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PROJECT MANUAL

ONSITE WASTEWATER SYSTEM (OWTS) REPAIR
510-534 FURNACE DOCK ROAD
TOWN OF CORTLANDT, NEW YORK

Owner:

Baker-Capital Limited Partnership
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Revision History		
Rev.	Date	Revision Description
0		Initial Project Manual

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A. Baker Capital Limited Partnership Standard Subcontract Agreement
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END OF SECTION

SECTION 00800 - POLLUTION PREVENTION MEASURES

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. Water pollution prevention.

1.2 REFERENCED SECTIONS

A. Section 00890 Project Permits

B. Section 01330 Submittals

C. Section 01740 Cleanup and Disposal of Waste Materials

D. Section 02370 Erosion and Sediment Control

1.3 GENERAL REQUIREMENTS

A. The work specified in this section of the Specifications shall be considered as the minimum requirements to prevent pollution. Other requirements may be required by permits described in Section 00890: Project Permits or as required by other local, municipal, county, state, and federal regulatory agencies.

B. Cleanup and disposal of waste materials, including trash, shall be in accordance with Section 01740: Cleanup and Disposal of Waste Materials.

1.4 WATER POLLUTION

A. Construction activities shall be performed by methods that will prevent entrance, or accidental spillage, of solid matter, contaminants, debris, and other pollutants and wastes into streams, flowing or dry water courses, lakes, and underground water sources. Such pollutants and wastes include, but are not restricted to, refuse, garbage, industrial waste, radioactive substances, oil and other petroleum products, and unnecessary embankment materials and construction or demolition materials.

B. Construction shall be performed in accordance with the requirements of Section 00890: Project Permits, and Section 02370: Erosion and Sediment Control.

C. Excavated materials or other construction materials shall not be stockpiled or deposited near or on stream banks, wetlands, ponds, or other water course perimeters where they can be washed away by high water or storm runoff or can in any way encroach upon the water course.

D. Wastewaters from construction operations shall not enter streams, watercourses, wetlands, or ponds, without passing through suitable sedimentation basins or treatment facilities approved by the Engineer.

E. Comply with all applicable local, municipal, state, and federal laws, orders, regulations,

SECTION 00810 - SAFETY

PART 1 – GENERAL

1.1 SECTION INCLUDES

A. This section includes project safety requirements.

1.2 REFERENCED SECTIONS

A. Section 01330 Submittals

1.3 SAFETY REQUIREMENTS

A. The Sub-Contractor shall have sole responsibility for construction site safety.

B. The Sub-Contractor shall comply will all applicable OSHA regulations.

C. The Sub-Contractor shall become familiar with the potential hazardous health and safety conditions and risks associated with the work to be performed.

D. The Sub-Contractor shall not require anyone employed in the performance of the contract to work under any conditions which are unsanitary, hazardous, or dangerous to their health or safety, as determined under construction safety and health standards promulgated by the Secretary of Labor under section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327 et seq.) as amended. Construction Safety and Health Standards promulgated by the Secretary of Labor may be obtained from the regional or area office of the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor.

E. The Sub-Contractor is responsible for being cognizant of and ensuring compliance with the requirements set forth by OSHA and in these Specifications. Such responsibility shall apply to both his operations and those of his Sub-Contractors. When violations of the safety and health requirements contained in these specifications or referenced standards are called to the Sub-Contractor's attention by the Engineer, the Sub-Contractor shall immediately correct the condition. Such notice, either oral or written, when served on the Sub-Contractor or their representative(s), shall be deemed sufficient.

F. In the event the Sub-Contractor fails or refuses to promptly comply with these Specifications, the Owner may issue an order to stop all or any part of the work. When satisfactory corrective action is taken, an order to resume work will be issued.

G. The Sub-Contractor shall maintain an accurate record of, and shall report to the Owner in the manner prescribed by the Owner, all cases of death, occupational diseases, or traumatic injury to employees or the public; and property damage incident to performance of work under this contract.

