipal sewerage system in the event the DEVELOPER defaults under this Agreement or ceases construction, or abandons the sewer line or the premises prior to

completion by the DEVELOPER of all obligations under this Agreement and acceptance of the sewer line by the AUTHORITY; provided, however, the AUTHORITY, in its sole discretion, may complete construction of the sewer line or cause the DEVELOPER to complete construction of the sewer line by suit brought to enforce this Agreement or by enforcement under the performance bond, if the AUTHORITY determines that completion of the sewer line is necessary to protect the public health or safety or to prevent damage to, misuse of, or improper discharge into the municipal sewerage system.

4. EASEMENTS ON ADJOINING PROPERTIES

Upon execution of this Agreement by the DEVELOPER, the DEVELOPER shall furnish to the AUTHORITY proof in the form of duly executed and recorded deeds or bonds for deed that the DEVELOPER has acquired or has an inconditional right to acquire, easements on and through any properties not owned in fee by the DEVELOPER but which are necessary for completion of the sewer line, or its connection to the municipal sewerage system, in accordance with the plans approved by the AUTHORITY. No such deed or bond for deed shall contain any restriction or limitation preventing conveyance of the easements by the DEVELOPER to the Town of Suffield.

5. INSURANCE

A. Upon execution of this Agreement by the DEVELOPER, the DEVELOPER shall furnish proof, in the form of certificates of insurance, that the DEVELOPER is, in part, securing its obligations and the obligations of any of its contractors or subcontractors performing work under this Agreement, by maintaining at the DEVELOPER'S own expense, or the expense of the contractors or subcontractors, the following forms of insurance:

- (i) Owner's Protective Liability and Property Damage Insurance for and in the name of the AUTHORITY and the Town of Suffield and covering all claims against the AUTHORITY and the Town rising out of this Agreement.
- (ii) Public Liability and Property Damage Insurance, including coverage for acts of subcontractors, for all liability assumed under this Agreement and, where applicable, coverage for use of explosives, for collapse of buildings and damage to underground properties, and coverage required by any statute, ordinance, or regulation.
- (iii) Automobile Liability and Property Damage Insurance, including coverage for hired or borrowed vehicles.
 - (iv) Workman's Compensation and Employer's Liability Insurance.
- B. The minimum amounts of all such insurance shall be \$1,000,000.00 or each occurrence, but the stipulation of minimum amounts, or acceptance by the AUTHORITY of certificates indicating the limits of coverage, shall in no way limit the liability of the DEVELOPER to any such amounts. All liability insurance policies shall name the AUTHORITY and the Town of Suffield as co-insureds.

6. PERMITS

- A. Prior to commencing construction of the sewer line, the DEVELOPER shall obtain all required permits and approvals, in addition to the approval of the AUTHORITY, which may include, but are not limited to:
 - (i) Connecticut Department of Environmental Protection approval;
- (ii) Connecticut Department of Transportation permit for construction in any State highway;

- (iii) Suffield Department of Public Works permit for construction in any existing Town road;
- (iv) Subdivision, site plan, or special permit from the appropriate Suffield Zoning and Planning Commission;
 - (v) Inland wetlands permit.
- B. The AUTHORITY will not issue a sewer permit to begin construction until all pre-construction conditions of this Agreement and any other pre-construction conditions imposed by the AUTHORITY at the time of approving the DEVELOPER'S application have been completed and this Agreement has been executed by the DEVELOPER and by the AUTHORITY.

7. TIME OF CONSTRUCTION; EXPIRATION OF APPROVAL AND AGREEMENT

- A. Following execution of this Agreement by the DEVELOPER and by the AUTHORITY the DEVELOPER shall, without undue delay, make application for any permits necessary to construct the sewer line which have not previously been obtained. The DEVELOPER shall diligently pursue the obtaining of all such permits.
- $\ensuremath{\mathtt{B.}}$ The DEVELOPER shall commence construction of the sewer line within:
- (i) six (6) months after obtaining the last of the permits or approvals required for construction of the sewer line, or
- (ii) within one (1) year from the date of this Agreement, whichever is earlier.

Failure to begin construction during the time period specified shall render this Agreement null and void and the AUTHORITY'S approval of the DEVELOPER'S application shall be deemed revoked.

- C. Prior to expiration of the time period specified in Subsection
 7B above, the DEVELOPER may apply to the AUTHORITY for an extension of the time period of this Agreement, provided:
- (i) such application is received by the AUTHORITY, in writing, not less than one (1) full month prior to the regularly scheduled meeting of the AUTHORITY which next precedes the date of expiration. Cancellation of a regularly scheduled meeting by the AUTHORITY or lack of a quorum at a meeting such that the DEVELOPER'S application could not be rescheduled for another regularly scheduled meeting prior to expiration of the term of this Agreement, shall operate to automatically extend the term of this Agreement until the next regularly scheduled meeting of the AUTHORITY at which a quorum is present;
- (ii) an extension of the time period may be granted only upon sufficient evidence that the DEVELOPER has made timely application for all permits necessary to construct the sewer line, has pursued all applications with diligence, but that through no fault of or condition caused by the DEVELOPER, no decision has been rendered by the AUTHORITY empowered to grant or deny the permit.
- D. The DEVELOPER shall complete construction of the sewer line within five (5) years of the date of this Agreement or prior to the expiration of any subdivision approval, special permit or special exception granted by the Suffield Zoning & Planning Commission, whichever is earlier.

- E. Upon expiration of this Agreement due to lapse of time as provided in Subsection 7B or 7D above, all sums paid by the DEVELOPER for application fees or under the terms of this Agreement, including assessments paid in part or in full, shall be forfeited and no amount will be refundable to the DEVELOPER, except that the AUTHORITY will refund to the DEVELOPER any remaining portion of the deposit provided for in Section 2 of this Agreement after payment or reimbursement of all expenses as provided in Section 2, and further provided, that expiration of this Agreement shall not relieve the DEVELOPER of the obligation to pay all sums due under this Agreement including all sums due the AUTHORITY or the Town of Suffield for expenses incurred prior to expiration of this Agreement nor shall it relieve the DEVELOPER or any successor in title from payment of any assessment made against the premises.
- F. The AUTHORITY'S capacity to process and treat sewage being limited, and a portion of that capacity being reserved to the DEVELOPER upon approval of the DEVELOPER'S application, it is understood and agreed by the DEVELOPER that upon expiration of this Agreement due to lapse of time as provided by Subsection 7B or Subsection 7E above, the capacity reserved under this Agreement may be utilized by the AUTHORITY for service to other properties and that a subsequent application for the same premises may be denied by the AUTHORITY.

8. CONSTRUCTION

The DEVELOPER shall construct the sewer line in a good and workman-like manner in accordance with the construction plans approved by the AUTHORITY'S engineers, which plans are EXHIBIT B of this Agreement and as administered by the Town's field inspection personnel. The cost of

ronstruction and installation of the sewer line shall be borne soley by the DEVELOPER and the completion of the installation shall be at no cost to the AUTHORITY, or to the Town of Suffield.

9. CONNECTION TO MUNICIPAL SEWERAGE SYSTEM

- A. Following completion of construction of the sewer line, the DEVELOPER shall request an inspection of the line by the AUTHORITY'S designated inspector. Following satisfactory results of such tests and inspections as the AUTHORITY'S inspector deems advisable, the inspector shall authorize connection of the sewer line to the AUTHORITY'S municipal sewerage system. No part of the sewer line shall be connected to the municipal sewerage system until such inspection is completed and such authorization is obtained.
- B. Authorization to connect the sewer line to the municipal sewerage system shall not be deemed permission to discharge waste water or sewerage into the municipal sewerage system. The DEVELOPER shall not permit any person to discharge waste water or sewerage through the sewer line until the sewer line has been accepted by the AUTHORITY.

10. MAINTENANCE

The DEVELOPER shall maintain the sewer line for a minimum period of one (1) year from the date of acceptance of the sewer line by the AUTHORITY and shall repair at DEVELOPER'S own expense, any defect discovered, or which (through the exercise of reasonable diligence) should have been discovered during the one (1) year period. During such period the DEVELOPER will also repair at its own expense any damage to any public street or highway, any grounds, or any structure or other improvements to property caused during construction, caused by any defect in the sewer line, or caused during maintenance or repair of the sewer line. Should

the AUTHORITY or the Town of Suffield suffer any loss or expense due to the DEVELOPER'S failure to maintain or repair, the DEVELOPER shall reimburse the AUTHORITY or the Town for all such losses and expenses, including costs of collection and reasonable attorney's fees in enforcing this provision.

11. USE OF THE SEWER LINE

- A. The DEVELOPER, its successors and assigns, shall be entitled to connect to the sewer line only:
 - [] residential dwellings constructed on the building lots shown and designated in EXHIBIT _____.
 - [] the commercial building or buildings shown and designated in EXHIBIT _____.
- B. The DEVELOPER shall not connect nor permit any other person to connect to the sewer line, any properties, lots or buildings which are not shown on EXHIBIT without the express consent of the AUTHORITY, which consent may be in the form of an amendment to this Agreement executed by the DEVELOPER and on behalf of the AUTHORITY.
- C. Subsequent to the AUTHORITY'S approval of the plans attached hereto as EXHIBIT B, the DEVELOPER, its successors and assigns, shall not change the type of use of the sewer line or anticipated volume discharges as contemplated by the plans without the express consent of the AUTHORITY, which consent may be in the form of an amendment to this Agreement executed by the DEVELOPER and on behalf of the AUTHORITY.

12. ASSESSMENT OF BENEFITS

A. Upon execution of this Agreement, the AUTHORITY may cause a "caveat" to be recorded on the land records, which caveat will serve as notice that the property described in EXHIBIT A will be subject to an assessment of benefits upon completion of construction of the sewer line.

- B. Benefit assessments will be levied and paid in accordance with the sewer benefit assessment policy of the AUTHORITY in effect at the time the assessment is made. If the premises consist of several parcels of land or if the plans approved by the AUTHORITY, attached as EXHIBIT B, provided for division of the premises into more than one parcel or building lot, then the assessment shall be made on a per parcel or per building lot basis and not as a single assessment against the premises as a whole. Such assessments shall be a lien upon the premises enforceable in accordance with applicable statutes.
- C. A statement of assessment amounts and due dates and an estimate of final benefit assessment, (the estimate being for informational purposes only), is attached hereto as EXHIBIT C. It is understood and agreed by the DEVELOPER that the amount of the final assessment is an estimate only, is not binding upon the AUTHORITY, is subject to correction for errors, and that the actual final assessment may differ from the estimate. It is further understood and agreed that the final assessment will be based on the sewer benefit assessment policy of the AUTHORITY which is in effect at the time the assessment is made, not at the time of this Agreement.
- D. It is understood and agreed by the DEVELOPER that sewer user charges will be levied for actual use of the public sewerage system, separate from the benefits assessment, based upon the sewer user rates adopted by the AUTHORITY from time to time. It is further understood and agreed by the DEVELOPER that connection charges may be levied for connection of individual properties or buildings to the sewer line, separate from the benefits assessments, based upon the connection charge fees adopted by the AUTHORITY from time to time.

13. ACCEPTANCE OF THE SEWER LINE BY THE AUTHORITY

- A. Following connection of the sewer line to the municipal sewerage system, in accordance with Section 9 of this Agreement, the DEVELOPER may apply to the AUTHORITY to accept the sewer line and incorporate the line into the municipal sewerage system.
- B. With the application to accept the sewer line, the DEVELOPER shall deliver the following to the AUTHORITY, and it is expressly understood that no application to accept will be received by the AUTHORITY unless accompanied by all of the following:
- (i) "As Built" plans and profiles of the completed sewer line and appurtenances certified by a professional engineer to accurately describe the location and size of all facilities constructed and the boundaries of any easement or real property to be conveyed to the Town of Juffield. The drawing or drawings shall be in ink on Mylar, 24" x 36", drawn on a scale of 1" = 4' vertical and 1" = 40' horizontal;
 - (ii) original, executed (but unrecorded) deeds conveying to the Town of Suffield such unencumbered fee simple titles to property or permanent easements in and across properties as are necessary to insure the continued ability of the AUTHORITY to own and maintain the sewer line;
 - (iii) a policy or policies of title insurance naming the Town of Suffield as insured and insuring the fee simple title or permanent easement rights to be dedicated to the Town by the deeds referred to in (ii) above:
- (iv) payment of all assessment amounts due as of the date DEVELOPER applies for acceptance of the line and, if the amount of the final assessment has been determined, written acceptance by the DEVELOPER of the benefit assessment levied, or to be levied, by the AUTHORITY under

'ts sewer benefits assessment policy or certification from the DEVELOPER that the time to appeal has passed and that no appeal was filed or that a final judgement has been rendered by the appropriate Court in any appeal filed.

