

1000 HARTFORD TURNPIKE



WATERFORD, CT 06385

June 20, 2023

TO: Maureen Fitzgerald, Environmental Planner
FROM: James A. Bartelli, Director of Utilities
RE: Easement Land Clearing and Sewer Rehabilitation Work

The Utility Commission respectfully requests authorization from the Conservation Commission to continue the clearing and maintenance of the Town's sewer main easements to supplement the previously issued Conservation Commission Permits #02-05, 09-016, and 17--04: General Permit for the Inspection & Maintenance of Municipal Sewer Utilities within Easements, the last of which expired on April 27, 2022. The areas where previous clearing and rehabilitation work was approved are Contracts #1, 2, 3, 11, 23A, 26, 30 and 46. The Utility Commission requests adding the following areas to this request: Contracts 5, 10, 13, 14B, 17A, 17F, 20, 21, 23B, 29, 32, 37, 42A, and 43 all of which are identified on the enclosed Sewer Distribution Map. The enclosed Sewer Distribution Map identifies sewer main easements to be cleared (including areas where the interior of sewer manholes will be rehabilitated from within the structure) at this time there is no scheduled sewer rehabilitation work where there will be a permanent disturbance to the surrounding soils.

This clearing and rehabilitation process is necessary in order for the Utility Commission to accomplish the following:

- Identify the easement areas (areas are presently overgrown)
- Gain access to the service manholes and mains
- Inspect infrastructure in order to identify potential inflow and infiltration areas
- Perform prevention and corrective maintenance

For easement clearing and sewer rehabilitation work, the intent of the Utility Commission is to allow the use of machinery to clear a path wide enough to access the identified areas provided the wetland substrate is frozen or under dry soil conditions. For areas where ponded or flowing surface water conditions are present, the use of hand tools, brush-cutters and chainsaws will be used.

Please find a completed Conservation Commission Application for Inland / Wetland Watercourse Permit enclosed for your review and comment. The estimated area of temporary wetland impacts for this scope is 7.5 acres, using a 20 foot average width of clearing. Please note that the easement clearing will take place in phases over time and will not be conducted all at once, the Utility Commission intends to begin with Contract 1, the oldest piece of infrastructure in the sewer system and continue work from oldest to newest sections.

If you require further information, please contact Jill Stevens, Assistant Director of Utilities. Thank you.

JAB
Encl.

**WATERFORD UTILITY COMMISSION
P.O. BOX 310
WATERFORD, CT 06385
PHONE NO. (860) 444-5886 - FAX NO. (860) 442-9037**

TOWN OF WATERFORD
Conservation Commission
Application for Inland Wetland / Watercourse Permit

Type of Application:

Permitted Use, Section 4.1 _____

Unregulated Activities, Section 4.2 _____

Regulated Activities, Section 6 _____ Fee: _____

Agency Use:

Date Received: _____

Received By: _____

Application Number: _____

1. Applicant:		Phone: _____	
Address: _____		State: _____	Zip: _____
Fax: _____		E-Mail: _____	
2. Owner:		Phone: _____	
Address: _____		State: _____	Zip: _____
Fax: _____		E-Mail: _____	
3. Agent:		Phone: _____	
Address: _____		State: _____	Zip: _____
Fax: _____		E-Mail: _____	
4. Property Address:			
5. Assessor's Map #:		Assessor's Parcel #:	
6. Abutting Property Owners – Complete Attached Form			
7. Activity to be Reviewed and / or Licensed (attach sheet if necessary):			
8. Description of Proposed Activity (attach sheet if necessary):			
9. Purpose of Activity (attach sheet if necessary):			
10. Acreage of Property:		Acreage of Wetlands:	
11. Acreage of Wetlands Altered:		12. Wetlands Mitigation Proposed:	
13. DEP Reporting Form With Appropriate Attachments:		Yes:	No:
14. Section 7 and sections 8.1 & 8.2 of the Town of Waterford "Inland Wetlands and Watercourse Regulations"		Yes:	No:
have been complied with: (Review attached check list)			
The applicant / owner hereby gives the Commission, its agent and consultants the right of free access to any part of the property under consideration. The undersigned warrants the truth of all statements contained herein and in all supporting documents according to the best of his / her knowledge, information and belief.			
Applicant:		Date:	
Owner:		Date:	
Agent:		Date:	



**WATERFORD CONSERVATION COMMISSION
INLAND WETLANDS & WATERCOURSES PERMIT #17-04:**

**General Permit for the Inspection & Maintenance
of Municipal Sewer Utilities within Easements
Issued to the Waterford Utility Commission**

The Conservation Commission hereby authorizes the applicant to conduct regulated activities in designated areas that fall under the jurisdiction of the Inland Wetlands and Watercourses Act, as amended, Section 22a-36 to 22a-45, inclusive, of the Connecticut General Statutes. This permit is a grant of approval from the Waterford Conservation Commission to the Waterford Utility Commission for purposes of conducting inspection and maintenance activities on existing municipal sewer utilities within existing municipal sewer easements.

Regulated activities authorized include:

1. Cutting of vegetation in wetlands and adjacent upland areas within sewer easement areas to clear a 12 foot wide vehicle access for purposes of inspection and maintenance of the existing municipal sewer. Vegetation to be cut by machine-mounted mowers or manually where flooded conditions do not allow machinery access. Estimated area of temporary disturbance to inland wetlands and watercourses is approximately 2 acres.
2. Temporary machinery access through and over inland wetlands and watercourses within municipal sewer easement areas to access sewer manholes for inspection and repair.
3. Placement of temporary crossings including temporary plates, timbers, slash, corduroy or mats to minimize disturbance to inland wetlands and watercourses.
4. Minor repair of sewer manholes and utility lines to prevent infiltration of ground and surface water and correct system failures detected during the inspection. Minor repair work includes excavation of soils, installation of temporary erosion and sediment controls and de-watering basins, temporary discharge of sediment-free de-watering waters, repair and replacement of existing sewer manholes and utility lines.

The Conservation Commission attaches the following conditions to minimize impacts to inland wetlands and watercourses associated with the proposed inspection and maintenance activities:

SPECIAL CONDITIONS:

- 1) All maintenance and repair activities conducted under this authorization shall be reported no later than 7 days prior to the planned initiation of the activity to the Conservation Commission's agent for a determination of consistency with the terms of this permit.

The permanent obstruction, diversion or alteration of wetlands and watercourse resources is Not Authorized.