H. In the event there is a conflict between the requirements contained in the Specifications, the Safety Plan, referenced safety and health codes and standards, or the U.S. Department of Labor construction safety and health standards, the more stringent requirement shall prevail.

SECTION 00890 - PERMITS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Project Permits Obtained by the Owner

B. Project Permits Obtained by the Sub-Contractor

C. Project Permit Compliance

1.2 RELATED SECTIONS

A. Section 00800 Pollution Prevention Measures

B. Section 01330 Submittals

1.3 SUBMITTALS

A. The Sub-Contractor shall submit copies of all project permits obtained by the Sub-Contractor to the Engineer in accordance with Section 01330: Submittals 7 days prior to initiating applicable work.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.1 PROJECT PERMITS OBTAINED BY THE OWNER

A. The Owner will obtain or has prepared the following Permits:

1. New York State Department of Environmental Conservation Freshwater Wetlands Permit under Article 25 of the ECL.

2. Town of Cortland Building Permit #20140031 Wetlands Permit, dated 1/21/2014, Expiration date: 1/21/2015.

3.2 PROJECT PERMITS OBTAINED BY THE SUB-CONTRACTOR

A. The Sub-Contractor is required to obtain all permits required for the Work, except the Owner-obtained permits as listed above, in accordance with local, county, state, and federal regulations.

B. Use of the onsite hydrant as a supply of water is permissible only with the approval of the Cortlandt Consolidated Water District. The Sub-Contractor shall obtain written approval from the District prior to use of the hydrant.

DIVISION 1 – GENERAL REQUIREMENTS

A. The Sub-Contractor shall perform all his operations in accordance with the rules, regulations, and ordinances of those governing bodies having jurisdiction.

1.6 SUBMITTALS

A. The Sub-Contractor shall submit a schedule of proposed methods and operations for review and approval prior to the start of Work.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 SCHEDULE OF OPERATIONS

A. Prior to the start of construction the Sub-Contractor shall submit a Schedule of Construction Operations and completion dates to the Owner. No Work shall be started until the Owner has approved the Schedule.

3.2 SPECIAL REQUIREMENTS

A. No work shall be performed within 35 feet of the New York State Department of Environmental Conservation mapped wetlands limit line as shown on the drawings.

B. All work shall comply with the rules, regulations and permit conditions of the New York State Department of Environmental Conservation, Westchester County Department of Health and Town of Cortlandt Department of Technical Services.

END OF SECTION

1.4 SUBMITTAL SCHEDULE

A. Table 1 presents a summary of project submittals required by Specification Section. This list may not be inclusive of all required submittals. The Sub-Contractor should refer to the applicable specification section when preparing submittals.

Table 1 Division 2 Site Construction	
02370	Silt Fence Filter Cloth with Netting
02540	Temporary Storage Tank. Automatic siphon. Pipe and fittings. Gravel for Structure Bedding Absorption Trench Filter Material. Manhole Frame and Cover. Septic tank. Dosing tank. Distribution box.
02970	Seed Mix

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION

required to be paid for disposal of materials shall be paid by the Sub-Contractor. In the event that certain materials cannot be readily disposed of, the Sub-Contractor shall identify a suitable waste disposal facility and shall dispose of the material at such facility at no additional cost to the Owner.

PART 2 - PRODUCTS:

Not used.

PART 3 - EXECUTION:

3.1 DISPOSAL OF APPROVED EXCAVATED MATERIAL

A. Disposal of excavated material deemed not suitable or needed shall be the responsibility of the Sub-Contractor, any disposal costs shall be paid by the Sub-Contractor.

B. Disposal of approved excavated material on other areas of the property shall not be allowed, unless approved by the Owner in writing.

3.2 DISPOSAL OF CLEARED VEGETATION AND WASTE MATERIAL

A. All cleared grassy vegetation shall be reused for project mulching, or shall be disposed of at locations to be designated by the Engineer and acceptable to the Owner.