- (v) a performance bond in an amount not less than 20% of the original bond amount specified in Section 3 of this Agreement and with a term of not less than one (1) year, insuring the DEVELOPER'S obligations to maintain and repair the sewer line, unless the original bond submitted under Section 3 or any subsequent bond, by its terms, will continue in effect for at least one (1) year from the AUTHORITY'S acceptance of the sewer line;
- (vi) satisfactory evidence of approval of construction by the

 Connecticut Department of Transportation, the Connecticut Department of

 Invironmental Protection, the Suffield Department of Public Works, or any
 other authority from which permits may have been required.
 - c. Prior to acceptance of the sewer line the AUTHORITY may require review of all documents and plans by its designated agents and, if the same are deemed unsatisfactory for the purposes intended, may require that the DEVELOPER submit revised or substitute documents or plans. The AUTHORITY may also request any additional information from the DEVELOPER which the AUTHORITY reasonably deems necessary in determining whether to accept the sewer line.

- D. Upon verification from the AUTHORITY'S engineers and/or other agents that the DEVELOPER has fulfilled all of the terms of this Agreement, that the sewer line has been completed in accordance with the approved plans and is in acceptable operating condition, that all roadways, curbs, walks, grounds and other appurtenances disturbed by construction have been acceptably restored, and that all necessary titles or easements have been conveyed to the Town, then the AUTHORITY, by appropriate resolution voted upon, shall accept, acquire title to, and incorporate into the public sewerage system the sewer line constructed under this Agreement.
- E. Acceptance of the sewer line by the AUTHORITY shall not relieve the DEVELOPER of the obligation to maintain and repair under Section 10 of this Agreement, nor relieve the DEVELOPER of the obligation to make any ayments due hereunder, nor shall acceptance of the sewer line be deemed a waiver by the AUTHORITY of its right to enforce any responsibility or obligation of the DEVELOPER under this Agreement and the Agreement shall survive acceptance of the sewer line and continue in full force and effect for all such purposes.

14. INDEMNIFICATION, COSTS OF ENFORCEMENT

A. The DEVELOPER agrees that it shall at all times indemnify and save harmless the AUTHORITY, the Town of Suffield and their respective officers, agents and servants, on account of any and all claims, damages, losses, litigation, expenses, counsel fees, and compensation arising out of injuries, including death and property damage, sustained by, or alleged to have been sustained by, the servants, employees or agents of the

AUTHORITY and the Town, or of the DEVELOPER, any contractors or subcontractors employed by it or any materialmen, and from injuries, including death and property damage, sustained by or alleged to have been
sustained by the public, any or all persons on or near the work, or by any
other person or property, real or personal (including property of the
AUTHORITY and the Town) caused in whole or in part by the acts of
omissions of the DEVELOPER, any contractors employed by it or any subcontractor or materialman or anyone directly or indirectly employed by
them while engaged in the construction of the sewer line.

B. In the event of the DEVELOPER'S failure to perform any of the obligations under this Agreement, the DEVELOPER shall pay all cost, including reasonable attorney's fees, incurred by the AUTHORITY or the Town of Suffield in enforcing the terms of this Agreement. In the event the AUTHORITY or the Town of Suffield successfully defends any challenge to the validity or legality of this Agreement, or any part hereof, in an action brought by the DEVELOPER, then the DEVELOPER shall pay to the Town of Suffield such costs, including reasonable attorney's fees, as the Court, hearing and determining such challenge, shall deem reasonable for defending in such action.

15. TRANSFER OF TITLE

A. The obligations and responsibilities assumed by the DEVELOPER under this Agreement being personal to the DEVELOPER, the same shall survive any conveyance or other transfer of title of the premises and such conveyance or other transfer of title shall not relieve the DEVELOPER from performing such obligations and responsibilities, without the express consent of the AUTHORITY.

B. No person acquiring any title to the premises by conveyance or other transfer from the DEVELOPER shall acquire any of the rights and privileges granted by this Agreement unless such person also assumes all obligations and responsibilities of the DEVELOPER, and only with the express consent of the AUTHORITY.

16. SEVERABILITY

If any part of this Agreement shall be adjudged invalid or unenforceable by a court of competent jurisdiction, the same shall not affect the remainder of this Agreement, and the remainder of the Agreement shall continue in full force and effect.

17. EFFECTIVE DATE

The effective date of this Agreement shall be the date of its execution on behalf of the AUTHORITY.

8. CAPTIONS

Captions in this Agreement are i	nserted for reference and as a
natter of convenience only and are not	, intended to in any way limit or
define the specific terms of this Agre	·
IN WITNESS WHEREOF, the parties	
hands.	
	SUFFIELD WATER POLLUTION CONTROL AUTHORITY
	Ву
	Its Chairman
	DEVELOPER By
	Its:
STATE OF CONNECTICUT) (COUNTY OF HARTFORD) (COUNTY OF HARTFORD)	the purposes therein contained on
	Notary Public/Commissioner of the Superior Court
STATE OF CONNECTICUT)	
COUNTY OF HARTFORD)	
On this the day of	, 19, before me, the
undersigned officer, personally appearsigner of the foregoing instrument, whis/her free act and deed.	who acknowledged the same to be
	Notary Public/Commissioner of the Superior Court

EXHIBIT A PROPERTY DESCRIPTION

Note:

- (a) Boundary line description with reference to a deed or other document of record; if a map reference is used, the map should already be of record;
- (b) if application is for a proposed subdivision, not yet approved by Zoning and Planning, Exhibit A should include a copy of the proposed subdivision map in addition to, but not in lieu of, the boundary description, unless all proposed lots are set forth on the design plan, Exhibit B.

EXHIBIT B

[Design plan for sewer line.]

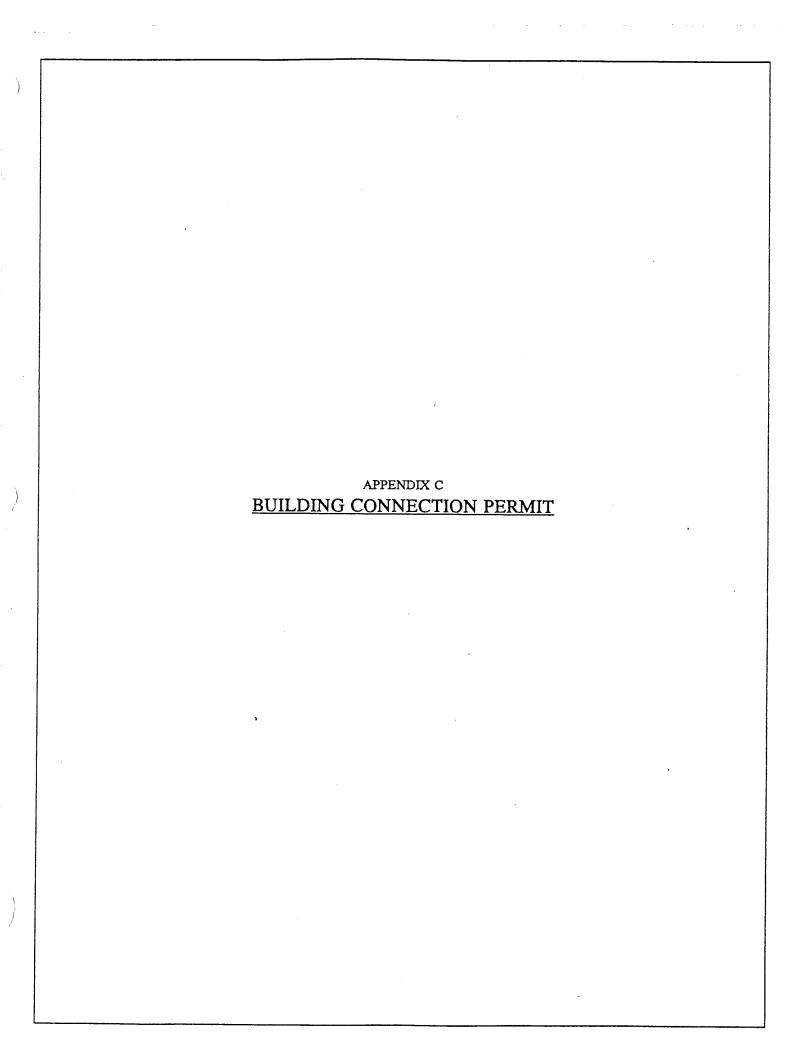
EXHIBIT C

[Preliminary assessments with dates or time due and an estimate of the final assessment.]

TOWN OF SUFFIELD

APPLICATION FOR EXCAVATION PERMIT

		Per	mit Fee \$20.00
Date		Per	mit #
Applicant's Name			
Address			
Owner's Name			
Address			
	PROPOSED E	XCAVATION	
Purpose of Application			
Site Location			
Is Bond Required	yes	no, amount	
istance from intersec	ting St	ft. N S E W of	£ St.
Approximate surface ar	ea to be dis	turbed	Sq. Yd.
Type of existing pavem	nent		
Starting Date		_Completion Date_	
NOTE TO APPLICANT: LOC	CATION MAP OR	SKETCH MUST ACCO	MPANY THIS APPL
Amount	Insura	nce carried by ap Company	Expiration
Public liability \$100,	,000/300,000	<u> </u>	Date
Property Damage \$50,00	- 10		
The undersigned, herekand regulations relations relations treet or sidewalk shawas previous to said ewill reimburse and indiction any manner incurrence and incomparation or work from the second statement of the second stat	oy agrees to ang to the wo all be restor excavation or demnify the Tered by reasoom the time s	rk to be done, the ed to as good a converse work, and that to the connection of and in connection work is commended.	endition as it the applicant ges and costs by ection with such
Signature of Applicant			
CALL BEEODE VOIL DIG NI	IMBER #		



TOWN OF SUFFIELD WATER POLLUTION CONTROL AUTHORITY

BUILDING CONNECTION PERMIT

PERMIT NO. C-
PART I CHECK LIST:
EXCLUDING THE CHECK SUBMIT TWO (2) COPIES OF THE FOLLOWING DOCUMENTS INCLUDING THIS APPLICATION.
APPLICATION FEE APPLICATION PLANS & SPECIFICATIONS
PART II APPLICANT NAME & ADDRESS:
TELEPHONE NUMBER:
PART III APPROVAL OF PLANS FOR CONSTRUCTION OF:
BUILDING CONNECTION FOR PROJECT WITH FLOWS LESS THAN 476 GP. BUILDING CONNECTION FOR PROJECT WITH FLOWS EQUAL TO OR GREATER THAN 476 GPD (EQUIVALENT TO 2 SINGLE FAMILY DWELLINGS).
PART IV APPROVALS AND PERMITS HAVE BEEN OBTAINED FROM: (Submit evidence of approvals/permits) WPCA PLANNING TOWN PLANNING & ZONING BOARDS/COMMISSIONS DEP CONSERVATION COMMISSION
PART V WASTEWATER CHARACTERISTICS
Describe wastewater characteristics of effluent being discharged into sewer system if other than residential sanitary wastewater (Attach additional sheets if necessary). Pollutant Concentration (mg/l
OFFICIAL USE ONLY
PERMIT ISSUED: YES NO REVIEW BY:

SIGNTURE

DATE: ____

TOWN OF SUFFIELD WATER POLLUTION CONTROL AUTHORITY

BUILDING CONNECTION PERMIT

PERMIT	NO.	C-		
--------	-----	----	--	--

PART V SEWER SYSTEM	
tillimate degion very	Ultimate population:s), Material(s):
Design Flow Data Average Initial: 5 year: 10 year: 20 year: 50 year: Ultimate:	
PART VI SIGNATURES (EN GPD)	IGINEER'S SIGNATURE REQUIRED IF FLOW > 476
APPLICANT SIGNATURE:	
information contained in drawings, plans, and speciapplication and that I had quality, true and correct of the Town of Suffield,	the application and supporting documents, cifications which are part of this ave found it to be of good engineering t, and in conformance with the requirements Water Pollution Control Authority, and it my knowledge, withhold information that is tion of compliance with the requirements of
Name of Design Engineer: Design Firm: Mailing Address:	
Telephone No:	SEAL
	Signature