- 2) Prior to initiation of any utility inspection or repair work proposed to be completed in and adjacent to inland wetlands and watercourses, the permittee shall review the scope of work with the Commission's agent. Limits of disturbance shall be identified and marked in the field. Erosion and sediment control and de-watering measures, and measures to restore wetland soils, grades and wetland vegetation shall be identified prior to the start of work in any wetland or watercourse resource.
- 3) The width of vegetation cutting and removal within inland wetlands or watercourses shall be 12 ft. on average and avoid excess disturbance. Cutting and removal of hardwood and canopy species within the easement to preserve integrity of the utility line is authorized.
- 4) In areas of flooded or saturated soil conditions, the use of machinery shall be restricted and vegetation removal conducted manually to protect wetland and surface flow patterns. Where temporary disturbance from machinery access occurs, the permittee shall restore the wetland substrate and surface flows to pre-existing conditions upon completion of the maintenance activity.
- 5) The crossing of wetlands and watercourses with machinery shall be temporary and accomplished with minimal disturbance to wetlands and streambed substrates. Use of best management practices for temporary stream crossings, wetland protection and erosion control shall be incorporated into the inspection and maintenance program. These practices shall comply with the State of Connecticut Forest Practices Regulations.
- 6) Upon completion of machinery access and required repairs to the utility, all temporary wetland and watercourse crossing devices shall be removed, and the wetland and watercourse substrate and surface flows shall be restored to pre-existing grades. The permanent obstruction, diversion or alteration of wetlands and watercourse resources is Not Authorized.
- 7) The permittee shall coordinate with the Commission's agent to schedule a site inspection of all wetland and watercourses traversed by the clearing and inspection activity. Where required and as directed by the Commission's agent, corrective measures to restore grade, stabilize exposed soils and control potential erosion shall be immediately implemented.
- 8) The Waterford Utility Commission shall be responsible for ensuring the terms and provisions of this permit are adhered to during maintenance and repair activities, including the implementation of pollution prevention and best management practices, installation of erosion and sediment controls and restoration of temporary disturbance areas.

Regulated activities identified to be outside the scope of this authorization will require submission of an individual application to the Commission for approval.

All work and all regulated activities conducted pursuant to this authorization shall be consistent with the terms and conditions of this permit. Any structures, excavation, fill, obstructions, encroachments or regulated activities not specifically identified and authorized herein shall constitute a violation of this permit and may result in permit modification, suspension or revocation.

In the event that any additional wetland or watercourse regulated activities are required as a result of other agency permitting to support the proposed activity, the Waterford Conservation Commission reserves the right to reconsider the proposed regulated activity and may require modifications to minimize the impact to wetland resources.

In evaluating this application, the Commission has relied on information provided by the applicant. If such information subsequently proves to be false, incomplete and/or inaccurate, this permit shall be modified, suspended or revoked.

This permit shall be valid for a period of 5 years. Permit extensions may be authorized in accordance with CT General Statutes § 22a-36 through 22a-45 inclusive. If the regulated activity is not completed within this time frame, the permit may be held to be invalid by the Conservation Commission and the applicant may be required to petition the Commission for an extension or re-issuance of the permit. The Commission may require the applicant to furnish additional information at that time.

The Conservation Commission renders this Summary Ruling in accordance with the Waterford Inland Wetlands and Watercourses Regulations based on the following considerations:

- A. The proposed activity is necessary for maintenance and inspection of the public sewer utility lines.
- B. The proposed method of vegetation removal and machinery access does not pose long-term adverse impacts to the wetlands and watercourses within or adjacent to the sewer easement.
- C. Strict adherence to the terms and conditions imposed with this permit will protect the quality of wetlands and surface waters on this property.

This permit will be strictly enforced. If the Conservation Commission finds that the applicant has not complied with the permit conditions or has exceeded the scope of this permit as set forth herein, or, if the intended use of the general site is not as represented by the application or the plan of record, the Commission may suspend or revoke this permit, direct the Environmental Officer to issue a cease and desist order, require the applicant to modify, extend or revise the site work, or require the applicant to restore the area to its original condition.

Dated: 4-27-2017

Issued By: Jeffrey C. Sims

Chairman, Jeffrey C. Sims
Waterford Conservation Commission

FIFTEEN ROPE FERRY ROAD



WATERFORD, CT 06385-2886

**WATERFORD CONSERVATION COMMISSION
MODIFIED PERMIT #09-016:**

**General Permit for the Inspection & Maintenance of Municipal Sewer Easements
Issued to the Waterford Utility Commission**

The Conservation Commission hereby authorizes the applicant to conduct regulated activities in designated areas that fall under the jurisdiction of the Inland Wetlands and Watercourses Act, as amended, Section 22a-36 to 22a-45, inclusive, of the Connecticut General Statutes. This permit is a grant of approval from the Waterford Conservation Commission to the Waterford Utility Commission for purposes of conducting inspection and maintenance activities within sewer easements granted to the Utility. Regulated activities authorized include:

1. Cutting of vegetation in wetlands, watercourses and adjacent upland areas within the identified sewer easement areas to provide an average vehicle access width of 12 ft. for purposes of inspection and maintenance of the municipal sewer. Vegetation to be cut by machine-mounted mowers or manually where flooded conditions do not allow machinery access. The total estimated wetland area affected by these maintenance activities is 2.14 acres.
2. Temporary machinery access through and over inland wetlands and watercourses within the identified sewer easement contracts to access sewer manholes for inspection and repair.
3. Placement of temporary wetland and watercourse crossings to minimize vehicle disturbance, including temporary plates, timbers, slash corduroy or mats. Temporary crossing materials are to be removed from wetlands and watercourses immediately after completion of the maintenance activity in the easement area; and,
4. Minor repair of sewer manholes and utility lines to prevent infiltration of ground and surface water and correct system failures detected during the inspection. Minor repair work includes excavation of soils, installation of temporary erosion and sediment controls and de-watering basins, temporary discharge of sediment-free de-watering waters, repair and replacement of existing sewer manholes and utility lines within the defined sewer easement and restoration of wetland soil characteristics, hydrology, and vegetation.

These regulated activities are associated with maintenance practices and repairs for the Town of Waterford municipal sewer system as described in the modification request dated February 8, 2010, submitted by the Waterford Utility Commission, and described in Conservation Permit #09-016. The Conservation Commission attaches the following conditions to minimize impacts to inland wetlands and watercourses associated with the proposed inspection and maintenance activities:

SPECIAL CONDITIONS:

1. All maintenance and repair activities conducted under this authorization shall be reported no later than 7 days prior to the planned initiation of the activity to the Conservation Commission's agent

for a determination of consistency with the terms of this permit. The permanent obstruction, diversion or alteration of wetlands and watercourse resources is Not Authorized.

2. Prior to initiation of any utility repair work proposed to be completed in and adjacent to inland wetlands and watercourses, the permittee shall review the scope of work with the Commission's agent and identify limits of disturbance, required erosion and sediment control and de-watering measures, and measures to restore wetland soils, contours and re-establish wetland vegetation.
3. The Waterford Utility Commission shall be responsible for ensuring the terms and provisions of this permit are adhered to during maintenance and repair activities, including the implementation of pollution prevention and best management practices, installation of erosion and sediment controls and restoration of temporary disturbance areas. Regulated activities identified to be outside the scope of this authorization will require submission of an individual application to the Commission for approval.
4. All conditions specified in CC Permit #09-016 shall remain in effect as follows:

Clearing within the sewer easement shall be limited to the minimum necessary to provide effective access for inspection and repair/maintenance of the utility. The width of vegetation cutting and removal shall be 12 ft. on average to avoid excess disturbance. Cutting and removal of hardwood and canopy species within the easement to preserve the integrity of the utility line is authorized.

