

Engineering Plan Review
SUBMISSION GUIDE



Monroe County Department of Public Health
Division of Environmental Health
Bureau of Public Health Engineering
111 Westfall Road
Rochester, NY 14620

January 2016

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About these Notes:

The following notes shall be used as needed on a project specific basis. All applicable notes should appear on the design plans submitted for approval. Designers are encouraged to cut and paste from this document to provide the proper notations on the plans.

Standard Notes for Residential On-site Wastewater Treatment Systems (OWTS)

1. Laundry waste shall be piped to the septic tank. The line shall have a check valve if the wastewater is pumped to the system.
2. Basement sump pumps, roof drains and footing drains shall not be connected to the OWTS.
3. Unless approved for a special system design, no earthwork (cutting or filling) shall be allowed in the septic system area.
4. Any change in house location and/or OWTS location or elevation shall require additional review and re-approval from the MCDPH.
5. The area of the proposed absorption field should be staked out to prevent vehicles and materials from entering. If this area is disturbed, new percolation tests may be required and septic system approval may be revoked.
6. All well(s) and OWTS existing or approved within 200 feet of the proposed well(s) and OWTS shall be shown on this plan along with any other environmental hazards in the area that may affect the design and functional ability of the OWTS and well(s).

Additional Notes for Modified, Tight Soil or Marginal Soil Raised Fill Systems

1. Heavy construction equipment shall not be allowed within the area of the system. The original soil must be left in place and plowed in conformance with procedures in the MCDPH OWTS Design and Construction Standards. The soil must not be wet when plowed.
2. No standing water in the fill area is allowed.
3. Fill material must be placed on the edge of the prepared base and pushed into place by a bulldozer while maintaining at least six (6) inches of fill under the tracks.
4. The absorption trenches shall be constructed in the fill material. To maintain the required 24-inch vertical separation between trench bottoms and seasonal high groundwater or impervious soil, trenches must not be deeper than twelve (12) inches in the fill. Trenches shall not be constructed if the frost has penetrated the fill more than three (3) inches.
5. The entire surface of the fill system, except the taper, shall be covered with a minimum of six (6) inches of topsoil mounded to enhance runoff from the system and seeded to grass. Tapers shall be covered with three (3) to six (6) inches of topsoil.
6. Swales shall be constructed to divert surface water around the system and provide drainage away from the system.

Additional Note for Tight Soil Raised Fill Systems

1. The On-Site Wastewater Treatment System is designed for use in soils having a percolation rate of greater than 60 min/inch at the conventional depth. Successful operation of this system depends on exact conformance with the approved plans and construction and maintenance in accordance with Department of Public Health standards. System components are to be 100 feet from any property line.

Stabilization Measures Notes (NYS SPDES General Permit GP-0-15-002):

1. In areas where soil disturbance activity has been temporarily or permanently ceased, temporary and/or permanent soil stabilization measures shall be installed and/or implemented within seven (7) days from the date the soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the most current version of the technical standard, New York State Standards and Specifications for Erosion and Sediment Control.
2. All required Erosion & Sediment Control and Storm Water Pollution Prevention Water Quality & Quantity Control structures, permanent and temporary, are shown on the plans.

Additional Notes for Intermittent Sand Filters

1. The filter bed gravel or stone must be clean and free of all foreign matter.
2. Filter media for Nitrification Potential Filters: clean course sand all passing a ¼” sieve. The effective grain size (E.S.) must be between 0.25 and 1.0 mm and the uniformity coefficient (U.C.) must be 4.0 or less. The installer shall submit a sample of filter sand, (approximately 2 lbs.) to the design engineer for a laboratory analysis. Approval of the sand must be obtained by the installer from the design engineer prior to placement of the sand. A copy of the sand analysis must be sent to the Monroe County Department of Public Health.
3. The sand filter must be thoroughly settled by flooding or other means before placing the distribution box, distribution header and distribution lines at final grade. Backfilling shall be done carefully and the use of heavy equipment avoided.
4. The distribution and collection pipes shall be laid with the perforations down, (4 and 8 o'clock) and the ends of the pipe shall be sealed or capped.
5. Topsoil: minimum cover over sand filter bed shall be 6” and graded to allow for surface runoff.
6. The top and sides of the filter bed shall be seeded with a grass seed mixture of the type used to provide for a permanent lawn.
7. All electrical work shall be performed in compliance with the New York State Uniform Fire Prevention and Building Code and all applicable local codes. A Certificate of Approval shall be obtained from the New York State Board of Fire Underwriters or other New York State acceptable inspection agency and a copy submitted to the Monroe County Department of Health.
8. The installation of the sand filter system shall be under the field supervision of a New York State licensed professional engineer, who shall certify in writing to the MCDPH that the sewage treatment system has been installed in conformance with the approved plans. Supervision and Certification shall include verification of all features of the system including verification of all elevations. A set of “As Built” drawings shall be submitted with the engineer’s certification.
9. Roof drains, infiltration drains or surface run-off shall not be connected to the sewage treatment system.

MCDPH Conditions of Approval (Provide on Utility Plan)

Monroe County Department of Public Health approval is granted on condition that:

1. The proposed facilities for water supply and sewage treatment are installed in conformity with the approved plans on file with the Monroe County Department of Public Health (MCDPH).
2. A copy of the plans approved this date shall be filed in the office of the Clerk of Monroe County, if applicable.
3. No lot or remaining land (if applicable) shall be subdivided without plans for such re-subdivision being submitted to and approved by the Monroe County Department of Public Health.
4. This certificate is granted with the understanding that the approved plans are subject to review and re-approval after two years from date of approval, if installation is not completed by that time.
5. Adequate erosion/siltation control measures shall be employed prior to and during construction. If the project will result in the disturbance of one acre or more, coverage under the NYSDEC SPDES General Permit GP-0-15-002 for Stormwater Discharges for Construction Activities will be obtained.
6. Private wells and private on-site wastewater treatment systems shall no longer be constructed or used after public facilities become available.

Conditions of Approval for Realty Subdivisions (Provide on Plat)

Monroe County Department of Public Health approval for this realty subdivision is granted on condition that:

1. The proposed facilities for water supply and sewage treatment are installed in conformity with the approved plans on file with the Monroe County Department of Public Health (MCDPH).
2. An original realty subdivision map approved this date shall be filed in the office of the Clerk of Monroe County prior to offering lots for sale.
3. The owner of the realty subdivision shall furnish each purchaser of a lot with a copy of the approved plan or, in the case of sale of developed lots, the owner of the realty subdivision shall furnish each purchaser with an accurate "As-built" plan depicting all installed facilities including sewage, storm water and water supply.
4. Adequate erosion/siltation control measures shall be employed prior to and during construction. If the project will result in the disturbance of one acre or more, coverage under the NYSDEC SPDES General Permit GP-0-15-002 for Stormwater Discharges for Construction Activities shall be obtained.
5. No lot or remaining land (if applicable) shall be subdivided without plans for such re-subdivision being submitted to and approved by the MCDPH.
6. Plan approval is limited to 5 years. Time extensions for plan approval may be granted by the MCDPH based upon development facts and the realty subdivision regulations in effect at that time. A new plan submission may be required to obtain a time extension.
7. Private wells and private on-site wastewater treatment systems shall no longer be constructed or used after public facilities become available.