B. All cleared woody vegetation, trees, and shrubs from site clearing operations shall be removed from the site, any disposal costs shall be paid by the Sub-Contractor.

C. The Sub-Contractor shall not burn or bury any cleared debris or material from clearing or grubbing operations.

END OF SECTION

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION

SECTION 02110 - SITE CLEARING

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Removal and disposal of all surface debris, rocks, trees and shrubs from the limits of site disturbance shown on the Drawings.

B. Grubbing all tree stumps and root systems from project work areas shown on the Drawings.

C. Remove grass, weeds, and topsoil within the limits of disturbance.

D. Stockpile topsoil in stockpile and disposal areas shown on the Drawings or as approved by the Engineer.

1.2 REFERENCED SECTIONS

A. Section 01320: Survey and Layout Data

1.3 DEFINITIONS

A. Site clearing as defined herein shall mean the removal, hauling, and disposal of surface debris, asphalt, concrete, rubbish, trees, and shrubs from the limits of site disturbance shown on the Drawings.

B. Grubbing as defined herein shall mean the removal, hauling, and disposing of all tree stumps and root systems, and backfilling the grubbed holes.

C. Topsoil stripped from the site shall be the selected portion of the top of the surface soil that is brown or black, fertile, and contains organic matter as directed by the Engineer. Topsoil shall be free of subsoil, heavy clay, hard clods, toxic substances, or other material, which would be detrimental to plant growth.

D. Herbicides: Comply with the rules and regulations of the Department of Environmental Conservation Title 6, Chapter 4 Quality Services, Parts 320 through 329.

1.4 CLEARING LIMITS

A. The clearing limits shall include all work areas required to construct the project features within the limits of site disturbance shown on the Drawings. Only clear areas that are required to facilitate construction or as designated by the Engineer or on the Drawings.

B. Verify the clearing limits with the Engineer prior to initiating clearing and grubbing operations in each specific work area.

C. Protect trees, shrubs, wetlands, and other site features that do not need to be cleared to complete the work.

3.5 STOCKPILING TOPSOIL

A. All stripped topsoil material shall be stockpiled in an area as directed by the Engineer and approved by the Owner.

B. Stockpile excavated topsoil separately from other materials in stockpile areas as shown on the Drawings or approved by the Engineer.

C. Stockpile topsoil to a height not exceeding ten feet. Protect stockpiled topsoil from erosion.

D. As required, all excavated topsoil shall be used in site reclamation.

3.6 REMOVAL AND DISPOSAL

A. Unless indicated or approved otherwise, all material removed as a result of clearing and grubbing shall be removed from the site.

3.7 MAINTENANCE OF CLEARED AREAS

A. The Sub-Contractor shall be responsible for maintaining cleared work areas in a condition free from additional vegetation growth for the duration of the project. Use of herbicides to discourage plant growth shall not be allowed.

B. The Sub-Contractor shall be compensated for clearing each work area only once. If weed and brush growth require additional clearing, this shall be performed solely at the Sub-Contractor's expense.

C. The Sub-Contractor shall protect all trees beyond the areas to be cleared and the trees designated to be replanted, structures, utilities and other features and shall not trespass beyond the construction limits.

3.8 CLEAN UP

A. Remove and dispose of all logs, tree trimmings, and debris from the property. Leave work area in a neat uncluttered condition.

END OF SECTION

1.5 DELIVERY, STORAGE & HANDLING (NOT USED)

1.6 JOB CONDITIONS

A. Protection of existing conditions as indicated in Part 1.07 of Section 02200 of these Project Specifications shall apply to this Section.

B. The Sub-Contractor shall provide all necessary safeguards as may be required to prevent damage to property beyond the Work area or adjacent property.