In areas of flooded or saturated soil conditions, the use of machinery shall be restricted and vegetation removal conducted manually to protect wetland and surface flow patterns. Where temporary disturbance from machinery access occurs, the permittee shall restore the wetland substrate to pre-existing grades upon completion of the maintenance activity.

The crossing of wetlands and watercourses with machinery shall be temporary and accomplished with minimal disturbance to wetlands and streambed substrates. Use of forest best management practices for temporary stream crossings, wetland protection and erosion control shall be incorporated into the scope of work and protocol for the inspection and maintenance procedure. These practices shall comply with the State of Connecticut Forest Practices Regulations.

Upon completion of machinery access and required repairs to the utility, all temporary wetland and watercourse crossing devices shall be removed, and the wetland and watercourse substrate and surface flows shall be restored to pre-existing grades. The permanent obstruction, diversion or alteration of wetlands and watercourse resources is Not Authorized.

Prior to the start of easement clearing activities, the clearing limits shall be marked. The permittee shall coordinate with the Commission's agent to conduct a site inspection of the wetland resources areas to be affected and the temporary wetland and stream protection measures proposed.

The permittee shall be responsible for the implementation of soil erosion and sediment control measures where such measures are necessary to prevent sedimentation impacts to receiving wetlands and watercourses.

All work and all regulated activities conducted pursuant to this authorization shall be consistent with the terms and conditions of this permit. Any structures, excavation, fill, obstructions, encroachments or regulated activities not specifically identified and authorized herein shall constitute a violation of this permit and may result in permit modification, suspension or revocation.

In the event that any additional wetland or watercourse regulated activities are required as a result of other agency permitting to support the proposed facility, the Waterford Conservation Commission reserves the right to reconsider development of this site and may require design modifications to minimize the impact to regulated resources.

In evaluating this application, the Commission has relied on information provided by the applicant. If such information subsequently proves to be false, incomplete and/or inaccurate, this permit shall be modified, suspended or revoked.

This permit shall be valid for a period of 5 years. If the regulated activity is not completed within this time frame, the permit may be held to be invalid by the Conservation Commission and the applicant may be required to petition the Commission for an extension or re-issuance of the permit. The Commission may require the applicant to furnish additional information at that time.

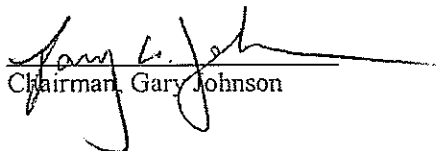
The Conservation Commission renders this Summary Ruling in accordance with the Waterford Inland Wetlands and Watercourses Regulations based on the following considerations:

- A. The proposed activity is necessary for maintenance and inspection of the public sewer utility lines. The proposed method of vegetation removal and easement access does not pose a long-term adverse impact to the wetlands and watercourses within or adjacent to the sewer easement.
- B. Alternative vegetation clearing measures will be used in areas of flooded or saturated wetlands and surface waters to reduce the potential for erosion and sediment impacts to wetland resources.
- C. Strict adherence to the terms and conditions imposed with this permit will protect the quality of wetlands and surface waters on this property.

This permit will be strictly enforced. If the Conservation Commission finds that the applicant has not complied with the permit conditions or has exceeded the scope of this permit as set forth herein, or, if the intended use of the general site is not as represented by the application or the plan of record, the Commission may suspend or revoke this permit, direct the Environmental Officer to issue a cease and desist order, require the applicant to modify, extend or revise the site work, or require the applicant to restore the area to its original condition.

Dated at Waterford, Connecticut this 25th day of February, 2010.

By:


Chairman Gary Johnson

SEWER REPAIRS

PART 1 - GENERAL

DESCRIPTION

- a. A sewer repair shall be defined as a repair made at a specified location on a sanitary or storm sewer line as determined by TV inspection of the line or as required by the Waterford Utility Commission.
- b. This work shall include:
 1. The repair or replacement of any service connection, cleanout, cap or plug, tee or wye connection, or plugging of a sewer line to be abandoned.
 2. The removal of obstructions from sewer lines which cannot be removed by cleaning equipment or similar means and which requires excavation.
 3. The repair or replacement of sections of a sewer main as determined by the Waterford Utility Commission.
 4. The disconnection of storm drains, roof leaders, catch basins, etc., from a sanitary sewer line and the repairs and plugging required to prevent water from entering the sanitary sewer.

PART 2 - PRODUCTS

MATERIALS

- a. Pipe and connections shall be manufactured of the following materials:
 1. Replacement Pipe for Sewer Repairs
 - i. Polyvinyl Chloride (PVC) Non-Pressure Pipe, SDR 35
 2. Standard adaptors for P.V.C., Vitrified Clay Pipe, and ACP
 - i. Flexible couplings with all stainless steel clamps equivalent to a Series 1002 Flexible Coupling by Fernco Joint Sealer Co. of Davison, Mich. and approved by the Waterford Utility Commission representative.
 - ii. Bell donuts equivalent to Fernco Donut Sewer Pipe Compression Joint Sealers, by Fernco Joint Sealer Co. of Davison, Mich. and approved by the Waterford Utility Commission representative.
 3. PVC Wyes and saddles See section 02625.
 4. Saddles equivalent to:
 - i. Romac Industries, Bothell, WA.
 - ii. The General Engineering Company, Frederick, MD
- b. Joint material shall meet all requirements of the current ASTM standards.

- c. Sewer Connections and Appurtenances shall conform to the pipe manufacturer's recommendations and specifications and applicable ASTM standards.
- d. The developer shall have on hand at all times a sufficient amount of material and fittings of appropriate sizes to make proper connections including: adaptors; 4, 6 and 8 inch wyes and saddles; 22½°, 45° and other bends and fittings; short and long nipples; neoprene connectors with various size bushings; an approved non-shrink grout material; mortar mix; reinforcing wire mesh; oakum; pipe saw; hole cutter.