APPENDIX D SEWER EXTENSION REPAIR PERMIT

TOWN OF SUFFIELD WATER POLLUTION CONTROL AUTHORITY

SEWER EXTENSION REPAIR PERMIT

P.	ERMIT	NO.	SR-		
----	-------	-----	-----	--	--

PERMIT NO. SR-	
PART I CHECK LIST:	
EXCLUDING THE CHECK FOR PAYMENT, S FOLLOWING DOCUMENTS INCLUDING THIS	SUBMIT TWO (2) COPIES OF THE S APPLICATION.
APPLICATION FEE PLANS & SPECIFICATIONS	APPLICATION
PART II APPLICANT NAME & ADDRESS:	
	TELEPHONE NUMBER:
PART III APPROVAL OF PLANS FOR REP.	AIR TO:
SEWERS AND APPURTENANCES PUMP STATIONS	COST OF PROPOSED REPAIR TO SEWERAGE FACILITIES
PART IV APPROVALS AND PERMITS HAVE (Submit evidence of approv	BEEN OBTAINED FOR: als/permits)
DEP PRELIMINARY DESIGN REPORT (IF CONSERVATION COMMISSION	REQUIRED)
PART V WASTEWATER CHARACTERISTICS	
Describe wastewater characteristi into sewer system if other than r (Attach additional sheets if nece Pollutant	esidential sanitary wastewater
OFFICIAL U	SE ONLY
PERMIT ISSUED: YES NO REVIE	WED BY:
DATE:	CICNATUDE

TOWN OF SUFFIELD WATER POLLUTION CONTROL AUTHORITY

SEWER EXTENSION REPAIR PERMIT

PERMIT NO. SR-

Describe	Problem And		Size:	
Describe	Repair:			
r VII	PUMP STATIO	N(S)		
Pump Sta Location				
Initial	population	served:		
Force Ma	in Size(s),	Length(s), Ma	terial(s):	
Domestic Industri	al Flow tion/Inflow		AVG (GPD)	***************************************
Detentio Design A	n Time verage Velo	Pump Station ad	Main - (MIN) + Force Main)	(FPS)

TOWN OF SUFFIELD WATER POLLUTION CONTROL AUTHORITY

SEWER EXTENSION PERMIT

PERMIT	NO.	S-	

DADO VIII	DIMED COMMITTED COMMITTED BY CIT TOTAL	
PART VIII	PUMP STATION ODOR CONTROL FACILITIES	
1.	Has the generation of objectionable odors be the design of this station? Yes	en considered in
2.	Will an odor control system be installed? Yes No	
•	Describe the measures taken to minimize the objectionable odors during the design life of station.	
- - -		
PART IX.	- SIGNATURES	
APPLI SIGNA	CANT FURE:	
information drawings, application true and of South to the best of the best of the south for the sou	concertify that I have personally reviewed all on contained in the application and supportion plans, and specifications which are part of on and that I have found it to be good enging correct, and in conformance with the require affield, Water Pollution Control Authority, st of my knowledge, withhold information that amination of compliance with the requirement	ve documents, this eering quality, ments of the and it does not, at is pertinent
	esign Engineer:	
Telephone	No:	SEAL
		SIGNATURE

APPENDIX E

CONNECTION REPAIR PERMIT

TOWN OF SUFFIELD WATER POLLUTION CONTROL AUTHORITY

BUILDING CONNECTION REPAIR PERMIT

PERMIT	NO.	CR-
--------	-----	-----

PART I CHECK LIST:	
EXCLUDING THE CHECK FOR PAYMENT, SUBMIT TO FOLLOWING DOCUMENTS INCLUDING THIS APPLICATION	NO (2) COPIES OF THE ATION.
APPLICATION FEE AND	PPLICATION
PART II APPLICANT NAME & ADDRESS:	TO TOWN NUMBER.
	TELEPHONE NUMBER:
PART III APPROVAL OF PLANS FOR REPAIR OF:	
BUILDING CONNECTION FOR PROJECT WITH BUILDING CONNECTION FOR PROJECT WITH THAN 476 GPD (EQUIVALENT OF 2 SINGLE	FLOWS EQUAL OR GREATER
PART IV APPROVALS AND PERMITS HAVE BEEN OB (Submit evidence of approvals/perm WPCA PLANNING TOWN PLANNING & ZONING BOARDS/COMMISS DEP	its)
CONSERVATION COMMISSION	
PART V WASTEWATER FLOWS	·
Average Daily Flow Currently: Peak Daily Flow Currently:	gpd. _ gpd.
Ultimate Average Daily Flow: Ultimate Peak Daily Flow:	gpd.
OFFICIAL USE ONLY	,
PERMIT ISSUED: YES NO REVIEWED BY:	
	SIGNATURE

TOWN OF SUFFIELD WATER POLLUTION CONTROL AUTHORITY

BUILDING CONNECTION REPAIR PERMIT

PERMIT	NO.	CR-	

PART VI WASTEWATER CHARACTERISTICS	•
Describe wastewater characteristics of into sewer system, if other than reside (Attach additional sheets if necessary)	ential sanitary wastewater
Pollutant	Concentration (mg/l)
PART VII SEWER SYSTEM	
Exiting Pipe Size & Material: Describe Problem and Location:	
Describe Repair:	
PART VIII SIGNATURES (ENGINEER'S SIGNATU	JRE REQUIRED IF FLOW > 476
APPLICANT SIGNATURE:	
This is to certify that I have personally rinformation contained in the application and drawings, plans, and specifications which a application and that I have found it to be true and correct, and in conformance with to Town of Suffield, Water Pollution Control A to the best of my knowledge, withhold inforto a determination of compliance with the respective services.	nd supportive documents, are part of this good engineering quality, the requirements of the authority, and it does not mation that is pertinent
Name of Design Engineer:	
Mailing	
Address:	
Telephone No:	Seal

Signature

APPENDIX F
DEVELOPER'S AGREEMENT

DEVELOPER'S AGREEMENT

By and Between

THE WATER POLLUTION CONTROL AUTHORITY

OF

THE TOWN OF SUFFIELD

and

·			7 A. W	DEVELOPER
Project	Referen	ice		
				Town Copy
				Developer's Copy

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ı	13.	Acceptance of the Sewer Line by the Authority	Page	13
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WATER POLLUTION CONTROL AUTHORITY

TOWN OF SUFFIELD

DEVELOPER'S AGREEMENT

AGREEMENT MADE thisday of, 19;
by and between
THE WATER POLLUTION CONTROL AUTHORITY
of the Town of Suffield, County of Hartford and State of Connecticut
hereinafter designated the "AUTHORITY"
and
of
hereinafter designated the "DEVELOPER"
WITNESSETH:
WHEREAS, the DEVELOPER is the owner of certain premises located on Street/Road in the Town of Suffield, which are more particularly described in EXHIBIT A attached hereto (hereinafter referred to as "the premises"); and
WHEREAS, the DEVELOPER desires to
[] construct residential dwellings on the lots designated in Exhibit $___$.
[] offer for sale, residential building lots as designated in Exhibit

[]	construct a commercial Exhibit	building .	or	buildings	as	designated	ın
. []	other:				_		
					_		

and

WHEREAS, the DEVELOPER desires that the premises be served by the public sewerage disposal system and desires to obtain a permit from the AUTHORITY in order to construct the sewer line to service the premises and to connect that line to the AUTHORITY'S existing sewerage system; and

WHEREAS, the AUTHORITY has approved the design of the sewerage line as shown on plans or prints marked EXHIBIT B, attached hereto and made a part hereof,

NOW THEREFORE, in consideration of the foregoing and of the promises and covenants herein contained the AUTHORITY and the DEVELOPER agree:

1. CONSENT TO CONSTRUCTION

The AUTHORITY agrees to permit the DEVELOPER to construct a sewer line to service the premises and to incorporate the sewer line into the AUTHORITY'S municipal sewerage system, subject to the terms and conditions of this AGREEMENT, and provided that:

- (a) all application fees have been paid in full;
- (b) construction of the sewer line shall be by a properly licensed drain layer or contractor employed by the DEVELOPER and approved by the AUTHORITY;
- (c) construction of the sewer line shall be at the DEVELOPER'S sole cost and expense and without cost to the AUTHORITY or to the Town of Suffield;
- (d) all construction shall be done in accordance with the plans or prints, previously submitted to and approved by the AUTHORITY and its engineers, which

plans or prints are EXHIBIT B of this Agreement;

- (e) prior to commencing construction of the sewer line the DEVELOPER shall have completed all pre-construction conditions of this Agreement, including payment of the deposit under Section 2, posting of the bond under Section 3, submission of documents required under Section 4, submission of insurance certificates required under Section 5, and payment of any assessment, or part thereof, due under Section 12 and Exhibit C, and all of which shall be submitted and approved before a sewer construction permit is issued to the DEVELOPER.
- (f) prior to the sewer line being incorporated into the municipal sewerage system, the DEVELOPER shall have complied with all post-construction requirements of this Agreement, as specified in Section 13.

As used in this Agreement, "sewer line" means the entire facility to be constructed by the DEVELOPER including pipe lines, connections, pump stations, manholes and any other appurtenances necessary to make the completed facility an operating sewerage disposal system capable of integration into the existing municipal sewerage system.

2. REIMBURSEMENT TO AUTHORITY, DEPOSIT FOR EXPENSES

- A. The DEVELOPER agrees to reimburse the AUTHORITY for all costs of preliminary engineering reviews, inspections, supervisory engineering, grade taking, measuring, testing, legal expenses, and all other related expenses incurred by the AUTHORITY or the Town of Suffield prior to or during construction of the sewer line, or during any maintenance period stipulated in this Agreement.
- - C. During the time of construction of the sewer line, the

AUTHORITY or the Town of Suffield may without further consent of the DEVELOPER draw on the funds so deposited, and on any subsequent deposits, to pay or reimburse expenses incurred by the AUTHORITY or the Town.

- D. In the event the full amount of the deposit is expended prior to acceptance of the sewer line by the AUTHORITY the AUTHORITY shall require that the DEVELOPER deposit additional funds in such amount as the AUTHORITY reasonably deems necessary to meet actual or anticipated expenses in excess of the initial deposit, and the AUTHORITY may require further subsequent deposits as amounts deposited are expended. The DEVELOPER shall make all additional deposits within ten (10) days after written notice from the AUTHORITY.
- E. Upon acceptance of the sewer line by the AUTHORITY any remaining funds on deposit, after payment or reimbursement of all expenses incurred by the AUTHORITY or the Town of Suffield, shall be returned to the DEVELOPER.

3. PERFORMANCE BOND

- A. Upon execution of this Agreement by the DEVELOPER, the DEVELOPER shall provide the AUTHORITY with a performance bond, with such surety as the AUTHORITY deems acceptable, in the amount of and in favor of the AUTHORITY and the Town of Suffield. Such bond shall insure the completion and maintenance of the sewer line to be constructed by the DEVELOPER and performance of all of DEVELOPER'S obligations hereunder, and shall be in an amount not less than the estimated cost, as determined by the AUTHORITY'S engineer, for the completion of and the connecting of the DEVELOPER'S proposed sewer line to the municipal sewerage system.
 - B. During construction and prior to acceptance of the sewer line

by the AUTHORITY, the DEVELOPER may from time to time and upon submission of sufficient evidence of actual construction, request that the amount of the bond be reduced as construction progresses, but the amount of the bond remaining shall at all times be sufficient to insure completion of the sewer line in accordance with the approved plan and shall never be less than 30% of the original bond amount.

- C. Following acceptance of the sewer line by the AUTHORITY, the bond shall remain in effect in at least 20% of its original amount for the maintenance period required under Section 10 of this Agreement, but in any event for no less than one (1) year from the date of acceptance of the sewer line.
- D. A performance bond shall be maintained throughout the term of this Agreement and the DEVELOPER shall not allow a bond provided hereunder to expire without providing the AUTHORITY with a subsequent bond effective on or before the expiration date of the bond being replaced. If any bond expires and a subsequent bond has not been provided to the AUTHORITY, this Agreement shall be deemed revoked, without further act by the AUTHORITY and the DEVELOPER shall cease construction. In addition to any other remedy, the AUTHORITY may seek enforcement of this provision by injunction.
- E. Nothing in this Agreement shall be interpreted as requiring the AUTHORITY or the Town of Suffield to complete construction of the sewer line or to accept the sewer line as part of the municipal sewerage system in the event the DEVELOPER defaults under this Agreement or ceases construction, or abandons the sewer line or the premises prior to completion by the DEVELOPER of all obligations under this Agreement and acceptance of the sewer line by the AUTHORITY; provided, however, the AUTHORITY, in its sole discretion, may complete construction of the sewer line or cause the DEVELOPER to complete

construction of the sewer line by suit brought to enforce this

Agreement or by enforcement under the performance bond, if the

AUTHORITY determines that completion of the sewer line is necessary to

protect the public health or safety or to prevent damage to, misuse

of, or improper discharge into the municipal sewerage system.