C. Area of Work

1. The Owner's Field Representative shall have the authority to increase or decrease the surface area of erodible earth material exposed by clearing and grubbing, and/or excavation and fill operations, and to direct the Sub-Contractor to provide immediate permanent or temporary pollution control measures to prevent contamination of adjacent streams or other watercourses, lakes, ponds or other areas of water impoundment.

2. In general, the limit of the area of clearing and grubbing and/or excavation and fill operations in progress, shall be commensurate with the Sub-Contractor's capability and progress in keeping the finished grade, mulching, seeding and other such permanent control measures current and in accordance with the accepted schedule. Temporary erosion control measures shall immediately be provided by the Sub-Contractor should seasonal limitations make such coordination unrealistic, as determined by the Owner's Field Representative.

D. Temporary Erosion Control Measures

1. Temporary erosion control measures shall be used to correct conditions that develop during construction that are needed prior to installation of permanent control features, or that are temporarily needed to control erosion that develops during normal construction practices, but which are not associated with permanent control features on the Project. All slopes and stockpile areas that will remain undisturbed and/or not topsoiled and seeded for a period of thirty (30) days shall be temporarily seeded as specified on Drawings.

PART 2 – PRODUCTS

2.1 GENERAL

A. All materials shall be in accordance with the items specified on the Drawings and/or contained in the "New York Standards and Specifications for Erosion and Sediment Control" dated August 2005.

2.2 SILT FENCE

A. Fence post shall be at least 36 inches long. Wood posts shall be of hardwood with a minimum cross section area of 3 inches. Steel posts shall be standard "T" of "U" sections and should weigh no less than one (1) pound per linear foot.

2.5 MULCH

A. Mulch Materials

Material	Quality Standard	Application Rate per 1,000 s.f.	Depth of application
Small Grain Straw	Air dried; free of undesirable seeds and coarse material	90 to 100 lbs.	Cover about 90% of surface

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

A. Examine the areas and conditions where Erosion Control Measures are to be installed and notify the Owner's Field Representative of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected by the Sub-Contractor in a manner acceptable to the Owner's Field Representative.

B. The Sub-Contractor shall conduct his operations to minimize erosion of soils and to prevent silting and muddying of streams, rivers, irrigation systems, impoundments (lakes, reservoirs, etc.) and lands adjacent to or affected by the Work, in accordance with the approved Sequence of Construction, Drawings and these Project Specifications.

C. Where erosion is likely to be a problem, clearing and grubbing operations shall be scheduled so that grading operations and permanent erosion control features can follow immediately thereafter, if the Project conditions permit; otherwise, temporary erosion control measures may be required between successive construction stages. The area of bare soil exposed at any one time by construction operations shall be kept to a minimum.

D. Throughout all operations covered by this Section, the Sub-Contractor shall provide all necessary measures to control dust through the use of water, calcium chloride or other material in accordance with the approval of the Owner's Field Representative, at such locations and during such periods as he may direct, or as may be required by Local Ordinance or Authorities.

E. All silt and sediment that has been accumulated behind erosion control measures shall be removed and placed as compacted fill material and shall not be removed from the site.

3.2 TEMPORARY EROSION CONTROL MEASURES

A. Temporary erosion control measures shall be used to correct conditions that develop during construction that are needed prior to installation of permanent control features, or that are temporarily needed to control erosion that develops during normal construction practices, but which are not associated with permanent control features on the Project.

B. The Sub-Contractor shall install all temporary sediment and erosion control measures in accordance with the Details and as described herein.

2. Annual ryegrass shall be applied at the rate of 30 lbs. per acre, or other select mixture described in the standards.

3. Small grain straw mulch shall be applied at a rate of 90 lbs. per 1000 square foot or 2 tons per acre, to be applied and anchored according to the standards.

B. All slopes and stockpile areas that will remain undisturbed and which will not be topsoiled and seeded for a period of thirty (30) days shall be temporarily seeded as specified on Drawings.