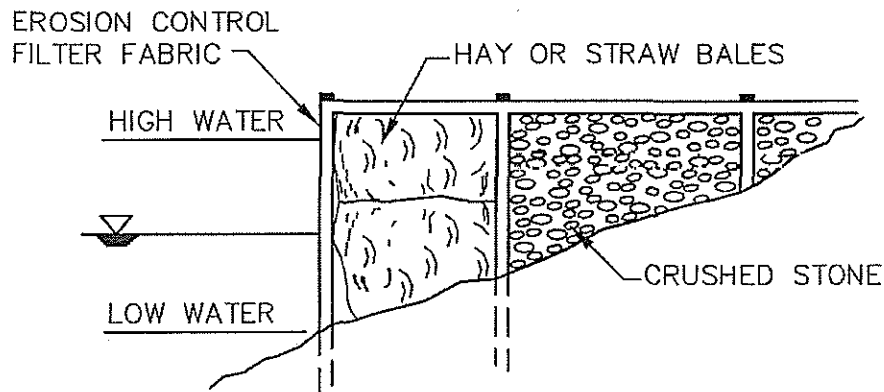
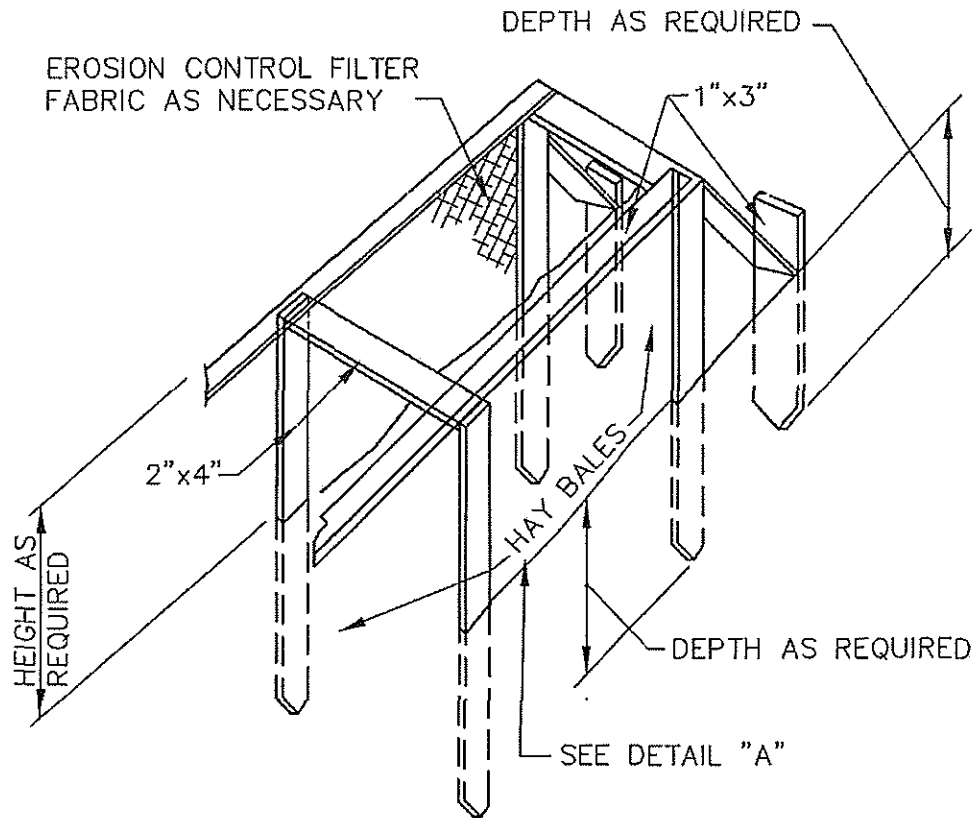
PART 3 - EXECUTION

REPAIR METHOD

- a. The method used shall include all supervision, labor, equipment and materials necessary to complete a sewer repair including, but not limited to, the items listed below.
 - 1. Excavate and uncover the sewer line carefully to allow examination of the pipe and to reveal the extent of damage. Handwork will be necessary near pipes and structures.
 - 2. Remove and replace any fences, base materials, storm sewers, etc., which might interfere with the repair, or in the case of utilities such as water lines or telephone cable, to carefully work around these while maintaining close contact with representatives of these utilities.
 - 3. Replace and reshape pipe bedding so that pipe grades match existing sewer lines.
 - 4. Repair or replace sewer pipe, exercising due caution with undamaged existing sewer lines. Pipe broken by the developer shall be replaced at the developer's expense. Pipe joints shall be made by one of the following methods:
 - i. Standard AC push-on adaptors
 - ii. Adjustable full circle stainless steel collar with rubber gaskets, such as dresser coupling.
 - iii. Rubber coupling with stainless steel bands.
 - 5. Repair or replace any service connection encountered to the satisfaction of the Waterford Utility Commission representative.
 - 6. Seal any open joints revealed by the excavation, removing any visible roots prior to sealing.
 - 7. Make all connections watertight to prevent any inflow/ infiltration.
 - 8. Dewater the excavation to permit repairs to be made. If necessary, a coarse granular bedding such as crushed stone may be required.
 - 9. Use adequate sheeting, bracing and/or shoring to protect employees and existing structures and to remove same prior to backfilling.
 - 10. Plug and seal all lines to be abandoned. Unless otherwise directed, all service connections to be abandoned shall be blocked off at the sewer main.

11. Backfill according to procedures specified in Section 02250.
12. Clean up work area so that no trash or salvage pipe is left.

END OF SECTION



DETAIL "A"

HAY BALE/SILT FENCE SYSTEM FOR SEDIMENTATION
BASINS (END SHOWN - RUN SIMILAR)
 NOT TO SCALE

WATERFORD UTILITY COMMISSION
TOWN OF WATERFORD, CT
STANDARD DETAILS

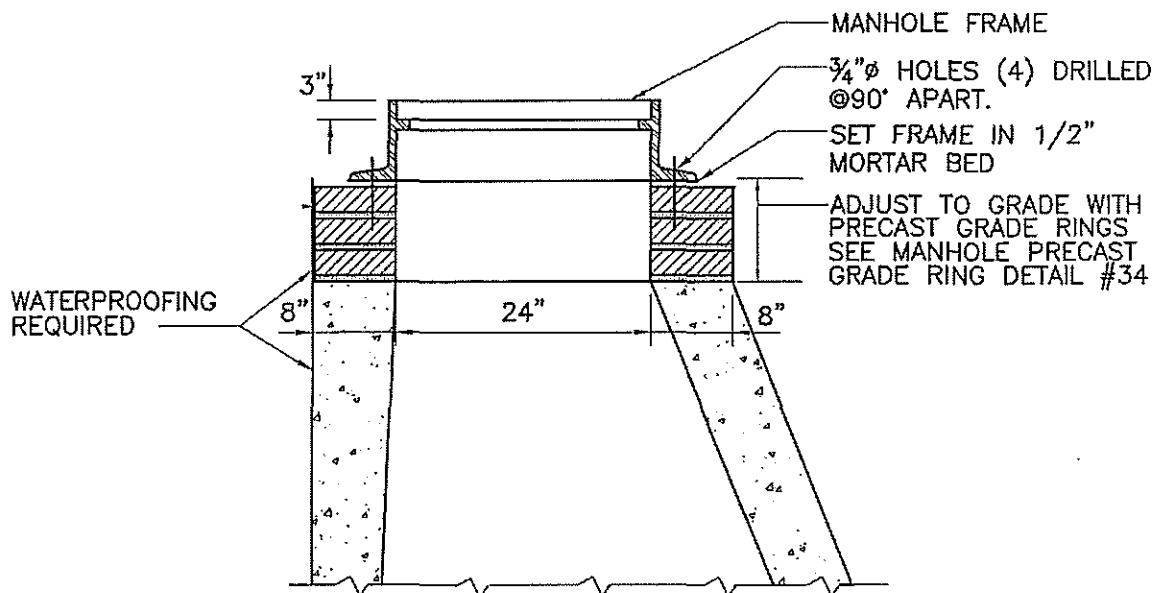


DETAIL:

2

DATE:

JAN 2006



MANHOLE FRAME INSTALLATION

NTS

NOTES:

1. FOR MANHOLE FRAMES LOCATED IN WOODED AREAS, FINAL RIM ELEVATION IS TO BE SET AT 2' ABOVE GRADE, UNLESS OTHERWISE DIRECTED BY THE UTILITY COMMISSION.

WATERFORD UTILITY COMMISSION
TOWN OF WATERFORD, CT
STANDARD DETAILS

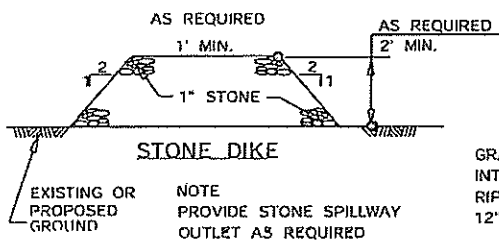


DETAIL:

13

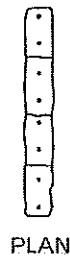
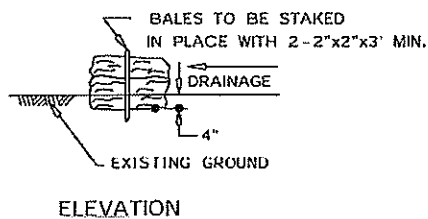
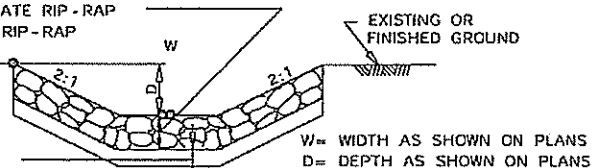
DATE:

JAN 2006

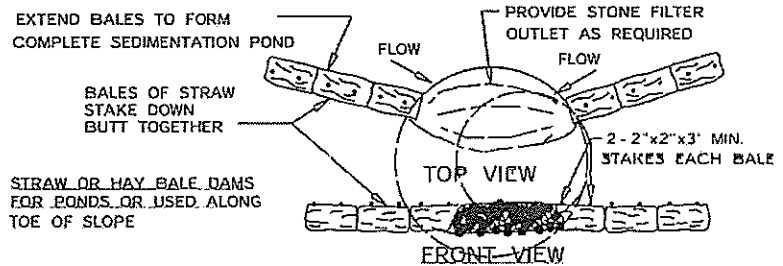


MIN. THICKNESS
 36" FOR STANDARD RIP-RAP
 18" FOR INTERMEDIATE RIP-RAP
 12" FOR MODIFIED RIP-RAP

GRAVEL FILL 6" FOR
 INTERMEDIATE & MODIFIED
 RIP-RAP
 12" FOR STANDARD RIP-RAP

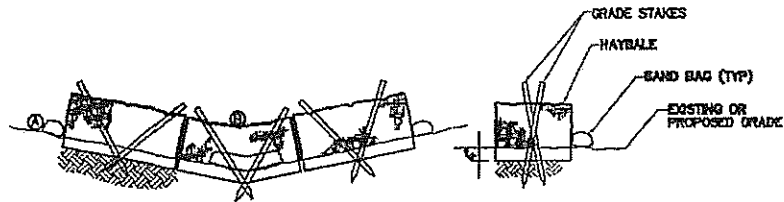


STREAM CHANNEL RESTORATION



SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

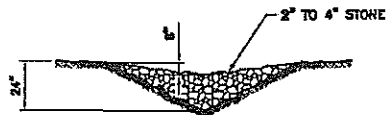
NOT TO SCALE



EROSION CHECK TO BE BALES OF HAY SECURED TO THE GROUND WITH TWO 4" LONG GRADE STAKES FOR EACH BALE. SAND BAG AS REQUIRED. PLACE SUFFICIENT BALES TO ESTABLISH ELEVATIONS AT LEAST 6 INCHES ABOVE OVERFLOW AT 10

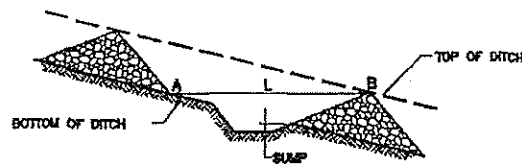
HAY BALE CHECK DAM

NTS



CROSS SECTION

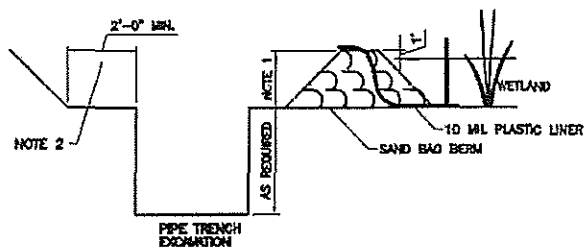
DITCH SLOPE (FT/FT)	L (FT)
0.020	100
0.030	66
0.040	50
0.060	40
0.080	25
0.100	20
0.120	17
0.150	13



PROFILE

STONE CHECK DAM DETAIL

NTS



NOTE:

1. HEIGHT OF BERM TO BE CONSTRUCTED BASED ON DEPTH OF WATER SO AS TO MAINTAIN 1' MINIMUM FREE BOARD.

2. SPOIL FROM TRENCH EXCAVATION AND SAND BAG BERM TO BE KEPT BACK AT A MINIMUM OF 2 FEET FROM EDGE OF TRENCH AS PER OSHA REGULATIONS.