4. EASEMENTS ON ADJOINING PROPERTIES

Upon execution of this Agreement by the DEVELOPER, the DEVELOPER shall furnish to the AUTHORITY proof in the form of duly executed and recorded deeds or bonds for deed that the DEVELOPER has acquired or has an unconditional right to acquire, easements on and through any properties not owned in fee by the DEVELOPER but which are necessary for completion of the sewer line, or its connection to the municipal sewerage system, in accordance with the plans approved by the AUTHORITY. No such deed or bond for deed shall contain any restriction or limitation preventing conveyance of the easements by the DEVELOPER to the Town of Suffield.

5. INSURANCE

- A. Upon execution of this Agreement by the DEVELOPER, the DEVELOPER shall furnish proof, in the form of certificates of insurance, that the DEVELOPER is, in part, securing its obligations and the obligations of any of its contractors or subcontractors performing work under this Agreement, by maintaining at the DEVELOPER'S own expense, or the expense of the contractors or subcontractors, the following forms of insurance:
- (i) Owner's Protective Liability and Property Damage Insurance for and in the name of the AUTHORITY and the Town of Suffield and covering all claims against the AUTHORITY and the Town rising out of this Agreement.
 - (ii) Public Liability and Property Damage Insurance, including

coverage for acts of subcontractors, for all liability assumed under this Agreement and, where applicable, coverage for use of explosives, for collapse of buildings and damage to underground properties, and coverage required by any statute, ordinance, or regulation.

- (iii) Automobile Liability and Property Damage Insurance, including coverage for hired or borrowed vehicles.
- (iv) Workman's Compensation and Employer's Liability Insurance.
- B. The minimum amounts of all such insurance shall be \$1,000,000.00 for each occurrence, but the stipulation of minimum amounts, or acceptance by the AUTHORITY of certificates indicating the limits of coverage, shall in no way limit the liability of the DEVELOPER to any such amounts. All liability insurance policies shall name the AUTHORITY and the Town of Suffield as co-insureds.

6. PERMITS

- A. Prior to commencing construction of the sewer line, the DEVELOPER shall obtain all required permits and approvals, in addition to the approval of the AUTHORITY, which may include, but are not limited to:
- (i) Connecticut Department of Environmental Protection approval;
- (ii) Connecticut Department of Transportation permit for construction in any State highway;
- (iii) Suffield Department of Public Works permit for construction in any existing Town road;
- (iv) Subdivision, site plan, or special permit from the appropriate Suffield Zoning and Planning Commission;
 - (v) Inland wetlands permit.
 - B. The AUTHORITY will not issue a sewer permit to begin

construction until all pre-construction conditions of this Agreement and any other pre-construction conditions imposed by the AUTHORITY at the time of approving the DEVELOPER'S application have been completed and this Agreement has been executed by the DEVELOPER and by the AUTHORITY.

7. TIME OF CONSTRUCTION; EXPIRATION OF APPROVAL AND AGREEMENT

- A. Following execution of this Agreement by the DEVELOPER and by the AUTHORITY the DEVELOPER shall, without undue delay, make application for any permits necessary to construct the sewer line which have not previously been obtained. The DEVELOPER shall diligently pursue the obtaining of all such permits.
- B. The DEVELOPER shall commence construction of the sewer line within:
 - (i) six (6) months after obtaining the last of the permits or approvals required for construction of the sewer line, or
 - (ii) within one (1) year from the date of this Agreement, whichever is earlier.

Failure to begin construction during the time period specified shall render this Agreement null and void and the AUTHORITY'S approval of the DEVELOPER'S application shall be deemed revoked.

- C. Prior to expiration of the time period specified in Subsection 7B above, the DEVELOPER may apply to the AUTHORITY for an extension of the time period of this Agreement, provided:
- (i) such application is received by the AUTHORITY, in writing, not less than one (1) full month prior to the regularly scheduled meeting of the AUTHORITY which next precedes the date of expiration. Cancellation of a regularly scheduled meeting by the AUTHORITY or lack of a quorum at a meeting such that the DEVELOPER'S application could not be rescheduled for another regularly scheduled meeting prior to

expiration of the term of this Agreement, shall operate to automatically extend the term of this Agreement until the next regularly scheduled meeting of the AUTHORITY at which a quorum is present;

- (ii) an extension of the time period may be granted only upon sufficient evidence that the DEVELOPER has made timely application for all permits necessary to construct the sewer line, has pursued all applications with diligence, but that through no fault of or condition caused by the DEVELOPER, no decision has been rendered by the AUTHORITY empowered to grant or deny the permit.
- D. The DEVELOPER shall complete construction of the sewer line within five (5) years of the date of this Agreement or prior to the expiration of any subdivision approval, special permit or special exception granted by the Suffield Zoning & Planning Commission, whichever is earlier.
 - E. Upon expiration of this Agreement due to lapse of time as provided in Subsection 7B or 7D above, all sums paid by the DEVELOPER for application fees or under the terms of this Agreement, including assessments paid in part or in full, shall be forfeited and no amount will be refundable to the DEVELOPER, except that the AUTHORITY will refund to the DEVELOPER any remaining portion of the deposit provided for in Section 2 of this Agreement after payment or reimbursement of all expenses as provided in Section 2, and further provided, that expiration of this Agreement shall not relieve the DEVELOPER of the obligation to pay all sums due under this Agreement including all sums due the AUTHORITY or the Town of Suffield for expenses incurred prior to expiration of this Agreement nor shall it relieve the DEVELOPER or any successor in title from payment of any assessment made against the premises.

F. The AUTHORITY'S capacity to process and treat sewage being limited, and a portion of that capacity being reserved to the DEVELOPER upon approval of the DEVELOPER'S application, it is understood and agreed by the DEVELOPER that upon expiration of this Agreement due to lapse of time as provided by Subsection 7B or Subsection 7E above, the capacity reserved under this Agreement may be utilized by the AUTHORITY for service to other properties and that a subsequent application for the same premises may be denied by the AUTHORITY.

8. CONSTRUCTION

The DEVELOPER shall construct the sewer line in a good and workmanlike manner in accordance with the construction plans approved by the AUTHORITY'S engineers, which plans are EXHIBIT B of this Agreement and as administered by the Town's field inspection personnel. The cost of construction and installation of the sewer line shall be borne solely by the DEVELOPER and the completion of the installation shall be at no cost to the AUTHORITY, or to the Town of Suffield.

9. CONNECTION TO MUNICIPAL SEWERAGE SYSTEM

- A. Following completion of construction of the sewer line, the DEVELOPER shall request an inspection of the line by the AUTHORITY'S designated inspector. Following satisfactory results of such tests and inspections as the AUTHORITY'S inspector deems advisable, the inspector shall authorize connection of the sewer line to the AUTHORITY'S municipal sewerage system. No part of the sewer line shall be connected to the municipal sewerage system until such inspection is completed and such authorization is obtained.
- B. Authorization to connect the sewer line to the municipal sewerage system shall not be deemed permission to discharge waste

water or sewerage into the municipal sewerage system. The DEVELOPER shall not permit any person to discharge waste water or sewerage through the sewer line until the sewer line has been accepted by the AUTHORITY.

10. MAINTENANCE

The DEVELOPER shall maintain the sewer line for a minimum period of one (1) year from the date of acceptance of the sewer line by the AUTHORITY and shall repair at DEVELOPER'S own expense, any defect discovered, or which (through the exercise of reasonable diligence) should have been discovered during the one (1) year period. During such period the DEVELOPER will also repair at its own expense any damage to any public street or highway, any grounds, or any structure or other improvements to property caused during construction, caused by any defect in the sewer line, or caused during maintenance or repair of the sewer line. Should the AUTHORITY or the Town of Suffield suffer any loss or expense due to the DEVELOPER'S failure to maintain or repair, the DEVELOPER shall reimburse the AUTHORITY or the Town for all such losses and expenses, including costs of collection and reasonable attorney's fees in enforcing this provision.

11. USE OF THE SEWER LINE

- A. The DEVELOPER, its successors and assigns, shall be entitled to connect to the sewer line only:
 - [] residential dwellings constructed on the building lots shown and designated in EXHIBIT . .
 - [] the commercial building or buildings shown and designated in EXHIBIT .
- B. The DEVELOPER shall not connect nor permit any other person to

 connect to the sewer line, any properties, lots or buildings which are not shown on EXHIBIT _____ without the express consent of the

AUTHORITY, which consent may be in the form of an amendment to this Agreement executed by the DEVELOPER and on behalf of the AUTHORITY.

C. Subsequent to the AUTHORITY'S approval of the plans attached hereto as EXHIBIT B, the DEVELOPER, its successors and assigns, shall not change the type of use of the sewer line or anticipated volume discharges as contemplated by the plans without the express consent of the AUTHORITY, which consent may be in the form of an amendment to this Agreement executed by the DEVELOPER and on behalf of the AUTHORITY.

12. ASSESSMENT OF BENEFITS

- A. Upon execution of this Agreement, the AUTHORITY may cause a "caveat" to be recorded on the land records, which caveat will serve as notice that the property described in EXHIBIT A will be subject to an assessment of benefits upon completion of construction of the sewer line.
- B. Benefit assessments will be levied and paid in accordance with the sewer benefit assessment policy of the AUTHORITY in effect at the time the assessment is made. If the premises consist of several parcels of land or if the plans approved by the AUTHORITY, attached as EXHIBIT B, provided for division of the premises into more than one parcel or building lot, then the assessment shall be made on a per parcel or per building lot basis and not as a single assessment against the premises as a whole. Such assessments shall be a lien upon the premises enforceable in accordance with applicable statutes.
- C. A statement of assessment amounts and due dates and an estimate of final benefit assessment, (the estimate being for informational purposes only), is attached hereto as EXHIBIT C. It is understood and agreed by the DEVELOPER that the amount of the final assessment is an estimate only, is not binding upon the AUTHORITY, is

subject to correction for errors, and that the actual final assessment may differ from the estimate. It is further understood and agreed that the final assessment will be based on the sewer benefit assessment policy of the AUTHORITY which is in effect at the time the assessment is made, not at the time of this Agreement.

D. It is understood and agreed by the DEVELOPER that sewer user charges will be levied for actual use of the public sewerage system, separate from the benefits assessment, based upon the sewer user rates adopted by the AUTHORITY from time to time. It is further understood and agreed by the DEVELOPER that connection charges may be levied for connection of individual properties or buildings to the sewer line, separate from the benefits assessments, based upon the connection charge fees adopted by the AUTHORITY from time to time.

13. ACCEPTANCE OF THE SEWER LINE BY THE AUTHORITY

- A. Following connection of the sewer line to the municipal sewerage system, in accordance with Section 9 of this Agreement, the DEVELOPER may apply to the AUTHORITY to accept the sewer line and incorporate the line into the municipal sewerage system.
- B. With the application to accept the sewer line, the DEVELOPER shall deliver the following to the AUTHORITY, and it is expressly understood that no application to accept will be received by the AUTHORITY unless accompanied by all of the following:
- (i) "As Built" plans and profiles of the completed sewer line and appurtenances certified by a professional engineer to accurately describe the location and size of all facilities constructed and the boundaries of any easement or real property to be conveyed to the Town of Suffield. The drawing or drawings shall be in ink on Mylar, 24" x 36", drawn on a scale of 1" = 4' vertical and 1" = 40' horizontal;

- (ii) original, executed (but unrecorded) deeds conveying to the Town of Suffield such unencumbered fee simple titles to property or permanent easements in and across properties as are necessary to insure the continued ability of the AUTHORITY to own and maintain the sewer line;
- (iii) a policy or policies of title insurance naming the Town of Suffield as insured and insuring the fee simple title or permanent easement rights to be dedicated to the Town by the deeds referred to in (ii) above;
- (iv) payment of all assessment amounts due as of the date DEVELOPER applies for acceptance of the line and, if the amount of the final assessment has been determined, written acceptance by the DEVELOPER of the benefit assessment levied, or to be levied, by the AUTHORITY under its sewer benefits assessment policy or certification from the DEVELOPER that the time to appeal has passed and that no appeal was filed or that a final judgement has been rendered by the appropriate Court in any appeal filed.
- (v) a performance bond in an amount not less than 20% of the original bond amount specified in Section 3 of this Agreement and with a term of not less than one (1) year, insuring the DEVELOPER'S obligations to maintain and repair the sewer line, unless the original bond submitted under Section 3 or any subsequent bond, by its terms, will continue in effect for at least one (1) year from the AUTHORITY'S acceptance of the sewer line;
- (vi) satisfactory evidence of approval of construction by the Connecticut Department of Transportation, the Connecticut Department of Environmental Protection, the Suffield Department of Public Works, or any other authority from which permits may have been required.
 - C. Prior to acceptance of the sewer line the AUTHORITY may

require review of all documents and plans by its designated agents and, if the same are deemed unsatisfactory for the purposes intended, may require that the DEVELOPER submit revised or substitute documents or plans. The AUTHORITY may also request any additional information from the DEVELOPER which the AUTHORITY reasonably deems necessary in determining whether to accept the sewer line.