3.7 STABILIZED CONSTRUCTION ENTRANCE

A. All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted. The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way, all sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device. Periodic inspection and needed maintenance shall be provided after each rain. All materials installed for the Stabilized Construction Entrance shall be removed from the site and disposed of by the Sub-Contractor at the end of all construction activity as directed by the Engineer at no additional cost.

3.8 SOIL STOCKPILING

A. Topsoil and earth material shall be stockpiled for reuse at the location shown on the Erosion Control Plans. The stockpile has been located away from sensitive vegetation or specimen trees and on a dry level area. All stockpiles shall be protected using a perimeter dike of silt fence to prevent sediment runoff. This applies to all stockpiles remaining in place for more than two weeks. Stockpile side slopes shall not exceed 2 horizontal to 1 vertical (2:1). Temporary seeding or covering of stockpiles shall be completed within two weeks of formation.

3.9 TEMPORARY FUEL TANKS

A. Temporary on-site fuel tanks for construction vehicles shall not be permitted on site.

END OF SECTION

B. Shop Drawings: Include manhole openings, covers, pipe connections, and accessories for the following precast, reinforced-concrete structures:

1. Septic tank.

2. Dosing tank.

3. Distribution box.

C. Coordination Drawings: Show piping, underground structures, and other utilities. Indicate size and invert elevations of piping and structures.

1.5 QUALITY ASSURANCE

A. The Sub-Contractor shall perform all his operations in accordance with the rules, regulations, and ordinances of those governing bodies having jurisdiction.

1.6 PROJECT CONDITIONS

A. Temporary Bypass Pumping Operation

1. The Sub-Contractor is advised that the existing onsite wastewater treatment system is active and will remain active during the duration of construction.

2. The Sub-Contractor shall provide all equipment and manpower necessary to bypass pump the existing sanitary sewage from the building to a holding tank located onsite. The existing sanitary sewage volume is estimated at 900 gallons per day.

3. The size and location of the holding tank shall be coordinated with and approved by the Owner.

4. The Sub-Contractor shall dispose of the sanitary sewage in accordance with all applicable rules and regulations.

PART 2 - PRODUCTS

2.1 PRECAST CONCRETE STRUCTURES

A. Concrete for Precast Structures: Air content 6 percent by volume with an allowable tolerance of plus or minus 1.5 percent. Minimum compressive strength, 4,000 psi after 28 days.

B. Reinforcing bars shall conform to the requirements of ASTM A615 / A615M - 12 Standard Specification for Deformed and Plain Carbon Steel Bars for Concrete Reinforcement.

C. Welded wire fabric reinforcement shall conform to the ASTM A497/A497M-05a Standard Specification for Steel Welded Wire Reinforcement, Deformed, for Concrete

D. Access Manhole Frames and Covers:

1. Cast openings in tank 2 inches larger than the outside diameter of the connecting pipe.

2. There shall be a minimum 3 inch difference in elevation between the inverts of the inlet and outlet piping.

3. Inlet and outlet piping shall be provided with sanitary tees or concrete baffles. The inlet tee shall discharge to the tank 15 inches below the liquid surface. The outlet tee shall draw from the tank 18 inches below the liquid surface. Baffles shall be of like dimensions.

D. Manholes:

1. Provide at least one access manhole per tank compartment. The access manhole opening shall have a minimum 24 inch clear opening.

2.3 PRECAST CONCRETE DOSING TANK

A. The tank and siphon shall provide a maximum 280 gallon dose per discharge.

1. Reduce dosage to 280 gallons by placing 6 x 8 x 18 inch solid concrete masonry units within the tank. (Note: One 6 x 8 x 18 inch solid concrete masonry units will displace 3.75 gallons of liquid).