Individual Water Supply Notes

1. The well shall be located up gradient of any potential or known source of contamination. The minimum horizontal separation distances from potential sources of contamination are listed in Table 1 of the State Sanitary Code (10NYCRR5) Subpart 5, Appendix 5-B, Standards for Water Wells.
2. The ground surface immediately surrounding a well casing shall be graded to establish positive drainage and divert surface water away from the well.
3. Wells shall be constructed as per SSC, Section 5-B.3, Water Well Construction and Table 2.
4. Data generated during the yield test shall be provided to the well owner and the Monroe County Department of Public Health (MCDPH).
5. The owner should obtain the well log from the well driller.
6. The MCDPH recommends at a minimum that the well be sampled for total coliform and e-coli bacteria, heterotrophic (standard) bacteria plate count, nitrite / nitrates, arsenic, and lead and that the well be drilled and tested prior to any house construction.

Additional Note for Realty Subdivisions on Former Orchards:

1. The proposed project is located in an area of what appears to be a former orchard. The soils may contain arsenic, lead and other pesticides. Developers planning to convert orchard lands to realty subdivisions are required by the New York State Department of Health to minimize the public's exposure to pesticide residues. A soil sampling plan shall be submitted to the Monroe County Department of Public Health. Based on the sampling results, it may be necessary to develop a soil management plan.

Additional Note for Development on Former Orchards:

1. The proposed project is located in an area of what appears to be a former orchard. The soils may contain arsenic, lead and other pesticides. Soil testing and analysis can confirm a potential problem. If test results are higher than the regulatory level, exposure should be minimized.

Additional Note for Engineer Certification

1. Installation of the OWTS shall be under the field supervision of a licensed professional engineer, who shall certify in writing to the MCDPH that the OWTS has been installed in conformance with the approved plan. Supervision and certification shall include all features of the system, including verification of all elevations. A set of "As Built" drawings shall be submitted with the engineer's certification.

Additional Note for Plans with Existing Houses with OWTS

1. The existing OWTS and/or private water supply was installed prior to the date of this approval and therefore this approval shall not be construed to mean that the functional ability or adequacy of the OWTS and/or water supply on lot(s) #___ has been approved or accepted.

OWTS Inspection Procedure Notes:

Please call the MCDPH at 753-5060 **at least 24-hr** in advance to schedule the following inspections:

1. Plow Inspection - The MCDPH will verify the plow is adequate and verify the location and orientation of the future sand bed. If requested, a sand sample will be tested.
2. Sand Bed Inspection - Before installation of the trenches, the MCDPH will verify sand bed dimensions and depth. A percolation test will be conducted in the sand fill.
3. Complete Inspection - Before backfilling, the MCDPH will verify all system components are installed per the approved plan and MCDPH requirements.
4. Final Grade Inspection - The MCDPH will verify there is adequate cover over system components and surface drainage is adequate.

If you have any questions regarding these procedures, please contact this office at (585) 753-5060.

Standard Water Main Extension Notes:

1. The water main pipeline shall be disinfected equal to AWWA Standard for Disinfecting Water Mains Designation C651 (latest revision). Following disinfection, the water main pipeline shall be flushed until the chlorine concentration in the water leaving the main is no higher than that generally prevailing in the system.

All water main pipe fittings not receiving 24-hour chlorine disinfection contact time must be swab-disinfected 30 minutes prior to installation.

The sampling point(s) must be decontaminated by flaming.

Fire hydrants are not acceptable sampling points.

The Monroe County Department of Public Health must receive at least 48-hour advance notification requesting sampling services. Sampling will not be performed prior to receipt from a New York State licensed or registered design professional (engineer, architect or land surveyor with a special exemption under Section 7208(n) of the Education Law) certifying that the water supply improvements, testing and disinfection procedures were completed in accordance with the approved plans, reports, specifications and any approved amendments. The Department will collect samples for free chlorine residual, total coliform, Escherichia coli (E. coli) and turbidity.

The water main pipe and appurtenances shall not be placed into service until so authorized by the Monroe County Department of Public Health.

2. Minimum vertical separation between water main pipelines and sewer pipelines shall be 18 inches measured from the outside of the pipes at the point of crossing. One full standard laying length of water main pipe shall be centered under or over the sewer so that both joints will be as far from the sewer as possible. In addition, when the water main pipeline passes under a sewer, adequate structural support (compacted selected fill) shall be provided for the sewer to prevent excessive deflection of joints and settling of the sewer on the water main. Minimum horizontal separation between parallel water main pipes and sewer pipes (including manholes and vaults) shall be 10 feet measured from the outside of the pipes, manholes or vaults.
3. When installing fire hydrants, should ground water be encountered within seven (7) feet of the finished grade, fire hydrant weep holes (drains) shall be plugged.
4. The water main pipeline and appurtenances shall be pressure/leakage tested in accordance with the minimum requirements of the AWWA Standard C600, C602, C604, or C605 (most recent version as applicable) **OR** in accordance with more stringent requirements imposed by the supplier of water.

Standard Sanitary Sewer Extension Notes:

1. Maximum allowable infiltration or exfiltration shall not exceed 100 gallons per inch diameter per mile of pipe per day for the sanitary sewer. If an air test is used, the test as a minimum shall conform to the procedure described in ASTM Designation C828-86 entitled practice for Low-Pressure Air Test of Vitrified Clay Pipe Lines. Sanitary manholes shall be visually inspected and tested for leakage by exfiltration or vacuum. Vacuum testing of manholes shall comply with the method outlined in the New York State Department of Environmental Conservation - Technical Information Pamphlet (TIP) No. 15 (latest revision).
2. Floor drains, if constructed in the project, must be connected to the sanitary sewer. NOTE: Floor drains DO NOT include foundation or footer drains installed to intercept uncontaminated ground water. All discharges from the floor drains to the sanitary sewer must comply with the effluent limits of the local and/or the Monroe County Sewer Use Law.
3. Deflection tests shall be performed on all flexible pipe. The test shall be conducted after the final backfill has been in place at least 30 days. No pipe shall exceed a deflection of 5%. If the deflection test is to be run using a rigid ball or mandrel, it shall have a diameter equal to 95% of the inside diameter of the pipe. The test shall be performed without mechanical pulling devices.
4. Minimum vertical separation between water mains and sewer lines shall be 18 inches measured from the outside of the pipes at the point of crossing. One full standard laying length of water main pipe shall be centered under or over the sewer so that both joints will be as far from the sewer as possible. In addition, when the water main pipeline passes under a sewer, adequate structural support (compacted selected fill) shall be provided for the sewer to prevent excessive deflection of joints and settling of the sewer on the water main. Minimum horizontal separation between parallel water mains pipes and sewer pipes (including manholes and vaults) shall be 10 feet measured from the outside of the pipes, manholes or vaults.