- D. Upon verification from the AUTHORITY'S engineers and/or other agents that the DEVELOPER has fulfilled all of the terms of this Agreement, that the sewer line has been completed in accordance with the approved plans and is in acceptable operating condition, that all roadways, curbs, walks, grounds and other appurtenances disturbed by construction have been acceptably restored, and that all necessary titles or easements have been conveyed to the Town, then the AUTHORITY, by appropriate resolution voted upon, shall accept, acquire title to, and incorporate into the public sewerage system the sewer line constructed under this Agreement.
- E. Acceptance of the sewer line by the AUTHORITY shall not relieve the DEVELOPER of the obligation to maintain and repair under Section 10 of this Agreement, nor relieve the DEVELOPER of the obligation to make any payments due hereunder, nor shall acceptance of the sewer line be deemed a waiver by the AUTHORITY of its right to enforce any responsibility or obligation of the DEVELOPER under this Agreement and the Agreement shall survive acceptance of the sewer line and continue in full force and effect for all such purposes.

14. INDEMNIFICATION, COSTS OF ENFORCEMENT

A. The DEVELOPER agrees that it shall at all times indemnify and save harmless the AUTHORITY, the Town of Suffield and their respective officers, agents and servants, on account of any and all claims, damages, losses, litigation, expenses, counsel fees, and compensation

arising out of injuries, including death and property damage, sustained by, or alleged to have been sustained by, the servants, employees or agents of the AUTHORITY and the Town, or of the DEVELOPER, any contractors or subcontractors employed by it or any materialmen, and from injuries, including death and property damage, sustained by or alleged to have been sustained by the public, any or all persons on or near the work, or by any other person or property, real or personal (including property of the AUTHORITY and the Town) caused in whole or in part by the acts of omissions of the DEVELOPER, any contractors employed by it or any subcontractor or materialman or anyone directly or indirectly employed by them while engaged in the construction of the sewer line.

B. In the event of the DEVELOPER'S failure to perform any of the obligations under this Agreement, the DEVELOPER shall pay all cost, including reasonable attorney's fees, incurred by the AUTHORITY or the Town of Suffield in enforcing the terms of this Agreement. In the event the AUTHORITY or the Town of Suffield successfully defends any challenge to the validity or legality of this Agreement, or any part hereof, in an action brought by the DEVELOPER, then the DEVELOPER shall pay to the Town of Suffield such costs, including reasonable attorney's fees, as the Court, hearing and determining such challenge, shall deem reasonable for defending in such action.

15. TRANSFER OF TITLE

A. The obligations and responsibilities assumed by the DEVELOPER under this Agreement being personal to the DEVELOPER, the same shall survive any conveyance or other transfer of title of the premises and such conveyance or other transfer of title shall not relieve the DEVELOPER from performing such obligations and responsibilities, without the express consent of the AUTHORITY.

B. No person acquiring any title to the premises by conveyance or other transfer from the DEVELOPER shall acquire any of the rights and privileges granted by this Agreement unless such person also assumes all obligations and responsibilities of the DEVELOPER, and only with the express consent of the AUTHORITY.

16. SEVERABILITY

If any part of this Agreement shall be adjudged invalid or unenforceable by a court of competent jurisdiction, the same shall not affect the remainder of this Agreement, and the remainder of the Agreement shall continue in full force and effect.

17. EFFECTIVE DATE

The effective date of this Agreement shall be the date of its execution on behalf of the AUTHORITY.

18. <u>CAPTIONS</u>

Captions in this Agreement are inserted for reference and as a matter of convenience only and are not intended to in any way limit or define the specific terms of this Agreement.

IN WITNESS WHEREOF, the partic	es hereto have hereunto set their
hands.	
	SUFFIELD WATER POLLUTION CONTROL AUTHORITY
	By Its Chairman
	its chairman
	DEVELOPER By
	Its:
to do so, executed the foregoing in	ntrol Authority and being authorized astrument for the purposes therein Water Pollution Control Authority,
	Notary Public/Commissioner of the Superior Court
STATE OF CONNECTICUT)	
) ss COUNTY OF HARTFORD)	
On this theday of me, the undersigned officer, person foregoing instrument, who acknowled and deed.	, 19, before ally appeared signer of the ged the same to be his/her free act
	Notary Public/Commissioner of the Superior Court

EXHIBIT A PROPERTY DESCRIPTION

Note:

- (a) Boundary line description with reference to a deed or other document of record; if a map reference is used, the map should already be of record;
- (b) if application is for a proposed subdivision, not yet approved by Zoning and Planning, Exhibit A should include a copy of the proposed subdivision map in addition to, but not in lieu of, the boundary description, unless all proposed lots are set forth on the design plan, Exhibit B.

EXHIBIT B

[Design plan for sewer line.]

EXHIBIT C

[Preliminary assessments with dates or time due and an estimate of the final assessment.]

EXHIBIT C

AS OF THE DATE OF THIS AGREEMENT, THE SEWER BENEFIT ASSESSMENT CHARGE IS FIVE THOUSAND DOLLARS (\$5,000.00) PER RESIDENTIAL UNIT. SAID CHARGE IS DUE AND PAYABLE AS FOLLOWS:

A) PAYMENT IN FULL PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE SUFFIELD BUILDING OFFICIAL OR UPON THE TRANSFER OF A VACANT LOT, WHICHEVER OCCURS FIRST.

OR

B) PAYMENT OF ONE HALF OF THE CHARGE PRIOR TO THE ISSUANCE OF A BUILDING PERMIT BY THE SUFFIELD BUILDING OFFICIAL OR UPON TRANSFER OF A VACANT LOT, WHICHEVER OCCURS FIRST. THE NEW BALANCE OF THE CHARGE SHALL BE PAYABLE OVER A FIVE YEAR PERIOD, WITH ACCRUED INTEREST, BY THE NEW OWNER OF THE PROPERTY. THE DEVELOPER SHALL CAUSE NOTIFICATION OF SAID FIVE YEAR PAYMENT PLAN TO BE PLACED IN THE DEED REFERENCING THE PROPERTY AS FILED WITH THE SUFFIELD TOWN CLERK.

THE ESTIMATED ASSESSMENT CHARGE FOR THIS PROPOSED DEVELOPMENT IS AS FOLLOWS:

FIVE	THOUSAND	(\$5,000.00)	PER	UNIT	MULTIPLI	ED BY	
UNITS	EQUALS _					THOUSAND	DOLLARS
(\$.00).					

IT IS UNDERSTOOD AND AGREED BY THE DEVELOPER THAT THE AMOUNT OF THE ASSESSMENT IS AN ESTIMATE ONLY, IS NOT BINDING UPON THE AUTHORITY, IS SUBJECT TO CORRECTION FOR ERRORS, AND THAT THE FINAL ASSESSMENT MAY BE DIFFERENT FROM THE ESTIMATE. IT IS FURTHER UNDERSTOOD AND AGREED THAT THE FINAL ASSESSMENT WILL BE BASED ON THE SEWER BENEFIT ASSESSMENT POLICY THAT IS IN EFFECT AT THE TIME THE FINAL ASSESSMENT IS MADE, NOT AT THE TIME OF THIS AGREEMENT.

DEVELOPER'S AGREEMENT CHECKLIST

1.)	Payment of deposit (Section 2)	
	- Deposit for estimated WPCA expenses	
2 \	Posting of bond (Section 3)	
2.)	FOSCING OF BONG (BECCION 3)	
3.)	Submission of documents (Section 4)	
	 Proof of duly executed and recorded deeds or bonds for property not owned in fee by developer. 	
4.)	Insurance certificates (Section 5)	
	- Owner's Protective Liability and Property Damage.	
	- Public Liability and Property Damage Insurance (including acts of subcontractors).	
	- Automobile Liability and Property Damage.	LETTE .
	 Workman's Compensation and Employer's Liability. 	
All and	liability insurance policies shall name the AUTHON the Town of Suffield as co-insureds.	RITY
5.)	Permits (Section 6):	
	- Connecticut Department of Environmental Protection.	Control of the second
	- Connecticut Department of Transportation for construction in any state highway.	
	- Suffield Building Department permit for construction in any existing Town road.	
6.)	Assessment of Benefits (Section 12):	
	- Per Exhibit C	
7.)	Sewer Extension Permit Application (Appendix B of Policy & Requirements For Extensions & Repairs to Existing Sewerage Facilities manual)	
8.)		

APPENDIX G
DRAIN LAYER'S BOND

DRAIN LAYER'S BOND

Know all Men by these Presents, that						
as principal, and						
as surety						
are held and firmly bound unto THE TOWN OF SUFFIELD, in the sum						
of Five Thousand Dollars (\$5,000), lawful money of the United						
States of America to be paid to the said TOWN OF SUFFIELD, its						
respective successors or assigns, for which payment, well and						
truly to be made, we bind ourselves, our heirs, executors, ad-						
ministrators, successors and assigns, jointly and severally,						
firmly by these presents.						
Signed and Sealed and dated atConn., this						
day of, 19						
The Condition of this Obligation is such, That whereas,						
the above bounden principal has by the Town of Suffield by its						
Town Engineer been duly licensed as a drain layer in said Town						
for the term beginning on the day of						
19 , and ending on the, 19						
Now, therefore, if the said shall well and truly keep and perform, during said term, all the terms and conditions of the ordinances, resolutions, rules and regulations of the said Town of Suffield, and its Sewer Commission regulating the laying of Town sewers and drains, sewer house connections, private drains and appurtenances, and shall forever idemnify and save harmless The Town of Suffield and any of its officers or agents for or on account of any damages to property of any person or persons or any damage to the sewer						

from any work performed by s	
negligence regarding said wo said principal agents until the expiration shall reimburse the Town of or its agents arising from a drain or other property of sby the principal of any requirement of said o work of all respects and sha of any street in which said make any excavation, to as gwas before said work was per such street in like good con Engineer of the Town of Suff five years after completing or other official, within sa principal, repair said portio pay the cost thereof within all respects with the rules Town Engineer and Sewer Comm terms of the permits that mapay all fines or penalties i	nts or agents, or of, or from any rk, or of, or from any act or ommission of servants or of the one year maintenance period; Suffield for any expense to said Town ny injury or damage to any sewer or aid Town or by reason of any violation agents or employees rdinance; shall faithfully perform said ll also replace and restore that portion applicant, his servants or agents shall ood condition as that in which the same formed, and shall also keep and maintain dition to the satisfaction of the Town ield for the period of not less than said work and should the said Engineer id period, and after notice to said n of such street, the principal shall thirty (30) days, and shall comply in and regulations established by the ission relative to such work, and the y be issued to him, and shall also mposed upon him for violation of any en this obligation shall be of no effect; n full force and virtue.
Signed and Sealed in the presence of:	(seal)
(Two witnesses required)	(seal)
	(seal)
	(seal)

(Drain Layer must have applicable State of Connecticut License).

APPENDIX H
PERFORMANCE BOND

TOWN OF SUFFIELD

PERFORMANCE BOND POLICY

Performance bonds will be accepted by the Treasurer upon receipt of the notification signed by the appropriate commissioners that a bond amount has been set.

It is the developer's responsibility to ensure that the bond is maintained until the project is complete and has been accepted by the Town. The bond will be released by the Treasurer only upon receipt of a release certificate signed by all boards and commissions involved in the setting of the bond, the Town Engineer and the First Selectman.

The Town of Suffield will accept performance bonds only as outlined below:

- A. Cash Cash or a check payable to "Treasurer, Town of Suffield". The Treasurer will open a special savings passbook in the name of The Town for Suffield for the developer in any Suffield Bank. Withdrawals will be under the signature of the Town Treasurer. Interest earned will belong to the Developer and will be maintained until completion and acceptance of the project.
- B. Insurance An insurance bond provided by any insurance company licensed for business in the State of Connecticut and specifying that the policy will be maintained until completion and acceptance of the project.
- C. Certificates of Deposit will be accepted from any Connecticut bank. The certificate must be in the name of the "Town of Suffield" and must be written for the full term of the project as specified in the Bond Request Form. For any project with a bond in excess of \$200,000, the first \$50,000 must be a cash bond the balance may be a Certificate of Deposit as specified in this paragraph.
- D. Letters of Credit Letters of Credit must be on Town of Suffield forms. The certifying bank must specify the amount of the performance bond and certify that the Letter of Credit will not terminate prior to the completion date specified on the Bond Request Form. For any project with a bond in excess of \$200,000, the first \$50,000 must be a cash bond balance may be a Letter of Credit subject to the specifications in this paragraph.

All performance bonds will be reviewed on an annual basis to determine: (1) Progress toward completion, (2) Adequacy of bond amount, and (3) Accuracy of the developer's estimation of project completion date.