PIPE TRENCH EXCAVATION DETAIL

NTS

WATERFORD UTILITY COMMISSION
TOWN OF WATERFORD, CT
STANDARD DETAILS



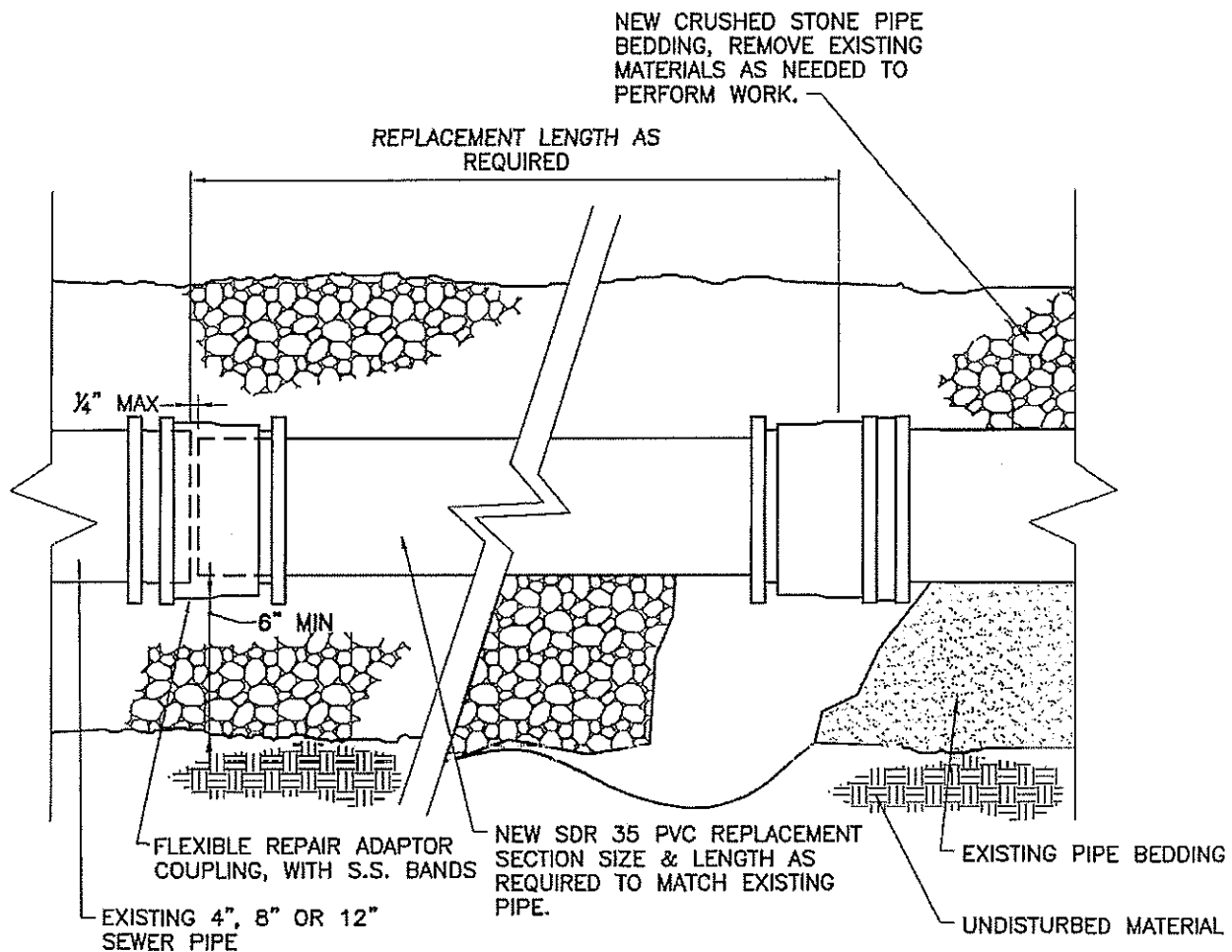
DETAIL:

1B

DATE:

JAN 2006

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PIPE REPLACEMENT DETAIL

NTS

WATERFORD UTILITY COMMISSION
TOWN OF WATERFORD, CT
STANDARD DETAILS

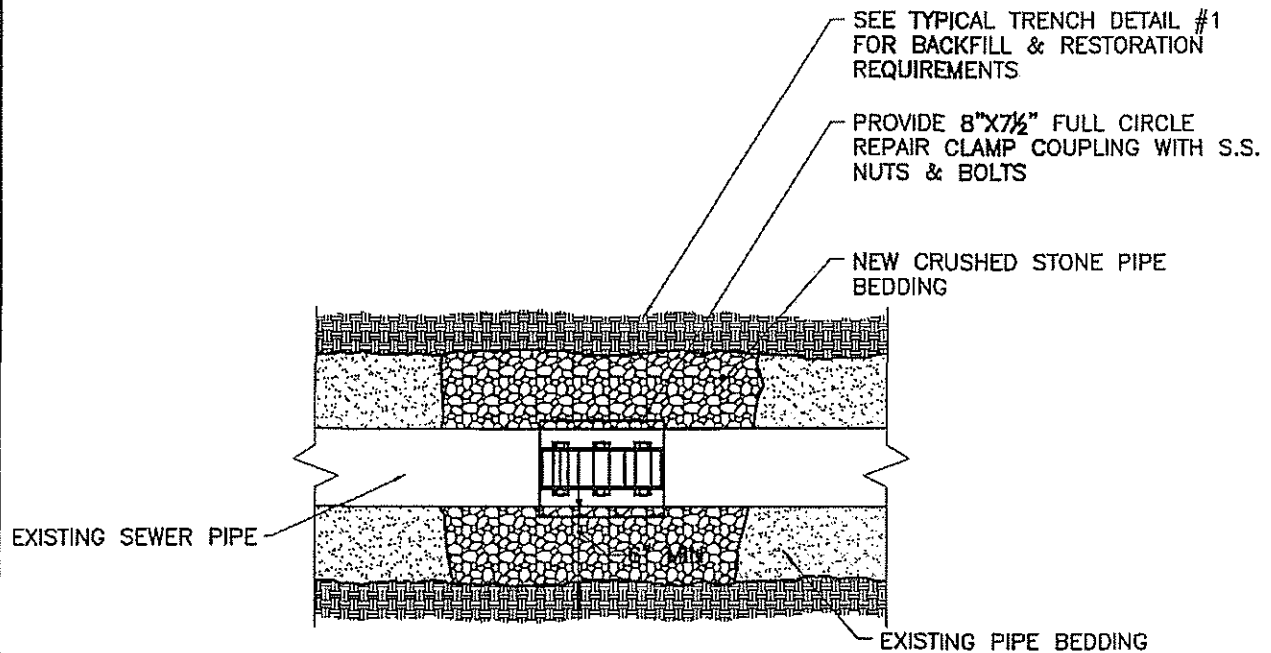


DETAIL:

30

DATE:

JAN 2006



PIPE REPAIR CLAMP
NTS

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WATERFORD UTILITY COMMISSION
TOWN OF WATERFORD, CT
STANDARD DETAILS



DETAIL:
31
DATE:
JAN 2006

EROSION AND SEDIMENTATION CONTROL NOTES

THIS PLAN HAS BEEN DEVELOPED AS A STRATEGY TO CONTROL SOIL EROSION AND SEDIMENTATION DURING AND AFTER CONSTRUCTION. THIS PLAN IS BASED ON THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION.

THE PROPOSED LOCATIONS OF EROSION AND SEDIMENT CONTROL MEASURES REQUIRED ARE SHOWN ON THE SITE GRADING AND LAYOUT PLAN. REFER TO DWG 0-3. PROVIDE SILT FENCE, STONE CHECK DAMS AND OTHER EROSION CONTROL MEASURES AS REQUIRED TO ADEQUATELY PREVENT SEDIMENT TRANSPORT AS NOTED IN THE PLAN.

1. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE DONE IN ACCORDANCE WITH THE "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION.
2. THOSE AREAS UNDERGOING ACTUAL CONSTRUCTION WILL BE MAINTAINED IN AN UNDISTURBED OR UNDEVELOPED CONDITION FOR THE MINIMUM TIME REQUIRED. IN GENERAL, AREAS TO BE REDEVELOPED SHALL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING AND TEMPORARILY STABILIZED WITHIN 30 DAYS OF INITIAL DISTURBANCE OF THE SOIL.
3. SEDIMENT BARRIERS (SILT FENCE, STONE CHECK DAMS, ETC.) SHOULD BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OF UPSTREAM DRAINAGE AREAS.
4. INSTALL SILT FENCE AT TOE OF SLOPES TO FILTER SILT FROM RUNOFF. SEE SILT FENCE DETAIL FOR PROPER INSTALLATION. SILT FENCE WILL REMAIN IN PLACE PER NOTE #2.
5. ALL EROSION CONTROL STRUCTURES WILL BE INSPECTED, REPLACED AND/OR REPAIRED EVERY 7 DAYS AND IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOW MELT OR WHEN NO LONGER EFFECTIVE DUE TO SEDIMENT ACCUMULATION OR DECOMPOSITION. SEDIMENT DEPOSITS MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPLOPE ARE PERMANENTLY STABILIZED.
6. NO SLOPES, EITHER PERMANENT OR TEMPORARY, SHALL BE STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL (2:1) UNLESS STABILIZED WITH PERMANENT EROSION CONTROL MEASURES.
7. IF FINAL SEEDING OF THE DISTURBED AREAS IS NOT TO BE COMPLETED 30 DAYS PRIOR TO THE ANTICIPATED DATE OF THE FIRST KILLING FROST, USE TEMPORARY MULCHING (DORMANT SEEDING MAY BE ATTEMPTED AS WELL) TO PROTECT THE SITE AND DELAY PERMANENT SEEDING, UNTIL UPSTREAM AREAS ARE STABILIZED.
8. WHEN FEASIBLE, TEMPORARY SEEDING OF DISTURBED AREAS THAT HAVE NOT BEEN FRESH GRADED SHALL BE COMPLETED 30 DAYS PRIOR TO THE FIRST KILLING FROST.
9. DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO THE SITE AND REINTEGRATED ONTO OPEN AREAS. POST SEEDING SEDIMENT, IF ANY, WILL BE DISPOSED OF IN AN ACCEPTABLE MANNER.
10. REVEGETATION MEASURES WILL COMMENCE UPON COMPLETION OF CONSTRUCTION EXCEPT AS NOTED ABOVE. ALL DISTURBED AREAS NOT OTHERWISE STABILIZED WILL BE GRADED, SMOOTHED, AND REVEGETATED AS FOLLOWS:
 - A. A MINIMUM OF FOUR (4) INCHES OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE.
 - B. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST. IF SOIL TESTING IS NOT DEEMED FEASIBLE ON SMALL OR VARIABLE SITES, OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 200 POUNDS PER ACRE OR 7.5 POUNDS PER 1,000 SQUARE FEET USING 10-10-10 (N-P-K) OR EQUIVALENT. APPLY GROUND LIMESTONE (EQUIVALENT TO 80% CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF 4 TONS PER ACRE (180 LB PER 1,000 SQ. FT.) FOR ONLY CLAY LOAM AND HIGH ORGANIC SOIL AT A RATE OF 3 TONS PER ACRE (135 LB PER 1,000 SQ. FT.) FOR SANDY LOAM, LOAM AND SILT LOAM AT A RATE OF 2 TONS PER ACRE (90 LB PER 1,000 SQ. FT.) FOR LOAMY SAND, AND SAND.
 - C. FOLLOWING SEED BED PREPARATION, DITCHES AND BACK SLOPES WILL BE SEEDING WITH A MIXTURE OF 47% CREEPING RED FESCUE, 5% REDTOP, AND 48% TALL FESCUE. THE LAWN AREAS WILL BE SEEDING WITH A PREMIUM TURF MIXTURE OF 44% KENTUCKY BLUEGRASS, 44% CREEPING RED FESCUE, AND 12% PERENNIAL RYE GRASS. SEEDING RATE IS 3.0 LBS PER 1,000 SQ. FT. LAWN QUALITY SOIL MAY BE SUBSTITUTED FOR SEED.
 - D. HAY MULCH AT THE RATE OF 2 TONS PER ACRE OR 90-95 LBS PER 1,000 SQUARE FEET OR A HYDRO-APPLICATION OF CELLULOSE FIBER SHALL BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SHALL BE USED ON HAY MULCH FOR WIND CONTROL.
11. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE WORK AREA IS STABILIZED.
12. WETLANDS (EXCEPTING THOSE WHICH ARE TO BE FILLED IN ACCORDANCE WITH STATE AND FEDERAL REGULATIONS) WILL BE PROTECTED WITH SILT FENCE INSTALLED AT THE EDGE OF THE WETLAND OR THE BOUNDARY OF WETLAND DISTURBANCE.
13. IN GENERAL, AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS SHALL HAVE A MAXIMUM PERIOD OF EXPOSURE OF NOT MORE THAN 15 DAYS.
14. FOLLOW APPROPRIATE EROSION CONTROL MEASURES PRIOR TO EACH STORM IN ALL AREAS WITHIN 100 FEET OF DELINEATED WETLANDS OR STREAMS.

EROSION CONTROL DURING WINTER CONSTRUCTION

1. WINTER CONSTRUCTION PERIOD DEFINED: NOVEMBER 1 THROUGH APRIL 15
2. WINTER EXCAVATION AND EARTHWORK SHALL BE DONE SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
3. EXPOSED AREA SHOULD BE LIMITED TO THAT WHICH CAN BE MULCHED IN ONE DAY PRIOR TO ANY PRECIPITATION EVENT.
4. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 100 LB. PER 1,000 SQUARE FEET (WITH OR WITHOUT SEEDING) OR DORMANT SEEDING, MULCHED AND ADEQUATELY ANCHORED BY AN APPROVED ANCHORING TECHNIQUE. IN ALL CASES, MULCH SHALL BE APPLIED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH.
5. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 15, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE-FREEZING TEMPERATURES, THE SLOPES SHALL BE FIRST GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDING AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED AND IS SMOOTH, THEN THE AREA MAY BE DORMANT SEEDING AT A RATE 200 - 300% HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT EXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW DITCHES TO BE FRESHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS.
6. A) BETWEEN THE DATES OF NOVEMBER 1ST AND APRIL 15TH ALL MULCH SHALL BE EITHER WOOD CELLULOSE FIBER OR BE ANCHORED WITH MULCH NETTING OR CHEMICAL TACK.
 - B) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGEWAYS WITH A SLOPE GREATER THAN 5%, FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 5%.
 - C) MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL AREAS WITH SLOPES GREATER THAN 15%. AFTER OCTOBER 1ST, THE SAME APPLIES FOR ALL SLOPES GREATER THAN 5%.
7. AFTER NOVEMBER 1ST THE CONTRACTOR SHALL APPLY DORMANT SEEDING OR MULCH AND ANCHORING ON ALL BARE EARTH AT THE END OF EACH WORKING DAY.
8. DURING WINTER CONSTRUCTION PERIODS ALL SNOW SHALL BE REMOVED FROM AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