Standard Low Pressure Sanitary Sewer Notes (from NYSDEC):

1. Gravity sewers are still the preference and shall still be used where they are still feasible.
2. The municipality will own and be responsible for the main pressure line the individual pumps eject into.
3. The municipality will establish the models and sizes of the pumps that may be used for the system. This is to ensure a standardized system so that normal and emergency repairs can be easily made.
4. The municipality shall have at least one complete system available for emergency use if the failure occurs when normal repairs from the supplier cannot be made. The municipality will provide an emergency contact phone number to the individual users.
5. The municipality shall be notified by all users of any equipment failures.
6. The municipality shall inspect each installation to see that the system is installed properly.
7. All normal maintenance and/or replacement of the individual pumping system are the responsibility of the individual homeowner.
8. Individual pumping units shall have an alarm light and audible alarm.
9. House service connections to the individual pumping system shall be by gravity.
10. The individual pumping systems shall have a curb stop and check valve at the property line.
11. The individual pumping systems shall be located at a minimum of ten feet from the house.
12. The individual pumping systems shall be located a maximum of twenty feet from the driveway at the house.
13. Suppliers of the individual pumping systems shall have an adequate supply of complete pump systems available for replacement if necessary.
14. The design standards within the NYSDEC 2014 Design Standards for Intermediate Sized Wastewater Treatment Works for individual pumping systems and low pressure sewers also will still apply. Any special requirements for deviation from these standards will be judged on a case by case basis using substantiating information submitted by the design engineer.

The following approval stamps are to be used on plans submitted for approval by the MCDPH:

<p>Monroe County Department of Public Health</p> <p>These plans for Public Water System Extension / Improvement are hereby approved pursuant to 10NYCRR5 of the State Sanitary Code subject to conditions of Approval</p> <p style="text-align: center;">Director of Public Health</p> <hr/> <p>By _____ Public Health Engineer _____ Date</p>	<p>Monroe County Department of Public Health</p> <p>These plans for Public Sanitary Sewer Extension / Improvement are hereby approved pursuant to Article 17 of the NYS Environmental Conservation Law subject to conditions of Approval</p> <p style="text-align: center;">Director of Public Health</p> <hr/> <p>By _____ Public Health Engineer _____ Date</p>
<p>Monroe County Department of Public Health</p> <p>These plans for Private Wastewater Treatment Facility are hereby approved pursuant to Article IIA of the Monroe County Sanitary Code</p> <p style="text-align: center;">Director of Public Health</p> <hr/> <p>By _____ Public Health Engineer _____ Date</p>	<p>Monroe County Department of Public Health</p> <p>These plans for Public Water System Facility / Improvement are hereby approved pursuant to 10NYCRR5 of the State Sanitary Code subject to conditions of Approval</p> <p style="text-align: center;">Director of Public Health</p> <hr/> <p>By _____ Public Health Engineer _____ Date</p>
<p>Monroe County Department of Public Health</p> <p>These plans for Public Bathing Facility / Improvement are hereby approved pursuant to 10NYCRR6 of the State Sanitary Code and subject to the conditions of approval and provisions of the annual operation permit</p> <p style="text-align: center;">Director of Public Health</p> <hr/> <p>By _____ Public Health Engineer _____ Date</p>	<p>Monroe County Department of Public Health Realty Subdivision Approval</p> <p>This is to certify that approved plans for Water Supply and Sewage Treatment for this project are on file in the office of the Monroe County Department of Public Health. Consent is hereby given for the filing of this map in the Monroe County Clerk's Office in accordance with Article III of the Monroe County Sanitary Code</p> <p style="text-align: center;">Director of Public Health</p> <hr/> <p>By _____ Public Health Engineer _____ Date</p>
<p>Monroe County Department of Public Health</p> <p>Realty Subdivision Approval NOT Required for the filing of this map in the Monroe County Clerk's Office</p> <hr/> <p style="text-align: right;">Date</p> <p>NOTE: Other Department of Public Health Approvals may be needed</p>	<p>Monroe County Department of Public Health</p> <p>These plans for _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>are hereby approved pursuant to 10NYCRR____ of the State Sanitary Code</p> <p style="text-align: center;">Director of Public Health</p> <hr/> <p>By _____ Public Health Engineer _____ Date</p>

Engineering Plan Review **CHECKLISTS**

The following checklists are used during the MCDPH review of each project. These are provided as a resource for design professionals to use when developing plans for MCDPH review.

Checklists:

1. GENERAL – Used for all plan submissions
2. OWTS – as needed per project
3. Water Distribution Mains – as needed per project
4. Sanitary Sewer Extension – as needed per project

MONROE COUNTY DEPARTMENT OF PUBLIC HEALTH
BUREAU OF PUBLIC HEALTH ENGINEERING
Review of Plans: GENERAL

Name of Project _____ (T)(V) _____
 Received From _____ Date _____
 Reviewed by _____ Date _____
 Number of Lots _____ Fee Received _____

<u>ITEM</u>	<u>CHECK</u> (Provided, Needed, N/A)	<u>REMARKS</u>
GENERAL		
<u>Materials Received</u>		
Number and Type of Plans		
Engineer's Report		
Planning Board Preliminary Approval		
Prepared by Licensed Engineer		
Development Review Committee Report		
SEQR materials:		
Realty Sub/Commercial: EAF and Neg. Dec. or Final EIS		
Single Lot or Utility Extension: Confirm Type II action		
<u>General Plan Review</u>		
North Arrow, Scale, Location Sketch, Vertical Datum		
Tax ID #, owner information, developer information		
MCDPH Approval Block or place for stamp		
Standard Notes as applicable to project		
All existing and proposed buildings		
FEMA Flood Hazard Area Outlined		
Wetlands, Lakes, Streams shown		
All Utilities, existing and proposed		
Elevations and Contours (2 ft max interval), existing and proposed, and site benchmark		
Property Lines and Easements, existing and proposed		
All information agrees with site inspection		
<u>Additional Permits/Agencies Needed</u>		
Town Engineer approve of grading, drainage, erosion control		
Construction in Flood Hazard Area (FHA), local		
ECL Article 15 Permit Rec'd (NYSDEC protection of waters)		
ECL Article 24 Permit Rec'd (NYSDEC wetlands)		
ECL Article 34 Permit Rec'd (Coastal, Lake Ontario)		
IBCC Comments Addressed (Irondequoit Bay)		
SPDES GP-0-15-002, for projects disturbing > 1 acre of land: Notice of Intent (NOI) <u>AND</u> MS4 SWPPP Acceptance form		
SPDES wastewater permit (≥ 1000 gpd or to surface water)		
<u>Realty Subdivisions</u>		
Completed SAN-72 application with signatures		
Completed Supplemental Application (contaminated soils)		

MONROE COUNTY DEPARTMENT OF PUBLIC HEALTH
 BUREAU OF PUBLIC HEALTH ENGINEERING
Review of Plans: ON-SITE WASTEWATER TREATMENT SYSTEMS

Name of Project _____ (T)(V) _____
 Received From _____ Date _____
 Reviewed by _____ Date _____
 Field Testing Fee Paid _____
 Plan Review Fee Received _____