APPENDIX I **INSURANCE CERTIFICATE** THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

AMENDMENT—AGGREGATE LIMITS OF INSURANCE (PER PROJECT)

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART.

The General Aggregate Limit under LIMITS OF INSURANCE (SECTION-III) applies separately to each of your projects away from premises owned by or rented to you.

CERTIFICATE OF INSURANCE ISSUE DATE (MM/DD/YY) **PRODUCER** THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. AGENT COMPANIES AFFORDING COVERAGE COMPANY LETTER COMPANY LETTER INSURED CONTRACTOR COMPANY LETTER COMPANY D LETTER COMPANY LETTER **COVERAGES** THIS IS TO CERTIFY THAT POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS, AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	ALL LIMITS IN THOUSANDS
	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS MADE X OCCURRENCE OWNER'S & CONTRACTORS PROTECTIVE	·			GENERAL AGGREGATE \$2,000, PRODUCTS-COMP/OPS AGGREGATE \$2,000, PERSONAL & ADVERTISING INJURY \$1,000, EACH OCCURRENCE \$1,000, FIRE DAMAGE (ANY ONE FIRE) \$ 100, MEDICAL EXPENSE (ANY ONE PERSON) \$ 10,
	AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS GARAGE LIABILITY				CSL \$1,000, BODILY INJURY (PER PERSON) BODILY INJURY ACCIDENT) PROPERTY DAMAGE
	EXCESS LIABILITY OTHER THAN UMBRELLA FORM				EACH AGGAEGATE OCCURRENCE
	WORKERS' COMPENSATION AND EMPLOYERS' LIABILITY				\$ 100, (EACH ACCIDENT) \$ 500, (DISEASE-POLICY LIMIT) \$ 100. (DISEASE-EACH EMPLOYEE)
	OTHER				

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/RESTRICTIONS/SPECIAL ITEMS

Town of Suffield and Town of Suffield Water Pollution Control Authority are included as

Additional Insureds.

Aggregate Limits Of Insurance (Per Project) - \$2,000,000 Limit

CERTIFICATE HOLDER

Town of Suffield and Town of Suffield Water Pollution Control Authority

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL $10\,$ days written notice to the certificate holder named to the Left, but failure to mail such notice shall impose no obligation or liability of any kind upon the company, its agents or representatives.

AUTHORIZED REPRESENTATIVE

APPENDIX J
CHAPTER 18, "UTILITIES"

Chapter 18

UTILITIES*

Art. 1. In General, §§ 18-1-18-15

Art.

II. Sewers, §§ 18-16--18-108

Div. 1. Generally, §§ 18-16-18-40

Div. 2. Building Sewers And Connections, §§ 18-41-18-70

Div. 3. Use Of Public Sewers And Natural Outlets, §§ 18-71-18-100

Div. 4. Permits, §§ 18-101-18-108

ARTICLE I. IN GENERAL

Secs. 18-1-18-15. Reserved.

ARTICLE II. SEWERS†

DIVISION 1. GENERALLY

Sec. 18-16. Purpose.

In order to ensure proper removal and disposal of sewage wastes and sewage waters within the town, to ensure the proper operation and maintenance of public sewers, sewage treatment plants and other sewage works within the town; and to provide for the

Cross references—Buildings and building regulations, Ch. 5; housing, Ch. 9; planning, Ch. 14; streets, sidewalks and other public places, Ch. 15; zoning, App. A; subdivisions, App. B.

State law references—Power of town to lay out, construct, etc., sewer and drainage systems and sewage disposal plants, G.S. § 7-148(cx6xBxii); power of town to contract for the furnishing of water, G.S. § 7-148(cx4xG); power of town to create, etc., all things in the nature of public works and improvements, G.S. § 7-148(cx6xAxiii); power of town to regulate the laying, etc., of water pipes, drains, sewers, etc., in the streets and public places, G.S. § 7-148(cx6xBxiii); power of town to regulate and prohibit the construction, etc., of sinks, cesspools, G.S. § 7-148(cx7xC); municipal waterworks systems, G.S. § 7-324 et seq.; municipal sewerage systems, G.S. § 7-245 et seq.; sewer districts, G.S. § 7-324 et seq.; water resources, G.S. § 25-1 et seq.; sewer revenue bonds, G.S. § 8 7-259—7-266.

†Charter reference—Superintendent of public works, § 605.

Cross reference-Excavations, § 15-16 et seq.

keeping of adequate records of sewers and appurtenances and connections thereto, the following article regulating the construction, use, repair, alteration, and discontinuance or abandonment of sewers and appurtenances and connection thereto, including pipes discharging directly or indirectly into such sewers, and the substances to be discharged directly or indirectly into and through the sewers and appurtenances of the public sewer system of the town as provided in the February 4, 1959 ordinance of the town and section 7-346 et seq. of the general statutes, is hereby enacted. (Ord. of 1-21-81, § 1)

Sec. 18-17. Definitions.

As used in this article the following words and phrases have the meanings ascribed to them in this section:

B.O.D. (denoting Biochemical Oxygen Demand) shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at twenty (20) degrees Centigrade, expressed in parts per million by weight.

Building drain shall mean that part of the lowest horizontal piping of a drainage system that receives only sanitary waste discharged from pipes inside the walls of the building and conveys it to the building sewer, beginning five (5) feet outside the inner face of the building wall.

Building sewer shall mean the extension from the building drain to the public sewer or other place of disposal.

Chlorine demand shall mean the amount of chlorine which must be added to waters or wastes to produce a residual chlorine content in such waters or wastes.

Cooling water shall include clean waste water from air conditioning, industrial cooling, condensing and similar apparatus and from hydraulically powered equipment. In general, cooling water will include only water which is sufficiently clean and unpolluted to admit of being discharged, without treatment or purification, into any natural open stream or watercourse without offence.

Garbage shall mean solid wastes from the preparation, cooking and dispensing of food, and from the handling, storage, and sale of produce.

^{*}Charter reference-Water pollution control authority, § 301(K).

Industrial wastes shall mean the liquid wastes from industrial processes as distinct from sanitary sewage.

Natural outlet shall mean any outlet in a watercourse, pond, ditch, lake or other body of surface water or groundwater.

pH shall mean the logarithm of the reciprocal of the weight of hydrogen ions in grams per liter of solution.

Properly shredded garbage shall mean the wastes from the preparation, cooking, and dispensing of food, which have been shredded to such degree that all particles will be carried freely under the flow conditions normally prevailing in public sewers, with no particle greater than one-half inch in any dimension.

Public sewer shall mean a sewer in which all owners of abutting properties have equal rights, and which is controlled by public authority.

Reasonable length of time shall mean ninety (90) days, weather permitting.

Sanitary sewer shall mean a sewer which carries sewage and to which storm, surface, and ground waters are not intentionally admitted.

Sewage shall mean a combination of the water-carried wastes from residences, business buildings, institutions and industrial establishments.

Sewage treatment plant shall mean any arrangement of devices and structures used for treating sewage.

Sewage works shall mean all facilities for collecting, pumping, treating, and disposing of sewage.

Sewer shall mean a pipe or conduit for carrying sewage.

Slug shall mean any discharge of water, sewage, or industrial waste which in concentration of any given constituent or in quantity of flow exceeds for any period of duration longer than fifteen (15) minutes, more than five (5) times the average twenty-four-hour concentration or flow.

Storm sewer or storm drain shall mean a sewer which carries storm and surface waters and drainage, but excludes sewage and polluted industrial wastes.

Sub-soil drainage shall include water from the soil percolating into sub-soil drains and through foundation walls, basement floors or from underground pipes or from similar sources.

Suitable facilities shall mean public sewer, or septic tank.

Suspended solids shall mean solids that either float on the surface of, or are in suspension in water, sewage, or other liquids; and which are removable by laboratory filtering.

Watercourse shall mean a channel in which a flow of water occurs, either continuously or intermittently.

Water pollution control authority is defined in chapter 103 section 7-246 of the general statutes.

(Ord. of 1-21-81, §§ 2.13-2.25)

Cross reference—Definitions and rules of construction generally, § 1-2.

Sec. 18-18. Use of public sewers required.

It shall be unlawful for any person to place, deposit, or permit to be deposited upon public or private property within the town or in any area under the jurisdiction of the town, any human excrement, garbage or other objectionable waste. (Ord. of 1-21-81, § 3.1)

Sec. 18-19. Prohibited discharges to natural outlets.

It shall be unlawful to discharge to any natural outlet within the town or in any area under the jurisdiction of the town, any sanitary sewage, industrial wastes, or other polluted waters, except where suitable treatment has been provided in accordance with subsequent provisions of this article.

(Ord. of 1-21-81, § 3.2)

Sec. 18-20. Owners must connect to public sewer before occupancy.

The owner of all newly constructed houses, buildings or properties used for human occupancy, employment, recreation, or other purpose, situated within the town and abutting on any street, alley or right-of-way in which there is now located a public sanitary sewer of the town is hereby required at his expense to install suitable toilet facilities therein, and to connect such facilities

directly with the proper public sewer in accordance with the provisions of this article before occupancy. (Ord. of 1-21-81, § 3.3)

Sec. 18-21. Septic tanks permitted in certain cases.

Those existing homes abutting a sanitary sewer where basement facilities cannot be served may be served by an existing septic tank system for that basement area only subject to approval of the water pollution control authority. (Ord. of 1-21-81, § 3.4)

Sec. 18-22. Private disposal systems.

All homes, businesses, buildings, institutions and industrial establishments not abutting on a street in which there is a sanitary sewer shall have a suitable private sewer disposal system, the installation and operation of which shall be subject to the inspection and approval of the building inspector in accordance with the applicable provisions of the ordinances and building code of the town and the state.

(Ord. of 1-21-81, § 3.5)

Sec. 18-23. Use of septic tanks restricted.

Except as herein provided it shall be unlawful to construct or maintain any septic tank and or other facilities intended or used for the disposal of sewage.

(Ord. of 1-21-81, § 3.6)

Sec. 18-24. Subdivisions to have suitable facilities.

Whenever a developer subdivides a tract of land into building lots or industrial or commercial sites he shall provide and install suitable facilities or a sewage disposal system in accordance with the regulations of the zoning and planning commission and the standards and specifications of the water pollution control authority, (Ord. of 1-21-81, § 4.1)

Cross reference-Subdivisions, App. B.

Sec. 18-25. Liability for damage.

Any person who willfully breaks, damages, destroys, or injures any structure, appurtenance, or equipment which is a part of the municipal sewage works shall be subject to the penalties imposed under section 53-46 of the general statutes. (Ord. of 1-21-81, § 14.1)

Sec. 18-26. Powers and authority of inspectors.

The water pollution control authority and the superintendent of sewers, and other duly authorized employees of the town bearing proper credentials and identification shall be permitted to enter upon all properties for the purpose of inspection, observation, measurement, sampling and testing, in accordance with the provisions of this article.

(Ord. of 1-21-81, § 15.1)

Sec. 18-27. Owners must connect to public sewer after notification.

Within sixty (60) days after a sewer in a public street becomes operational, the water pollution control authority shall notify abutting property owners that they must connect with the sewer within twelve (12) months after such notification. Failure to obtain a permit to make such connection shall be *prima facie* evidence that no connection has been made. (Ord. of 1-21-81, § 13.1)

Sec. 18-28. Penalties.

- (a) Any person who shall violate any provision of this article except section 18-25 shall be served by the town with written notice stating the nature of the violation and providing a time limit for the satisfactory correction thereof. The offender shall, within the period of time stated in such notice, permanently cease all violations.
- (b) Any person who shall violate any provision of this article may be fined not more than one hundred dollars (\$100.00). Each day that any violation of this article continues and each day that person continues to discharge prohibited wastes or substances into any public sewer shall be deemed a separate offense for the purpose of applying the above penalty. (Ord. of 1-21-81, §§ 16.1, 16.2)

Sec. 18-29. User charges.

(a) Charges covering operation and maintenance costs of the total sewer facilities shall be appropriately made to each user or person owning or controlling each property having use of sewers ("user charge system") and shall generate sufficient revenue to offset the costs of all treatment works operation and maintenance provided for by the town. In the event that collections do not cover all the costs of the sewerage treatment system, the water pollution authority may borrow appropriate amounts from the town sufficient to meet the financial requirements, for a period not to exceed twenty-four (24) months and subject to interest at the prevailing prime rate.

(b) The water pollution control authority is authorized to obtain from the Connecticut Water Company, all the necessary records to determine the consumption of water by users of the sewer system. Further, the water pollution control authority may enter into whatever contracts and agreements it deems necessary and appropriate with the Connecticut Water Company for the purpose of obtaining access to the above mentioned records. (Ord. of 5-1-85)

Sec. 18-30. Deferred payment for elderly.