B. Dosing Siphon: Provide one dosing siphon(s). The dosing siphon shall be constructed of PVC and meet the following size and flow capacity criteria:

C. Pipe Connection Opening: Cut or cast 2 inches larger than the outside diameter of the connecting pipe.

1. Inlet: Set inlet invert a minimum of 3 inches above the maximum high water level within the tank.

2. Vent: Provide opening for vent pipe off of siphon discharge. Set invert of vent pipe 1 inch below inlet piping invert.

D. Siphon Cutout: Sized for siphon provided.

E. Access Manholes: Minimum 24 inch clear opening centered over each siphon place over tank inlet piping connection.

2.4 PRECAST CONCRETE DISTRIBUTION BOX

A. Configuration: As shown on the drawings with proper inlet and outlet openings.

B. Covers: Removable concrete.

1. Covers on boxes designed for traffic loadings shall be provided with tapered concrete inspection plugs with handles.

1. Fittings: ASTM D 2729 or ASTM D 3034, PVC; or ASTM D 2751, ABS.

C. PE Tube and Fittings: ASTM F 405, corrugated with perforations.

1. Couplings: PE band, matching tube and fitting dimensions.

D. Vehicular-Traffic-Area Cleanouts: ASME A112.36.2M; with round, flanged, cast-iron housing and secured, scoriated, medium-duty loading class, cast-iron cover. Include cast-iron ferrule and countersunk brass cleanout plug.

E. Non-Vehicular-Traffic-Area Cleanouts: PVC pipe and fittings, ASTM D 3034, SDR 35, nonperforated, for solvent-cement or elastomeric gasket joints. Include PVC threaded cleanout plug.

2.7 ABSORPTION TRENCH MATERIALS

A. Filtering Material: ASTM D 448, Size No. 24, 3/4 to 2-1/2 inches, washed, crushed stone or gravel; or broken, hard-burned clay brick.

B. Filter Mat: Geotextile woven or spun filter fabric, in 1 or more layers, for minimum total unit weight of 3 oz./sq. yd.

C. Filter Mat: Untreated building paper or similar porous material.

D. Joint Covers for Open-Joint Pipe: Geotextile woven filter fabric, in 1 or more layers, for minimum total unit weight of 3 oz./sq. yd.; copper mesh screening; or commercial corrosion-resistant metal clips made for this application.

E. Backfill: Use soil removed from trench.

PART 3 - EXECUTION

3.1 INSTALLATION OF SEPTIC TANK

A. Construct the septic tank with precast concrete sections on a compacted, 12 inch leveling bed of pea gravel at required location and elevations. Seal construction joints with butyl rope sealant.

B. Extend access manholes approximately to grade utilizing brick, concrete masonry units or precast concrete riser sections. The extensions shall finish so that the tops of cast iron manhole frames and covers shall be flush with grade.

1. Install sewer brick, concrete masonry units, and precast concrete riser sections with full beds of mortar.

2. Plaster interior and exterior surfaces of brick and concrete masonry extensions smooth with a minimum 1/2 inch thickness of mortar.

C. Install cast iron manhole frames and covers to finish flush with grade. Set frames in a full bed of mortar.

I. Paint interior concrete surfaces of dosing tank, including underside of top slab and interior of access manhole extensions, with two coats of coal tar epoxy applied at 8-12 mils DFT per coat.

J. Test siphons in accordance with the manufacturer's written instructions. Adjust siphons as required and leave in proper operating condition.

3.3 INSTALLATION OF DISTRIBUTION BOX

A. Install distribution boxes level on a 6 inch deep compacted bed of pea gravel.

B. Field construct brick inlet baffles when required. Set bricks in a full bed of mortar. Plaster brick surfaces smooth with a 1/2 inch thickness of mortar.

C. Reinforce unused knockouts or knockout panels by plastering the unused areas with a minimum 3/4 inch thickness of mortar.

D. Make required piping connections to the boxes. Fill annular space around the pipe with non-shrink grout to provide a watertight joint between the pipe and structure.