<u>ITEM</u>	<u>CHECK</u> (Provided, Needed, or N/A)	<u>REMARKS</u>
ON-SITE WASTEWATER TREATMENT		
Complete MCDPH WWT Application		
Approval of Public Water Supplier		
PLAN REVIEW		
<u>Water Service - Public</u>		
Size, Type, Location of Existing & Proposed Water Main(s)		
Size, Type, Location of Proposed Water Service		
Calculations to Size Water Service		
Booster Pump Approval (if pressure at house < 35 PSI)		
<u>Water Service - Private</u>		
Location of Proposed Well(s)		
SSC Appendix 5-B Compliance (separation distances, etc.)		
Location of Wells/Septic Systems on Adjacent Properties		
Cross Section of Well		
<u>OWTS (General)</u>		
Erosion and Sediment Control Measures		
Floor Drains shown (not connected to OWTS)		
Location, Date & Results of Soil Testing		
Soil Testing Witnessed by MCDPH		
Appropriate System Type Used <i>(complete appropriate section below)</i>		
Slope of Native Ground Does Not Exceed 15%		
Schedule of Sizes for Treatment Systems Serving 3 & 4 Bedrooms (leach length, sand bed area/depth, septic tank capacity)		
4 Bedroom Design Shown on Plan (unless proposed number of bedrooms is specifically stated on plan) and largest system specified on design chart is shown on plan view design		
Vertical Separation From Bottom of System to Restrictive Feature (groundwater, bedrock, tight soil, clay, ext.)		
3 ft. min. Between 1 st Floor Elev. and House Invert		
System Invert Elevations (at house, septic tank inlet/outlet, distribution box inlet, leach line beginnings and ends)		
Roof Drains/Cellar Drainage Discharge Away from System		
Slope of Septic Tank Inlet Line (1/4 inch/foot min)		
Slope of Septic Tank Outlet Line: (1/8 inch/foot min.)		

Required Horizontal Separation Distances Met		
<ul style="list-style-type: none"> Water service to leach field/septic tank- 10 ft. min. 		
<ul style="list-style-type: none"> House to Septic Tank- 10 ft. min. 		
<ul style="list-style-type: none"> House to Leach Field - 20 ft. min. 		
<ul style="list-style-type: none"> Distance from Drinking Water Wells (App 5-B) 		
<ul style="list-style-type: none"> Leach Field to Storm Sewer – 20 ft. min. 		
<ul style="list-style-type: none"> High Water Elevation of Stream or Body of Water - 100 ft. min. 		
<ul style="list-style-type: none"> State/Federal Wetlands – 100 ft. min. 		
<ul style="list-style-type: none"> All other separations per MCDPH Standards Table 2 		
Clean-Outs Provided: bends and long pipe runs		
Expansion Area Provided (50% of System Area)		
Leach Lines Run Parallel to Slope Contours		
Note Stating Curtain Drain Must be Installed Prior to System Installation (if applicable)		
Piping Under Driveway Sleeved		
Details on Plan		
<ul style="list-style-type: none"> Septic Tank (dual compartment) 		
<ul style="list-style-type: none"> Pump Station (<i>complete pump station section below</i>) 		
<ul style="list-style-type: none"> Distribution / Drop Box 		
<ul style="list-style-type: none"> Cross Section & Longitudinal View of Lateral Trench 		
<u>Commercial Properties</u>		
Engineers Report and Plan to contain:		
<ul style="list-style-type: none"> Proposed Facility Usage 		
<ul style="list-style-type: none"> Detailed Breakdown to Determine Design Flows 		
<ul style="list-style-type: none"> Peak Flow Accounted For in Design 		
<ul style="list-style-type: none"> Wastewater Handled properly (kitchen waste to grease trap, restrooms to septic tank, ext.) 		
<ul style="list-style-type: none"> Calculations (Report only) to Size all Parts of the Proposed System (septic tank, grease trap, pump tank, leach field, ext.) 		
<u>Pump Stations</u>		
1 Days Flow Storage Above Alarm OR Duplex Pumps		
Dosing Calculations		
Alarm Panel Location / Alarm Method		
Pump Station Detail		
<ul style="list-style-type: none"> Pump station dimensions and volume 		
<ul style="list-style-type: none"> Pump Details (manufacture & model number) 		
<ul style="list-style-type: none"> Elevations for Cycle On, Off and Alarm 		
Pump Curve and Operating Point		
Force Main Diameter Indicated		
Distribution Box Detail On Plans (showing transition from force main to 4" PVC entering Distribution Box by Gravity)		

<u>Standard System</u> <i>(Perc depth: 18" – 30", Perc rate: 1 – 45 min/inch)</i>		
Correct Vertical Separation to Groundwater, Bedrock or Restrictive Feature		
Length of lines (60' max for gravity, 100' max for pressure)		
10 ft. min. Separation to Property Lines		
Separation Between Leach Lines - 8 ft. min. On Center		
Leach Amount Provided Meets Minimum Required		
If total leach line length \geq 500 LF, dosing provided		
<u>Modified Raised Fill System</u> <i>(Perc depth: 18" - 30", Perc Rate: 1 - 45 min/inch) and (Evidence of High Groundwater, Bedrock, Restrictive Feature)</i>		
Minimum Sand Depth: 12 Inches		
Vertical Separation to Groundwater, Bedrock or Restrictive Feature		
10 ft. Separation to Property Lines (from toe slope)		
Length of lines (60' max for gravity, 100' max for pressure)		
Design rate of underlying soil used, except that: Min Rate = 15 min/inch and Max Rate = 30 min/inch		
Leach Amount Provided Meets Minimum Required		
If total leach line length \geq 500 LF, dosing provided		
Separation Between Leach Lines - 8 ft. min. On Center		
<u>Marginal Soil System</u> <i>(Perc depth: 18" - 30", Perc rate: 46 - 60 min/inch)</i>		
Minimum Sand Depth: 30"		
Correct Vertical Separation to Groundwater, Bedrock or Restrictive Feature		
10 ft. Separation to Property Lines		
Length of lines (60' max for gravity, 100' max for pressure)		
Minimum Application Rates Used: Basal Area: 0.1 gpd/sf, Trench Length: 0.6 gpd/sf		
Leach Amount Provided Meets Minimum Required		
If total leach line length \geq 500 LF, dosing provided		
Separation Between Leach Lines - 8 ft. min. On Center		
<u>Tight Soil System</u> <i>Perc depth: 12", Perc Rate: 1 - 60 min/inch)</i>		
Minimum Sand Depth: 30" for dosed/pressure, 36" for gravity		
System dosed (pump or siphon) OR has pressure distribution OR if gravity feed: need engineer certification (note) and 24" of sand between bottom trench and original ground		
Correct Vertical Separation to Groundwater, Bedrock or Restrictive Feature		
100 ft. Separation to Property Lines		
Minimum Application Rates Used: Basal Area: 0.1 gpd/sf, Trench Length: 0.6 gpd/sf		
Leach Amount Provided Meets Minimum Required		
Length of lines (60' max for gravity, 100' max for pressure)		
If total leach line length \geq 500 LF, dosing provided		
Separation Between Leach Lines - 8 ft. min. On Center		