(a) Any owner of real property who is eligible for tax relief for elderly taxpayers under the provisions of sections 12-129b and 12-170a of the general statutes may apply to the water pollution control authority for approval of a plan of payment of such property owner's sewer assessment other than as provided under section 7-253 of the general statutes. The plan may include an option to pay only the annual interest charge, as provided in said section 7-253, on any deferred payments or outstanding balance of principal of said assessment. Any such plan shall provide that the outstanding balance of principal deferred under such optional method of payment of said assessment shall become due upon any transfer of title to the property subject to such assessment or upon the death of such property owner. The plan shall become effective upon approval of the water pollution control authority, and shall be subject to annual review and reapproval by the water pollution control authority.

(b) This section is enacted under authority of general statutes section 7-253a.

(Ord. of 12-29-80)

Cross reference-Taxation, Ch. 16.

Secs. 18-31-18-40. Reserved.

DIVISION 2. BUILDING SEWERS AND CONNECTIONS

Sec. 18-41. Building sewer permit-Required.

No person shall uncover, make any connections with or opening into, use, alter, or disturb any public sewer or appurtenance thereof without first obtaining a written permit from the superintendent of sewers.

(Ord. of 1-21-81, § 5.1)

Cross references—Building permits, § 5-16 et seq.; licenses, permits and miscellaneous business regulations, Ch. 11.

Sec. 18-42. Same-State permit required.

No person shall discharge into the public sewer any industrial or commercial waters or wastes without obtaining an appropriate permit from the state department of environmental protection pursuant to section 22a-430 of the general statutes prior to discharge of such waters or wastes to the town's sewerage system.

(Ord. of 1-21-81, § 5.1.1)

Cross references—Building permits, \$ 5-16 et seq.; licenses, permits and miscellaneous business regulations, Ch. 11.

Sec. 18-43. New discharges; substantial changes.

Any person proposing a new discharge into a public sewer or a substantial change in the volume or character of pollutants that are being discharged into a public sewer, shall notify the superintendent at least forty-five (45) days prior to the proposed change or connection.

(Ord. of 1-21-81, § 5.1.2)

Sec. 18-44. Classes of building sewer permits; application; fees.

- (a) There shall be two (2) classes of building permits for sewers:
- (1) For residential and commercial service; and
- (2) For service to establishments producing industrial wastes.
- (b) In either case, the owner or his agent shall make application on a special form furnished by the town. The permit application shall be supplemented by any plans, specifications, or other information considered pertinent in the judgment of water pollution control authority and superintendent of sewers. A permit and inspection fee of fifteen dollars (\$15.00) for a sewer permit for a residential or commercial building and twenty-five dollars (\$25.00) for a sewer permit for buildings where industrial wastes are produced shall be paid to the superintendent of sewers at the time the application is filed. (Ord. of 1-21-81, § 5.2.2)

Sec. 18-45. Owner to bear costs of installation and connection; to indemnify city for loss, damage.

All costs and expense incident to the installation and connection of the building sewer shall be borne by the owner. The owner shall indemnify the town from any loss or damage that may directly or indirectly be occasioned by the installation of the building sewer.

(Ord. of 1-21-81, § 5.3)

Sec. 18-46. Use limited for old building sewers.

Old building sewers may be used in connection with new buildings only when they are found, on examination and test by the superintendent of sewers to meet all requirements of this article. (Ord. of 1-21-81, § 5.4)

Sec. 18-47. Standards and specifications.

The water pollution control authority or the superintendent of sewers shall from time to time establish minimum standards and specifications to regulate the sizes, materials, methods and workmanship to be used in the construction of sewers, building drains,

building sewers, and other similar work and appurtenances, thereto connected or intended to be connected or to discharge, directly or indirectly, into any public sewer or drain. Such standards shall provide minimum requirements as to size, depth, slope or rate of grade for such pipes, shall regulate the kinds of pipe, fittings, methods of laying, jointing, materials used, manner of connecting to pre-existing sewers and drains, and general considerations as to location and other pertinent features. (Ord. of 1-21-81, § 5.5)

Sec. 18-48. Building and plumbing regulations to be observed.

The requirements of town building and plumbing codes shall be observed with respect to piping and fixtures inside or immediately adjacent to buildings and within the areas of jurisdiction of said several codes, subject only to the general requirements of this article. Pipe more than five (5) feet outside the inner walls of any building or similar structure shall conform to the requirements of this article as to permits, materials and workmanship. (Ord. of 1-21-81, § 5.6)

Cross reference—Buildings and building regulations, Ch. 5.

Sec. 18-49. Notification of inspection.

The applicant for the building sewer permit shall notify the superintendent of sewers, reasonably in advance, when the building sewer is ready for inspection and connection to the public sewer. The connection shall be made under the supervision of the superintendent of sewers or his agent.

(Ord. of 1-21-81, § 5.7)

Sec. 18-50. Excavations for building sewers.

All excavations for building sewer installation shall be adequately guarded with barricades and lights so as to protect the public from hazard. Streets, sidewalks, parkways and other public property disturbed in the course of the work shall be restored in a manner satisfactory to the water pollution control authority. (Ord. of 1-21-81, § 5.8)

Cross reference-Excavations, § 15-16 et seq.

When any building, or other structure previously served by a connection to any public sewer is demolished, destroyed, abandoned, or altered so that any sewer portion of an abandoned plumbing system which is directly or indirectly connected to any public sewer is no longer used and is no longer connected to the sewer system which discharged, directly or indirectly, into public sewer shall be promptly closed and sealed off so that no water or wastes not otherwise permitted to enter the public sewer shall so discharged thereinto. The superintendent of sewers shall be notified of such abandonment or discontinuance and of the closing and sealing of such sewer and shall be afforded an opportunity to see such work performed. All of the work shall be done by the person or party who demolishes the building or structure or who alters the sewage of the premises so as to make such closing and sealing necessary, and, in the event of the failure of such person or party to do so, shall be done by the owner, lessee or tenant of the premises in a satisfactory manner all without expense to the town.

(Ord. of 1-21-81, § 5.9)

Sec. 18-52. Drain layers; bond, insurance required.

- (a) The town may license as a drain layer any person found to be suitable and competent, who shall have applied to it on forms to be provided for that purpose and who shall have furnished the surety bond, and insurance required by sections 18-106 and 18-107.
- (b) No person other than those described in subsection (a) shall construct, repair, alter or remove any sewer, building drain, building sewer, or sewer line connected to or with or discharging directly or indirectly to or into, any public sewer of the town or intended to discharge thus at some future time, regardless of whether the work is located in a public street or in public or private land.

(Ord. of 1-21-81, §§ 7.1, 7.2)

Sec. 18-53. Persons authorized to construct, alter, repair, etc.

(a) The following may, as indicated, construct, repair, alter or

remove sewers, subject to supervision and approval by the water pollution control authority:

- (1) Regular forces of a contractor employed by the town, operating under orders of the water pollution control authority and in the performance of work for the town;
- (2) Regular forces of the town or the state highway department operating under the subject to permit for the particular job to be issued by the water pollution control authority or the superintendent of sewers and while engaged in the regular work and operations of the town or state highway department.
- (3) Regular forces of any public utility corporation authorized by state law to construct, maintain and operate pipes or ducts within public highways within the town, while engaged in work incidental to the regular structures of the utility company and operating under the subject to the conditions of a permit for the particular ob issued by the water pollution control authority or the superintendent of sewers.
- (b) The limitations as to person who may construct, alter or repair building drains and building sewers as provided in section 18-52 shall not restrict the usual work of plumbers or others when operating in accordance with local plumbing and building codes of the town and when they are working on pipes within or not more than five (5) feet outside the walls of a building or similar structure; provided, no plumber or other person shall make any connection to a public sewer of the town without a permit therefore, even if the sewer is located under or immediately adjacent to any building or similar structure; and provided, all fixtures within the building or structure and all use made of them shall conform to the requirements of this article as to what may and may not be permitted to be discharged into public sewers. (Ord. of 1-21-81, §§ 7.3, 7.4)

Sec. 18-54. Owner performance.

Nothing contained in this division shall prohibit the owner of a building or structure from personally installing the building sewer on his own property under the conditions herein specified:

- (1) Approval of plans and final approval by the superintendent of sewers shall be obtained;
- (2) A permit shall be secured as provided in this division before the work is performed;
- (3) Permit fees shall be paid, and application made for inspections;
- (4) All work shall be performed by the owner himself in accordance with the provisions of this article.

(Ord. of 1-21-81, § 7.5.4)

Secs. 18-55-18-70. Reserved.

DIVISION 3. USE OF PUBLIC SEWERS AND NATURAL OUTLETS

Sec. 18-71. Prohibited discharges to sanitary sewer.

No person shall discharge or cause to be discharged any storm-water, surface water, groundwater, roof runoff, subsurface drainage, uncontaminated cooling water or unpolluted industrial process waters to any sanitary sewer. (Ord. of 1-21-81, § 6.1)

Sec. 18-72. Designation of sewers for stormwater, other unpolluted drainage.

Stormwater and all other unpolluted drainage shall be discharged to such sewers as are specifically designated as combined sewers or storm sewers, or to a natural outlet approved by the superintendent. Industrial cooling water or unpolluted process waters may be discharged, on approval of the superintendent, to a storm sewer, combined sewer or natural outlet. (Ord. of 1-21-81, § 6.2)

Sec. 18-73. Prohibited discharges to public sewers and natural outlets.

No person shall discharge or cause to be discharged any of the following described waters or wastes to any public sewers:

(1) Any gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquid, solid, or gas;

- (2) Any waters or wastes containing toxic or poisonous solids, liquids, or gases in sufficient quantity, either singly or by interaction with other wastes, to injure or interfere with any sewage treatment process, constitute a hazard to humans or animals, create a public nuisance, or create any hazard in the receiving waters of the sewage treatment plant;
- (3) Any waters or wastes having a pH lower than 5.0, or having any other corrosive property capable of causing damage or hazard to structures, equipment, and personnel of the sewage works;
- (4) Solid viscous substances in quantities or of such size capable of causing obstruction to the flow in sewers, or other interference with the proper operation of the sewage works such as, but not limited to, ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, unground garbage, whole blood, paunch manure, hair and fleshings, entrails and paper dishes, cups, milk containers, etc., either whole or ground by garbage grinders. (Ord. of 1-21-81, §§ 6.3—6.3.4)

Sec. 18-74. Discharge of certain wastes restricted.

No person shall discharge or cause to be discharged the following described substances, materials, waters, or wastes if it appears likely in the opinion of the superintendent that such wastes can harm either the sewers, sewage treatment process, or equipment, have an adverse effect 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 the quantities of subject wastes in relation to flows and velocities in the sewers, materials of construction of the sewage treatment plant, degree of treatability of wastes in the sewage treatment plant, and other pertinent factors. The substances prohibited are:

(1) Any liquid or vapor having a temperature higher than one hundred fifty (150) degrees Fahrenheit or sixty-five (65) degrees Centigrade.

- (2) Any water or waste containing fats, wax, grease, or oils, whether emulsified or not, in excess of one hundred (100) mg/l or containing substances which may solidify or become viscous at temperatures between thirty-two (32) and one hundred fifty (150) degrees Fahrenheit.
- (3) Any garbage that has not been properly shredded. The installation and operation of any garbage grinder equipped with a motor of three-fourths horsepower (0.76 hp metric) or greater shall be subject to the review and approval of the superintendent.
- (4) Any waters or wastes containing strong acid iron pickling wastes, or concentrated plating solutions whether neutralized or not.
- (5) Any waters or wastes containing iron, chromium, copper, zinc, and similar objectionable or toxic substances; or wastes exerting an excessive chlorine requirement, to such degree that any such material received in the composite sewage at the sewage treatment works exceeds the limits established by the superintendent for such material.
- (6) Any waters or wastes containing phenols or other taste or odor producing substances, in concentrations exceeding limits which may be established by the superintendent as necessary, after treatment of the composite sewage, to meet the requirements of the state, federal or other public agencies or jurisdiction for such discharges to the receiving waters.
- (7) Any radioactive wastes or isotopes of such half-life or concentration as may exceed limits established by the superintendent in compliance with applicable state or federal regulations.
- (8) Any waters or wastes having a pH in excess of 9.5.
- (9) Materials which exert or cause:
 - Unusual concentrations of inert suspended solids (such as, but not limited to, Fullers earth, lime slurries, and lime residues) or of dissolved solids (such as, but not limited to, sodium chloride and sodium sulfate);
 - b. Excessive discoloration (such as, but not limited to, dye wastes and vegetable tanning solutions);

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- c. Unusual BOD, chemical oxygen demand, or chlorine requirements in such quantities as to constitute a significant load on the sewage treatment works, which may cause the effluent limitations of the discharge permit to be exceeded;
- d. Unusual volume of flow or concentration of wastes constituting "slugs".
- (10) Waters and wastes containing substances that are not amenable to treatment or reduction by the sewage treatment processes employed or are amenable to treatment only to such degree that the sewage treatment plant effluent cannot meet the requirements of other agencies having jurisdiction over discharge to the receiving waters.