E. Paint interior of the distribution box, including baffle and underside of the box cover, with two coats of coal tar epoxy applied at 8-12 mils DFT per coat.

3.4 PIPING APPLICATIONS

A. Use pipes, fittings, and joining methods, for all piping sizes, according to the following applications:

1. Install solid piping to connect septic tank, dosing tank, distribution box, and header for the absorption field with closed joints.

2. Install perforated piping in absorption trenches. Install perforated pipe with perforations at bottom.

3.5 PIPE JOINT CONSTRUCTION AND PIPING INSTALLATION

A. Join and install PE pipe and tube with loose joints or couplings, according to ASTM D 2321 and ASTM F 481.

B. Join and install solvent-cement-type PVC pipe and fittings according to ASTM D 2855 and ASTM F 402.

C. Join gasketed PVC pipe and fittings with elastomeric seals according to ASTM D 3212.

D. Install distribution PVC piping according to ASTM D 2321.

E. Install leaching PVC piping according to ASTM D 2321 and ASTM F 481.

F. Join dissimilar pipe materials with standard manufactured couplings and fittings made for that purpose.

K. Minimum separation between leach lines shall be seven (7) feet center to center or five (5) feet of undisturbed soil between trenches.

3.7 CLEANOUT INSTALLATION

A. Install cleanouts and extension from piping to clean out at grade as indicated. Use 4-inch-PVC pipe with threaded PVC cap. Set top of cleanout 2 inches above surrounding grade.

B. Install cleanouts and extension from piping to clean out at grade as indicated. Set cleanout housing and cover in concrete block 18 by 18 by 12 inches deep, unless location is in concrete pavement. Set top of cleanout 1 inch above surrounding grade or flush with grade if installed in pavement.

3.8 CONNECTIONS

A. Connect sanitary sewerage piping to septic tank.

B. Connect piping between septic tank system structures and absorption fields.

3.9 FIELD QUALITY CONTROL

A. System Tests: Perform testing of completed septic tank system piping and structures according to authorities having jurisdiction.

B. Additional Tests: Fill underground structures with water and let stand overnight. If water level recedes, locate and repair leaks and retest. Repeat tests and repairs until there is no leakage.

END OF SECTION

B. Time of Planting - The Sub-Contractor shall notify the Owner's Field Representative when sections of the Work have progressed sufficiently, to commence Work on lawns, including placing of topsoil to finished grade. Thereafter, planting operations shall be performed under favorable weather conditions during the next season or seasons which are normal for such work. Unless otherwise approved the seeding schedule shall be as follows:

Seeding of Permanent Lawns

March 15 (if soil is frost-free and not excessively moist) to May 15
August 15 to October 15

If the lawn areas are not ready for seeding between the time periods designated above, the areas shall be seeded immediately upon completion of topsoil operations, with annual rye grass (Italian Rye) at a rate of five (5) lbs per 1,000 square feet for a temporary lawn. Lawn work will not be permitted when the soil is frozen or excessively moist. If temporary lawn work has to be provided, the permanent lawn shall be installed during the next seeding season as specified.

C. All areas not required to be developed otherwise shall be planted with grass under the Contract Sum.

1.8 WARRANTY

A. Maintenance shall begin immediately following each operation of installation for each portion of lawn and shall continue for the length of this Contract.

B. Inspection of the Work to determine completion of Contract Work will be performed by the Owner's Field Representative at the conclusion of the maintenance period upon written notice requesting such inspection, submitted by the Sub-Contractor at least ten (10) days prior to the anticipated date. The condition of lawns will be noted and a determination made by the Owner's Field Representative whether maintenance shall continue in any part.

C. Acceptance - After inspection, the Sub-Contractor will be notified in writing by the Owner's Field Representative of acceptance of all Work under this Section.

D. Acceptance in Part - The Work may be accepted in part by the Owner's Field Representative upon written application by the Sub-Contractor, provided the Work offered for acceptance is completed in accordance with this Section.