<u>Seepage Pit</u>		
Property Must be Served by Public Water		
Percolation Tests Done at Proposed Seepage Pit Depth		
Percolation Test Results: 1-45 min/inch		
Soil Profile recorded to 3 ft. Below Bottom of Seepage Pit		
3 ft. Vertical Separation to Restrictive Feature		
Seepage Pit Tank Capacity / Dimensions (without stone)		
Dimensions of Stone Around / Under Seepage Pit		
Effective Depth Noted		
Correct Total Side Wall Infiltration Area Provided (see chart in MCDPH design book)		
Multiple Seepage Pits NOT Connected in Series		
Area shown for installation of additional seepage pit(s) for expansion or replacement		
Seepage Pit Detail		
<u>2-Stage System: Sand Filter and Secondary Bed</u> <i>(Perc depth: 6", Perc rate: 1-120 min/inch)</i>		
Engineer Certified System Note		
First Stage Sand Filter		
Sizing Calculations		
Correct Distribution (pressure or gravity) based on Size of Sand Filter		
System Dosed Minimum of Three Times Daily		
Distributor Lines Spaced 3 feet On-Center		
Collector Lines Centered Between Distributor Lines		
Sand meets spec in design standards		
Max sand loading rate 0.84 gpd/sf		
Second Stage Raised System		
Design Application Rates: Basal Area: 0.56 gpd/sf, Trench Length: 1.67 gpd/sf		
100 Foot Separation to Property Lines		
Trenches Spaced 5 feet on center		
Besides above, Tight Soil System requirements met		
<u>Mound System</u> <i>Perc depth: 12", Perc rate: 1-120 min/inch)</i>		
Engineer Certified System Note		
Natural Ground Slope \leq 12% for Perc Rate 1-60 min/inch; Natural Ground Slope \leq 6% for Perc Rate 60-120 min/inch		
Sizing Calculations		
Width of Absorption Area 20 Feet Max		
Pressure Distribution Used, 4 doses per day recommended		
Length of Distribution Lines: 200 ft. (center manifold); 100 ft. (end manifold)		

MONROE COUNTY DEPARTMENT OF PUBLIC HEALTH
 BUREAU OF PUBLIC HEALTH ENGINEERING
Review of Plans: WATER DISTRIBUTION/TRANSMISSION MAINS

Name of Project _____ (T)(V) _____
 Received From _____ Date _____
 Reviewed by _____ Date _____
 Fee Received _____

Supplier of Water _____
 Pipe Size _____
 Pipe Length _____
 Pipe Material _____

<u>ITEM</u>	<u>CHECK</u> (Provided, Needed, or N/A)	<u>REMARKS</u>
PUBLIC WATER SUPPLY		
Completed application DOH-348		
Approval from Supplier of Water		
ECL Art. 15, Title 15 (NYSDEC permit for withdrawal of surface or groundwater $\geq 100,000$ gpd)		
Hydrant flow test data submitted		
a. Hydrant location		
b. Outlet elevation		
c. Test date and time		
d. Static pressure		
e. Residual pressure		
f. Pitot pressure and observed flow		
g. Calculated flow @ 20 psi		
h. Hydrant coefficient		
Hydraulic analysis submitted, if necessary		
Size, type, and location of existing water main		
Size, type, length, and location of proposed water main		
a. Pipe meets AWWA Standard or equal		
b. Adequate cover provided or insulation shown		
c. Insulation specs. submitted		
d. Polyethylene wrap provided		
Hydrant spacing (350 – 600 ft.)		
Valve spacing [800 ft max (res.) or 500 ft max (comm.)]		
Easements shown		
Dead end mains eliminated		
Blow-off or hydrants at low points		
Air relief valves or hydrants at high points		
Chamber housing valves, meters, test conn. etc. drains to above grade or underground absorption pit		
Disinfection tap(s) – location shown		
Sample tap(s) – location shown		
Location of thrust blocks		

Standard Water Main Notes on plan		
Details		
a. Trench detail – bedding material		
b. Sampling tap		
c. Disinfection tap		
d. Blow-off hydrant		
e. Blow-off		
f. Railroad crossing		
g. Road crossing		
h. High pressure gas main crossing		
i. Casing detail		
j. Stream crossing		
k. Thrust blocks		
l. Meter vault, valve pits, absorption pit, drains, sump pump discharge		
m. Pipe insulation		
n. Water main – sewer crossing		
o. Hydrant		
p. Air relief valve		
q. Surge control valve		
r. Special design		
Hydraulic analysis submitted for residential services > 100 ft		
Size, type and location of water services		
Water – sewer crossings conform to 10 State Standard		
Water – sewer parallel installations conform to 10 States Std.		
Hydrant outlets 1 ft above 100 year Flood Plain		
Cross – connection plans submitted to supplier		

MONROE COUNTY DEPARTMENT OF PUBLIC HEALTH
 BUREAU OF PUBLIC HEALTH ENGINEERING
Review of Plans: SANITARY SEWER EXTENSION

Name of Project _____ (T)(V) _____
 Received From _____ Date _____
 Reviewed by _____ Date _____
 Fee Received _____

Pipe Size _____
 Pipe Length _____
 Pipe Material _____

<u>ITEM</u>	<u>CHECK</u> (Provided, Needed, or N/A)	<u>REMARKS</u>
SANITARY SEWER		
<i>Applications and Approvals</i>		
Completed BSP-5 Application		
Completed SAN-65 Checklist (10 States chapter 30)		
Completed Ch. 40 Checklist (10 States) (PUMP STA ONLY)		
Approval from Monroe County Pure Water		
Approval from local Municipality		
Resolution Forming District or Extension		
<i>Plans and Specs</i>		
Size, Type & Location of Existing Sewers		
Size, Type & Location of Proposed Sewer		
Adequate Slope & Inverts Provided		
Sufficient Depth Provided (Sewers and Laterals)		
Uniform Slope Between Manholes		
Anchors Provided for Slopes > 20%		
Minimum Pipe Diameter (8") Provided		
Manhole Location & Spacing Adequate		
Drop Manholes Provided (>24")		
Watertight Manholes or 1' Above 100 Yr. Flood Plan		
San Sewer – Water Main Crossing		
a. Horizontal Separation (10') Provided		
b. Vertical Separation (18") Provided		
Details Provided		
a. Bedding		
b. Water – Main Sewer Crossings		
c. Stream Crossings		
d. Other		
Lateral Size, Type & Location Shown		
Easements Provided		

Engineering Plan Review **APPLICATIONS**

The following applications shall be used when submitting plans to the MCDPH.
**All applications are available in form-fillable .pdf format.

Applications include:

1. New Individual Residential OWTS
2. Repair of Existing Residential OWTS
3. Partial Repair of Existing Residential OWTS
4. New Commercial OWTS
5. Realty Subdivision Sanitary Facilities – SAN-72
6. Supplemental Application for Realty Subdivision Sanitary Facilities
7. Public Water Supply Improvement – DOH-348
8. Improvement of Public Sewer System forms
 - a. BSP-5
 - b. SAN-65
 - c. Chapter 40 Checklist (only for pump stations)

MONROE COUNTY DEPARTMENT OF PUBLIC HEALTH

111 Westfall Road, Room 938, Rochester, New York 14620

APPLICATION FOR APPROVAL OF INDIVIDUAL WASTEWATER TREATMENT SYSTEMS

Application is hereby made for the approval of plans for individual wastewater treatment systems as required by Article II of the Monroe County Sanitary Code and Article 17 of the Environmental Conservation Law.