MULCH ANCHORING

ANCHOR MULCH WITH MULCH NETTING (AS PER MANUFACTURER), ASPHALT EMULSION (6.05 GALLONS PER SQ. YD.), CHEMICAL TACK (AS PER MANUFACTURER'S SPECIFICATIONS), OR WOOD CELLULOSE FIBER (2000 LBS./ACRE). NETTING FOR SMALL AREAS AND ROAD DITCHES MAY BE PERMITTED.

MULCH AND MULCH ANCHORING

MULCH

LOCATION	MULCH	RATE (1000 S.F.)
PROTECTED AREA	STRAW OR HAY *	100 POUNDS
WINDY AREAS	STRAW OR HAY (ANCHORED) *	100 POUNDS
MODERATE TO HIGH VELOCITY AREAS OR STEEP SLOPES (GREATER THAN 3:1)	JUTE MESH, EXCELSON MAT OR EQUIV.	AS REQUIRED

* A HYDRO-APPLICATION OF CELLULOSE FIBER MAY BE APPLIED FOLLOWING SEEDING. A SUITABLE BINDER SHALL BE USED ON HAY MULCH FOR WIND CONTROL.

ADDITIONAL TEMPORARY SEED MIXTURES FOR PERIODS LESS THAN 12 MONTHS

DATE	SEED	RATE
3/1 - 6/15	DATA	85 LBS./ACRE
5/15 - 8/15	OATS	85 LBS./ACRE
3/1 - 8/15	ANNUAL RYE GRASS	40 LBS./ACRE
(6/1 - 10/15)		
4/15 - 7/1	WINTER RYE	120 LBS./ACRE
(6/15 - 10/15)		
5/15 - 7/15	WILLET	20 LBS./ACRE

*SEED RATE ONLY

WATERFORD UTILITY COMMISSION
TOWN OF WATERFORD, CT

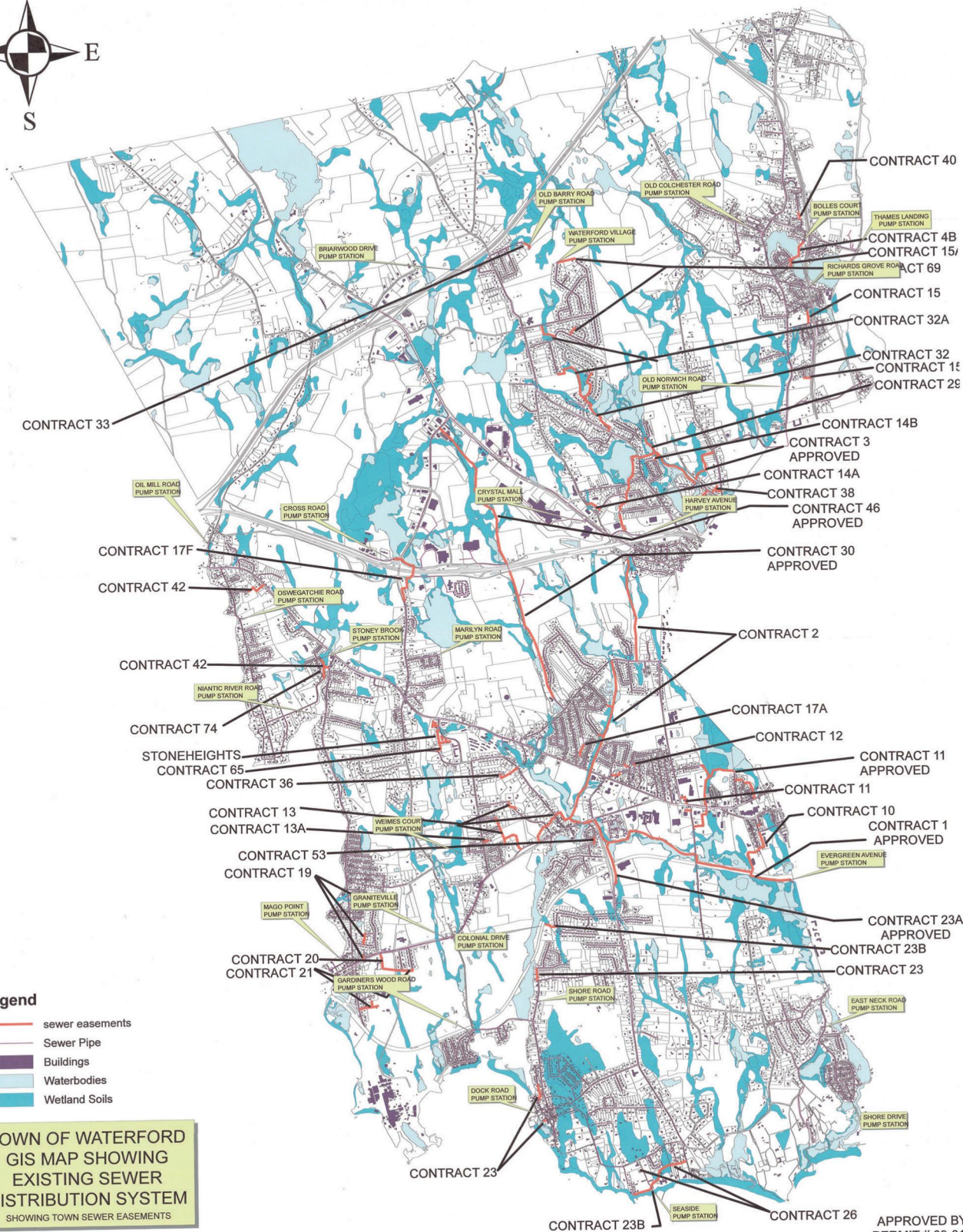


DETAIL:

1A

DATE:

JAN 2006



- sewer easements
- Sewer Pipe
- Buildings
- Waterbodies
- Wetland Soils

TOWN OF WATERFORD
GIS MAP SHOWING
EXISTING SEWER
DISTRIBUTION SYSTEM
SHOWING TOWN SEWER EASEMENTS

APPROVED BY
PERMIT # 09-016

REVISED TO
FEB 2010

2,000 1,000 0 2,000 4,000 Feet