E. Any areas which fail to show a "catch" shall be reseeded at the Sub-Contractor's expense until a "catch" is obtained. Damage resulting from erosion, i.e., gulley, washouts or other causes, shall be repaired at the Sub-Contractor's expense by filling with topsoil, tamping and reseeding until final acceptance of the Work.

2.5 SCREEN

A. Shall be one-half (½) inch mesh galvanized hardware cloth.

2.6 LAWN MATERIAL

A. Grass seed shall be mixed and guaranteed by the Dealer to meet the specifications in the Table below. The total weed content shall not exceed 1.5% of the total seed mixture.

Permanent Critical Area Planting Mixture			
Seed mixture Mix #6	Variety	Rate in lbs. per acre	Rate in lbs. Per 1000 sq. ft.
Creeping red fescue	Ensylva, Pennlawn, Boreal	20	.45
Tall fescue	KY 31 Rebel	20	.45
Perennial ryegrass	Pennfine, Linn	5	.10
Birdsfoot trefoil	Empire, Pardee	10	.45

2.7 MULCH

A. Dry Application, Small Grain Straw: Stalks of oats, wheat, rye or other approved crops that are free of noxious weed seeds and coarse material. Weight shall be based on 15 percent moisture content.

Material	Quality Standard	Application Rate per 1,000 s.f.	Depth of application
Small Grain Straw	Air dried; free of undesirable seeds and coarse material	90 to 100 lbs.	Cover about 90% of surface

PART 3 - EXECUTION

3.1 GRADING

A. Rough Grading: Trim and grade lawn areas within the Contract Limit to a level of 4 inches below the finish grades indicated unless otherwise specified herein or where greater depths are indicated. Provide smooth uniform transition to adjacent areas.

B. Finish Grading: Finish surfaces free from irregular surface changes, and as follows:

1. Grassed Areas: Finish areas to receive topsoil to within 1 inch above or below the required subgrade surface elevations.

3.2 TOPSOIL

A. Upon completion of grading operations for each respective area of Work, the Sub-Contractor shall place topsoil to a minimum depth of four (4) inches on all embankments and seed areas, first scarifying the subgrade for a depth of two (2) inches for the bonding of the topsoil with the subsoil. Where embankments are too steep for hand raking or tamping, topsoil may be compacted by mechanical means. Topsoil shall not be spread in

the specified rate.

C. Once accepted, the Owner will assume all maintenance responsibilities.

END OF SECTION

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7 Skyline Drive
Hawthorne, NY 10532

914.592.4040 PHONE
914.592.5046 FAX

www.TRCsolutions.com

ATTACHMENT B

Westchester County Department of Health
"Onsite Wastewater Treatment System (OWTS) Repair and Remediation Data Form"

BAKER
CAPITAL

ONESITE WASTEWATER SYSTEM (OWTS) REPAIR
510-534 FURNCE DOCK ROAD
TOWN OF CORTLANDT, NEW YORK

BID FORM

The undersigned, having examined the conditions of the work, hereby proposes and agrees to furnish all labor, materials, equipment and appliances and to complete the work as required by all contract documents including but not limited to the Request for Bid document, Project Manual prepared by TRC Engineers and Drawings SS-101 and SS-102.

Total Base Bid Price: $ 50,106

~~**Add – Alternate** for the disposal of excess topsoil and trench excavation material at an agency approved offsite disposal facility: $ 2,604~~

The undersigned understands and agrees to comply with and be bound by the Contract Documents issued for this work:

Subcontractor Name: CORTLANDT LAND + SITE WORKS INC.

Address: 106 JACK ROAD
CORTLANDT MANOR, NY 10567

Signed: [signature]

Print: JOHN KOSKI

Title: OWNER

Date: APRIL 16 2014

Office Phone: 914-736-0515

Email: CORTLANDTLSW@OPTONLINE.NET

Westchester DOH
Septic System Contractor License Number: 480