GENERAL INFORMATION

1. Name of project _____ Location _____
(Town or Village)
2. Owner _____
(State name of person, company, corporation or association, owning the project)
3. Business address _____
(Street) (City)
4. Total area of entire property _____ Area of this section _____
5. Total number of lots _____ Number of lots in this Section _____
6. Have plans for previous sections been Approved _____
7. Will plans for additional sections be submitted _____
8. Proximity to orchard or former orchard, waste site or former waste site _____

WATER SERVICE

9. Proposed method of supplying water _____
(If public supply, give name of water supplier)
10. Approximate distance to nearest public water supply main _____
11. Approximate distance to nearest wastewater treatment systems _____
12. Approximate distance to nearest farming operation _____
(if proposing private wells)

SEWERAGE SERVICE

13. Date of soil testing _____ MCDPH witness _____
14. Depth to water table / mineral deposits _____
15. Stabilized perc rate _____
16. Proposed peak flow (gpd) _____
(provide Engineer's Report for commercial developments)
17. Maximum number of bedrooms in completed house(s) _____
18. Is a NYSDEC SPDES permit required for wastewater flows _____

19. Approximate distance to nearest public sewer main _____

20. Approximate distance to nearest well water supplies _____

DRAINAGE

21. Is a NYSDEC SPDES permit for Stormwater Discharges required _____

ADDITIONAL INFORMATION

22. How will basement drainage be disposed _____

23. Will plumbing fixtures be located in the basement _____
(If so, how will wastewater be conveyed)

PROPERTY OWNER CERTIFICATION

It is hereby agreed that if the attached plans dated _____, or any amendment or revision thereof, are approved by the Monroe County Department of Public Health, installation of water supply and wastewater treatment facilities will be made in accordance with the details as shown on such approved plans. If the subdivided lands, shown on such plans are sold before such installations are made, it is agreed that all purchasers of lots will be furnished with a legible reproduction of the approved plans and they will be notified of the necessity of making such installations in accordance with such approved plans.

Date _____ Signature _____
(owner)

PROFESSIONAL ENGINEER OR LAND SURVEYOR* CERTIFICATION

I hereby certify that information provided hereon is true. The plans submitted with this application were prepared by me or under my supervision and direction.

Name (Give Firm, if any) _____

Address _____

License and No. _____ Signature _____

*Land Surveyor only if granted exception under Section 7208n of the State Education Law

**CONSTRUCTION PERMIT FOR THE RESIDENTIAL REPAIR OF AN
INDIVIDUAL WASTEWATER TREATMENT SYSTEM**

Name of Owner _____ Date _____

Mailing Address _____ Phone _____

Name of Installer _____ Phone _____

Mailing Address _____

Water supplied by (public water or well) _____

Approximate distance to nearest sanitary sewer _____

Internal Plumbing Check

All wastewater pipes, including laundry, must connect directly to a septic tank or aerobic treatment unit. Sump pumps must **NOT** discharge to the septic system.

Does the internal plumbing meet these requirements? (circle one) Yes No

If no, explain _____

House plumbing is equipped with water saving fixtures (1.6 gallons per flush max toilets and 3.0 gallons per minute max faucets and shower heads) (circle one) Yes No

I hereby certify that all information provided hereon is true and I understand and agree with this onsite wastewater treatment system repair proposal. If approved, the proposed system, the water supply, and drainage facilities will be installed as indicated.

Signed _____ Owner

_____ Buyer

_____ Installer

DO NOT WRITE BELOW THIS LINE

Inspector _____ Date _____

**RETURN TO: Monroe County Department of Public Health
Bureau of Public Health Engineering
111 Westfall Road, Room 938
Rochester, New York 14620**

(585) 753-5060; FAX 753-5098



**MONROE COUNTY DEPARTMENT OF PUBLIC HEALTH
BUREAU OF PUBLIC HEALTH ENGINEERING**

**111 Westfall Road, Room 938, Rochester, NY 14620
585-753-5060**

PARTIAL REPAIR – ONSITE WASTEWATER TREATMENT SYSTEM

OWNER:

TOWN:

ADDRESS:

INSTALLER:

INSTALLATION DATE:

OF BEDROOMS:

DESCRIBE MODIFICATIONS TO EXISTING SYSTEM:

SEPTIC TANK:

DISTRIBUTION BOX:

CONNECTING PIPES:

Draw a sketch showing location of house, septic tank, distribution box and leachfield. Give distances between house and septic tank, house and distribution box and leachfield and well.

MONROE COUNTY DEPARTMENT OF HEALTH
BUREAU OF PUBLIC HEALTH ENGINEERING
111 Westfall Road, RM 938, Rochester, NY 14620

APPLICATION FOR APPROVAL OF PLANS to construct an on-site sewage waste disposal system serving a Commercial or Service Facility.
Application for a "SPDES" Permit is also required if discharge is to be 1000 GPD or more.

NAME OF APPLICANT _____

ADDRESS OF APPLICANT _____

NAME OF FACILITY _____

LOCATION OF FACILITY _____

TYPE OF BUILDING _____ No. OF EMPLOYEES _____ SHIFTS/DAY _____

TYPE OF INSTALLATION _____ NEW _____ REPAIR/ALTERATION

NUMBER OF FIXTURES TO BE SERVED: Toilets _____ Urinals _____ Hand Sinks _____

Kitchen Dishwashers _____ Kitchen Sinks _____ Kitchen Disposals _____

Laundry Tubs _____ Showers _____ Other _____

AVERAGE DAILY FLOW (GPD) Present or Proposed _____ Future _____

Peak Loading Period (s): _____ A.M. _____ P.M. Length of Time _____ Flow Rate _____

Distance to Nearest Public Sanitary Sewer _____

Population Served: Present or proposed _____ Future _____

Floor Drains Provided _____ Estimated Flow _____ Oil/Water Separator Provided _____

Location of Discharge Point _____

Water Source: Public Supply Purveyor _____ Well (drilled, dug or driven) _____

Estimated Flow _____ GPM Depth _____ Distance to nearest public water supply _____

NAME OF NEAREST WATERCOURSE _____ Distance (feet) _____ Class of Stream _____

STABILIZED PERC TEST RESULTS: 1" Drop in _____ Minutes

DEEP HOLE RESULTS: Topsoil _____ Subsoils _____

Mineral/Rust Deposits _____ Rock and/or Water _____

Test Witness By _____ of the Monroe County Health Department Date of Test _____

Signature of Applicant _____ Official Title _____ Date of Application _____

Signature of Design Engineer _____ New York State Professional Engineer License No. _____

Address _____ Telephone No. _____

Design plans and engineer's report attached.