(Ord. of 1-21-81, §§ 6.4-6.4.10)

Sec. 18-75. Action of superintendent upon discharge of wastes having deleterious effect upon sewage works, etc.

- (a) If any waters or wastes are discharged, or are proposed to be discharged to the public sewers, which waters contain the substances or possess the characteristics enumerated in section 18-74, and which in the judgment of the superintendent, may have a deleterious effect upon the sewage works, processes, equipment, or receiving waters, or which otherwise create a hazard to life or constitute a public nuisance, the superintendent may:
 - (1) Reject the wastes;
 - (2) Require pretreatment to an acceptable condition for discharge to the public sewers;
 - (3) Require control over the quantities and rates of discharge;
 - (4) Require payment to cover the added cost of handling and treating the wastes.
- (b) If the superintendent permits the pretreatment or equalization of waste flows, the design and installation of the plants and equipment shall be subject to the review and approval of the superintendent, and subject to the requirements of all applicable codes, ordinances, laws and the municipal discharge permit. Further, such pretreatment installations must be consistent with the

requirements of any state pretreatment permit issued to the industry.

(Ord. of 1-21-81, §§ 6.5—6.5.4)

Sec. 18-76. Interceptors.

Grease, oil, and sand traps shall be provided when, in the opinion of the superintendent, they are necessary for the proper handling of liquid wastes containing grease in excessive amounts, or any flammable wastes, sand, or other harmful ingredients; except that such traps shall not be required for private living quarters or dwelling units. All traps shall be of a type and capacity approved by the superintendent, and shall be located as to be readily and easily accessible for cleaning and inspection. (Ord. of 1-21-81, § 6.6)

Sec. 18-77. Maintenance of preliminary treatment facilities.

Where preliminary treatment or flow-equalizing facilities are provided for any waters or wastes, they shall be maintained continuously in satisfactory and effective operation by the owner at his expense.

(Ord. of 1-21-81, § 6.7)

Sec. 18-78. Control manhole.

- (a) When required by the superintendent, the owner of any property serviced by a building sewer carrying industrial wastes shall install a suitable control manhole together with such necessary meters, and other appurtenances in the building sewer to facilitate observation, sampling, and measurement of the wastes. Such manhole, when required, shall be accessibly and safely located, and shall be constructed in accordance with plans approved by the superintendent.
- (b) The manhole shall be installed by the owner at his expense, and shall be maintained by him so as to be safe and accessible at all times.

(Ord. of 1-21-81, § 6.8)

Sec. 18-79. Monitoring of discharges required.

All industries discharging into a public sewer shall perform such monitoring of their discharge as the superintendent or other duly authorized employees of the town may reasonably require, including installation, use and maintenance of monitoring equipment, keeping records and reporting the results of such monitoring to the superintendent. Such records shall be made available, upon request by the superintendent, to other agencies having jurisdiction over discharges to the receiving waters. (Ord. of 1-21-81, § 6.8)

Sec. 18-80. Measurements, tests and analyses.

All measurements, tests, and analyses of the characteristics of waters and wastes to which reference is made in this ordinance shall be determined in accordance with the latest edition of "Standard Methods for Examination of Water and Wastewater," published by the American Public Health Association, and shall be determined at the control manhole provided, or upon suitable samples taken at said control manhole. If no special manhole has been required, the control manhole shall be considered to be the nearest downstream manhole in the public sewer to the point at which the building sewer is connected. Sampling shall be carried out by customarily accepted methods to reflect the effect of constituents upon the sewage works and to determine the existence of hazards to life, limb and property.

(Ord. of 1-21-81, § 6.9)

Sec. 18-81. Special agreements with industrial concerns.

No statement contained in this article shall be construed as preventing any special agreement or arrangement between the town and any industrial concern whereby an industrial waste of unusual strength or character may be accepted by the town for treatment, subject to payment, therefor, by the industrial concern; provided that such agreements do not contravene any requirements of existing federal laws and are compatible with any user charge and industrial cost recovery system in effect. (Ord. of 1-21-81, § 6.10)

Sec. 18-82. Use of treatment plant.

The waste from any privy, septic tank or cesspool may be deposited and processed at the town's sewage treatment plant, provided such waste is from property in the town, and is not

considered harmful. The plant operator's permission must be given before such waste can be discharged into the treatment plant. A test of such waste, and any treatment to make such waste compatible shall be made at the contractor's expense if the plant operator considers the waste harmful to the plant facilities or operation. The contractor shall assume all liability to property and persons.

(Ord. of 1-21-81, § 6.11)

Secs. 18-83-18-100, Reserved.

DIVISION 4. PERMITS*

Sec. 18-101. Required.

No person, other than those working for and under the direction of the town, shall make any excavation for or construct, install, lay, repair, alter or remove any sewer, building drain, building sewer, sewer connection, or appurtenance thereof or connect to such sewer within the town, which is in any way connected to or discharges directly or indirectly to or into any public sewer of the town, or is intended at some future time to be so connected or so discharged, until said person or party shall have applied for and secured from the superintendent of sewers a permit for doing such work. Such permits may be issued only to those qualified to perform such work as provided in section 18-52. (Ord. of 1-21-81, § 8.1)

Sec. 18-102. Application.

Every application for a permit required by this division shall be made in writing on forms to be provided by the town for that purpose and shall be signed by the drain layer or other qualified person or party, or an authorized agent thereof. The application shall state the location and ownership of the property to be served by the sewer in question, the post office address of the property owner, a brief description of the work to be done, and shall contain an agreement that the permittee will do the work in

accordance with the requirements of town and local laws, ordinances, regulations and permits as those laws, etc., may apply to the particular locations or work and will save the town and others harmless from damages, loss, damage claims, etc., in accordance with the terms of the drain layer's surety bond provided for in section 18-107. The superintendent of sewers shall require as a prerequisite to the issuance of any permit that he be furnished evidence that any and all necessary permits, etc., to open public streets, public or private grounds or property have been or will be issued; that the agent of the application is properly authorized to sign the application in question; that the devices used or provisions made to prevent the entry into public sewers of any substances forbidden entry by this ordinance will be provided. maintained and operated as required by division 2 and division 3 of this article; and any other information or proof pertinent to the particular job in question.

(Ord. of 1-21-81, § 8.2)

Sec. 18-103. Fee; assignability.

Any person who applies for a permit to connect into a sewer or sewer line shall pay the prescribed fee for each such permit. Permits shall not be transferable or assignable by the permittee. Permits shall be kept on the premises where and at all times when work is in progress and shall be shown to any proper person asking to see the same. All persons operating under such permits shall be held responsible for conformity to the requirements thereof and of this article.

(Ord. of 1-21-81, § 8.3)

Sec. 18-104. Suspension, cancellation, termination.

Any permit required by this division, in whole or in part, may be suspended, cancelled or terminated by the water pollution control authority or the superintendent of sewers on written notice to the permittee for violation of the conditions thereto or for the violation of the requirements of this article. (Ord. of 1-21-81, § 8.4)

Sec. 18-105. Conduct of permittee.

Each drain layer licensed in accordance with section 18-52 shall be responsible for the proper performance of all work per-

^{*}Cross references—Building permits, § 5-16 et seq.; licenses, permits and miscellaneous business regulations, Ch. 11; building sewer permit required, § 18-41; state permits for building sewers required, § 18-42.

formed under the permits issued to him and for the conduct of all work and all materials furnished on work by his employees or agents. No work shall be sublet by a drain layer under any permit issued in any manner to divest the drain layer of full control and responsibility for all parts of the work. (Ord. of 1-21-81, § 9.1)

Sec. 18-106. Drain layer responsibility.

Each drain layer shall save the town, its agents and servants harmless from all loss or claims of loss, damage or injury arising from the operations of the drain layer under any permits issued him by reason of his negligence in performing the work in which he has been issued a permit. He shall furnish the town a public liability policy in the amount of fifty thousand dollars (\$50,000.00) in which the town is a named insured, protecting it against such loss or claims of loss.

(Ord. of 1-21-81, § 10.1)

Sec. 18-107. Surety bond.

Every person making application for permit required by this division shall file with the town a satisfactory bond of a surety company authorized to transact such business in the state, and having an agent within the limits of the county, in a form satisfactory to the water pollution control authority or the superintendent of sewers. The bond shall be in an amount not less than one thousand five hundred dollars (\$1,500.00) to be determined by the sewer superintendent, conditioned upon the applicant substantially and properly performing all work to be done under the permits issued to him in a workmanlike manner and upon his using proper materials; upon the applicants restoring that portion of any street or public place, which he has excavated in accordance with the rules contained in the permit issued him and maintaining the same for a period of one (1) year; upon the applicants reimbursing the town for any expense for repairs to such street or public place made necessary by reason of the excavation.

(Ord. of 1-21-81, § 11.1)

Sec. 18-108. Enforcement.

§ 18-108

(a) If any person shall construct, install, alter or repair any sewer, building drain, building sewer or connection to any public sewer of the town in violation of the requirements of this article or, having obtained a permit as provided in this division, shall construct, install, alter or repair any sewer, building drain, building sewer or connection thereto without having given the superintendent of sewers or his authorized representative adequate notice, time, opportunity and assistance, during regular working hours, to inspect such sewer, connection and the work and materials used thereon, the superintendent of sewers shall order or direct the person who constructed, installed, altered or repaired such sewer, etc., or the owner of any property in which such sewer, etc., may be located or which may be served thereby, or in whose interest and employ the work was done, to uncover and fully expose any or all portions of such sewer, etc., and afford the superintendent of sewers and his authorized representatives adequate opportunity to examine and inspect such sewer, etc., and to secure such records thereof as may be proper. If such sewer, etc., and the appurtenances thereof shall be found not to be in full accord with the requirements of this article and the standards established under its provisions, then the superintendent of sewers shall order and direct such person, owner or lessee to make such changes in or additions to or remove portions of appurtenances of such sewer, etc., as may be necessary to insure that such sewer, etc., will conform to the requirements of this article and of the standards established under its provisions. All of such work shall be performed by the person, owner or lessee without delay and without expense to the town.

(b) If any person after proper order or direction from the superintendent of sewers fails to take the remedial steps or perform the acts required by this article, or fails thereafter to use, operate and maintain any connection with the public sewers of the town, or appurtenances thereof, as required by this article, the water pollution control authority or the superintendent of sewers, by such agents or facilities as it or he may choose, may disconnect the sewer, etc., which was wrongfully connected, altered, repaired or used, or through which improper wastes were discharged into the public sewer system of the town.

(Ord. of 1-21-81, §§ 12.1, 12.2)

APPENDIX K
FEES AND PENALTIES

FEES AND PENALTIES

Connection & Repair Processing Fees:

The Planning Application fee for a project which will discharge \geq 476 gpd of wastewater into the sewer and will only require a Connection Permit shall be \$100.00.

Permit fees shall be as follows:

	Connection or Repair When Flow < 476 gpd	:	\$ 50.00
-	Connection or Repair When Project Flow ≥ 476 gpd	:	\$250.00
	Sewer Extension Repair w/pump station	:	\$500.00
_	Sewer Extension Repair w/o pump station	:	\$250.00

For <u>all</u> other types of projects requiring the WPCA's approval/permit, the fee shall be dependent upon the cost incurred by the WPCA to process and review the submission. The Applicant is required to make a deposit with the submission. In event the WPCA's review and processing costs are different from the deposit the Applicant shall be reimbursed or charged accordingly. The following deposits are required:

Planning Application:

_	Sewer	extension	with	a	pump	station	. :	\$1000.00
-	Sewer	extension	w/o	pun	np sta	ation	:	\$500.00

Preliminary Design Report:

- Review of Report : \$1000.00

Permit:

- Sewer Extension with a pump station : \$2500.00 - Sewer Extension w/o pump station : \$1500.00

Inspection fees:

The Applicant shall be required to reimburse the WPCA for all costs incurred for inspection. These costs will be established in the Developer's Agreement.

Penalties:

_	Construction without planning approval		
	or a permit		\$5,000.00/day.
_	Failure to notify WPCA of any changes		\$500.00/day.
_	Construction without proper inspection	:	\$500.00/day.
_	Failure to submit O&M manuals or		
	acceptable as-builts	:	\$100.00/day.