MONROE COUNTY DEPARTMENT OF PUBLIC HEALTH

111 Westfall Road, Room 938, Rochester, New York 14620

APPLICATION FOR APPROVAL OF SANITARY FACILITIES FOR A REALTY SUBDIVISION

NOTE: (Law requires that no subdivision or portion thereof shall be sold, leased or rented or any permanent building erected thereon until plans are approved by the Monroe County Department of Public Health)

Application is hereby made for the approval of plans for realty subdivision as required by the provision of Article III, Realty Subdivisions, Chapter 569 of the Monroe County Code

GENERAL INFORMATION

1. Name of subdivision _____ Location _____
(Town or Village)
2. Owner _____
(State name of person, company, corporation or association, owning the subdivision)
3. Business address _____
(Street) (City)
4. Officers _____
(If organized, give names of officers)
5. Total area of entire property _____ Area of this section _____
Total number of lots _____ Number of lots in this Section _____
Have plans for previous sections been Approved _____ Disapproved _____
Will plans for additional sections be submitted? _____
6. Do you intend to build houses on this subdivision? _____ Do you intend to sell lots only? _____
Do you intend to build on some lots and sell others without building? _____
7. Is this subdivision or any part thereof located in an area under the control of local planning, zoning or other officials? _____
If so, have these plans been submitted to such authorities? _____
Have these plans been approved or disapproved by such governing authority? _____
8. Nature of soil _____
(Describe to a depth of 10 feet (20 feet if seepage pits are proposed) giving thickness of various strata such as topsoil, clay, loam, sand, gravel, rock, etc.)
_____ By whom determined _____
How determined _____ Date determined _____
9. Topography _____
(State whether ground is flat, rolling, steep or gentle slope, etc.)
10. Grading: state depth of maximum cut _____ maximum fill _____
11. Depth to water table Max. _____ Min. _____ By Whom determined _____
(Give maximum and minimum if there is any variation)
How determined _____ Date determined _____
12. Proximity to orchard or former orchard, wastesite or former wastesite _____

WATER SERVICE

13. Proposed method of supplying water _____
(If public supply, give name of municipality, water district or company)
Has municipality, district or company agreed to supply water? _____
14. State approximate distance to nearest public water supply main of municipal system _____
15. State approximate distance to nearest subsurface disposal systems _____
16. If a water supply application is required, has the approval from Bureau of Water Regulations, Department of Environmental conservation been received? _____

SEWERAGE SERVICE

- 17. Proposed method of collection and disposal of Sewage _____
(Give name of municipality or sewer district if public sewers are to be used)
Has municipality, district or company agreed to provide sewerage facilities? _____
- 18. State approximate distance to nearest public sewer main of municipal system _____
(Give name of municipality or sewer district)
- 19. State approximate distance to nearest well water supplies _____

DRAINAGE

- 20. Are there any low or wet areas that require drainage? _____
(yes or no)
Are there any water sources, ditches, ravines which may be filled in? _____
(yes or no)
Is there an existing local drainage plan? _____ Have these plans been approved by drainage officials? _____
State arrangements for disposing of surface water from streets and other areas _____

GAS TRANSMISSION LINES

- 21. Does a high pressure gas transmission line pass through or within 300 feet of any lot in this subdivision? _____
If so, has its location been shown accurately on plans? _____

ADDITIONAL INFORMATION

- 22. Maximum number of bedrooms in completed house(s) _____ Bedrooms in expansion attic _____
- 23. Cellar drainage: Are cellar or footing drains to be installed? _____
If so, show on plans how drainage will be disposed of.
- 24. Laundry wastes: Are laundry tubs to be located in basement? _____
If so, show on plans how waste will be disposed of.

It is hereby agreed that is the attached plans dated _____, or any amendment or revision thereof are approved by the Monroe County Department of Public Health, installation of water supply and sewage disposal facilities will be made in accordance with the details thereof as shown on such approved plans. If the subdivided lands, shown on such plans are sold before such installations are made, it is agreed that all purchasers of lots will be furnished with a legible reproduction of the approved plans and they will be notified of the necessity of making such installations in accordance with such approved plans.

Date _____ Signature _____

Official Title _____

Statement must be signed by the owner of the land platted for subdivision or the responsible official of the company or corporation offering the same for sale.

TO BE FILLED IN BY PROFESSIONAL ENGINEER OR LAND SURVEYOR*

The plans submitted with this application were prepared by me or under my supervision and direction. Individual water and sewerage systems, if shown on plans, were designed after careful and thorough study of local geological and existing sanitary conditions.

Name (Give Firm, if any) _____

Address _____

License and No. _____ Signature _____

*Land Surveyor only if granted exception under Section 7208n of the State Education Law

MONROE COUNTY DEPARTMENT OF HEALTH

PROTOCOL FOR CHARACTERIZING POTENTIAL CHEMICAL CONTAMINATION IN PROPOSED REALTY SUBDIVISIONS

(JULY 1995)

The New York State Department of Health (NYDOH) requires the evaluation of previous land usage prior to approval of realty subdivision applications. (Reference: 10NYCRR 74.7 6NYCRR PART 617 – State Environmental Quality Review). The New York State Department of Health Bureau of Toxic Substance Assessment (BTSA) has developed draft guidance to local Health Departments which recommends the consideration of past land uses during the permit review process.

Previous usage of lands should be evaluated for agricultural activities involving the application of pesticides to orchards or other crops, industrial activity, disposal of municipal wastes, construction and demolition debris, household trash, hazardous wastes, landfilling, sludge application and the potential for the presence of harmful degradation products. This evaluation is necessary to minimize potential public exposure to pesticides or other chemical residues in soils, ground water and surface waters during construction and site occupancy.

The Supplemental Application Form should be completed and submitted to MCDOH as part of the submission for realty subdivision approval process.

Information to complete this form may be available from a number of sources including: past property owners, site neighbors, local municipal officials, New York State Department of Environmental Conservation (NYSDEC), Monroe County Environmental Management Council (MCEMC) and the Monroe County Department of Health (MCDOH). Historical aerial photos are also an important source of information. Photos can be examined at MCDOH – 111 Westfall Road (585) 753-5075; Fax: (585)753-5098.

Exposures can occur due to windborne soils and fugitive dust emissions affecting residents and construction personnel, contamination of shallow groundwater or proposed drinking water wells, direct ingestion of surface soils by young children and by the ingestion of fruits and vegetables grown in contaminated soils.

Areas exhibiting concentration levels above guidelines established by the NYSDOH/MCDOH may require special construction procedures along with area remediation before or during on site developmental activities.

The following remediation alternatives may be used for contaminated soils: limited excavation and disposal at permitted waste disposal sites; limited excavation and stockpiling for use as fill material on-site to establish required grades; bottom plowing and disking to achieve background levels; emplacement below parking lots, roadways or other low permeable surfaces; use of deed restrictions to give notice to future residents of areas where use may be restricted. These alternatives should not be considered all-inclusive to allow for remediation flexibility.

An assessment of contaminant levels will be made by comparison to available information on typical background occurrences in residential soils. Published data can provide valid information for assessing significance of contaminated levels in soils in addition to consultations with BTSA.

The Developers, their agents/consultants (D/A) can utilize a variety of documents for their evaluation such as the USEPA Health Based Criteria For Carcinogens, Health Based Criteria for Systemic Toxicants, Element and Chemical Concentrations in Eastern US, NY and Monroe County Soils. The NYSDOH Drinking Water Standards, the NYSDEC Groundwater Standards and the USEPA Health Based Criteria will be used for evaluating groundwater. Other publications with scientifically supported guidance values can also be used.

SOILS

The subdivision developer should submit a supplemental application indicating past site usage. D/A will be responsible for conducting the preliminary evaluation and if indicated develop the soil sampling plan, overseeing the field sampling investigation and if required by MCDOH developing, overseeing and certifying compliance with a soils management plan(SMP). Upon completion of the SMP, soils monitoring may be required to document the effectiveness of the remediation project.

If there is evidence of possible residual contamination, the D/A will prepare a sampling plan and submit it to the MCDOH. The plan will detail the number of samples to be collected, sampling locations, soil depth intervals to be sampled, the analyses to be performed along with the rationale for selecting the locations. Sampling location selection should be based on historic patterns; suspected mixing, storage and disposal areas; differences in surface topography, swales, surface drainage and different soil drainage conditions; variations in soil type across the site or other site-specific conditions. The proposed locations should be plotted on a site plan which shows the topography, roadways and proposed lot boundaries.

Prior consultation with the MCDOH regarding the sampling plan as to the sampling locations, their number along with monitoring and analytical requirements is strongly recommended.

The number of sampling locations should be adequate to characterize the distribution of contaminant levels across the project area. In order to identify distinct areas of contamination, samples should not be composited. Cross-contamination between samples should be prevented by the use of clean equipment.

Initial samples should be obtained in the top two inches of soil. Soils at deeper levels should be collected at the same time as surface samples. They should be held for analysis under appropriate laboratory conditions following USEPA and NYSDOH laboratory protocols pending the analytical results of the surface samples. Analysis of deeper soil samples should be done when significant elevated levels in the upper interval are encountered or when a soils management plan involves top soil removal.

Sample analysis should be performed by a laboratory certified by the New York State Environmental Laboratory Approval Program. Pesticides are to be analyzed by Method 8080 - EPA SW-846. Other pesticides and their appropriate metabolites should be analyzed by appropriate methods based on years of usage, half-life, and time of last application. Lead, arsenic and mercury should be evaluated under the appropriate EPA 7000 series and prepared under EPA-3050. Analytical protocols for industrial, commercial or waste disposal sites should be discussed with MCDOH.

The TCLP (leaching procedure) is not recommended because some exposure pathways involve the entire soil metal content. TCLP may be appropriate where elevated levels of metals indicate that the soils may be considered hazardous waste (NYSDEC should be consulted in this regard).

GROUNDWATER

Test wells should be drilled and sampled if: (1) a potable water source is to be located on site - refer to the MCDOH Policy on Wells Serving Realty Subdivision;(2)contaminated groundwater may be encountered during construction or in basement sumps.

SURFACE WATER / SEDIMENTS

Surface water and sediment locations should be included if ditches, streams, ponds, etc. are on the subject property. Upgradient and downgradient locations should be sampled.

RESPONSIBILITIES

Developers, their agents/consultants are responsible for interpretation of monitoring data, evaluating the site and determining the need for any remedial measures prior to or during site development. MCDOH will either agree or disagree with the submitted information.

LIST OF REFERENCES

- (1) 10 NYCRR 74.7
- (2) Criteria for Contaminated Soils/Sediment Cleanup, J. Fitchko, 1989
- (3) Draft NYS AIR GUIDE I - Guidelines for Control of Toxic Air Contaminants, NYSDEC Division of Air Resources, 1991
- (4) Fugitive Dust Suppression & Particulate Monitoring Program at Inactive Hazardous Waste Sites, Division Technical & Administrative Guidance Memorandum HWR-89-4031, NYSDEC Division of Hazardous Waste Remediation, October 1989
- (5) Exposure Factors Handbook, USEPA, Publication # EPA 600-8-89-043, July 1989
- (6) RCRA Facility Investigation (RFI) GUIDANCE, Volume I-IV, USEPA, Publication # PB89-200299, May, 1989
- (7) Background Concentrations of 20 Elements in Soils with Special Regard for New York State, NYSDEC, undated
- (8) NYSDEC TAGM Determination of Soil Cleanup Objectives and Cleanup Levels, November 16, 1992
- (9) NYSDEC STARS Memo #1 Petroleum Contaminated Soil Guidance Policy, August 1992

**TYPICAL PROCEDURE FOR A SITE
SUSPECTED OF BEING CHEMICALLY CONTAMINATED**

D/A: Submits realty subdivision site plan with past land use assessment.

MCDOH: Reviews submission and determines the need for a more extensive site evaluation. Notifies D/A.

D/A: Submits site sampling plan if required

MCDOH: Reviews the sampling plan, consults with NYSDOH-BTSA as necessary, approves the sampling plan or informs the D/A of required changes.

D/A: Modifies the sampling plan as necessary and submits to MCDOH for review and approval; repeats as necessary until plan is approved. Arranges for sample collection and analysis. Notifies the MCDOH at least 24 hours prior to conducting on site sampling. Evaluates the analytical information and if necessary proposes a Soils Management Plan (SMP). Submits the analytical results and written evaluation to MCDOH.

A Summary Table should be submitted listing the analytes detected, concentrations, sample location ID and depth of samples.

MCDOH: Reviews the submission, consults with NYSDOH-BTSA, concurs with the evaluation or advises the D/A of the need for additional soil testing or a SMP. If MCDOH concerns are adequately addressed, the D/A and MCDOH Realty Subdivision(RS) staff will be so advised by written confirmation.

D/A: Prepares a SMP based on the analytical results detailing how soils will be handled during and after site activities and submits proposed SMP to the MCDOH.

MCDOH: Reviews SMP; consults with the NYSDOH-BTSA as necessary. Informs the D/A of any need for sampling requirements or changes in the proposed SMP.

D/A: If revision of the SMP is necessary, a reevaluation of the SMP will be initiated and resubmitted to the MCDOH.

MCDOH: The D/A will be notified when agreement is reached on the SMP. **A copy of the approval will be forwarded to MCDOH-RS staff with a request that implementation of the SMP and its certification be added as a condition to the Subdivision Plan approval and so noted on the subdivision plan.**

D/A: Initiates remediation activities and documentation requirements. Notifies MCDOH upon completion of remediation activities, submits the required documentation and certifies that the site activities had been carried out in compliance with the SMP.

D/A =	Developer/Agent
MCDOH =	Monroe County Department of Health
NYSDOH-BTSA =	New York State Department of Health – Bureau of Toxic Substance Assessment

COUNTY OF MONROE - DEPARTMENT OF HEALTH

SUPPLEMENTAL APPLICATION
APPROVAL OF SANITARY FACILITIES FOR REALTY SUBDIVISIONS

SUBDIVISION: _____

LOCATION: _____

CITY/TOWN: _____

DEVELOPER: _____

ADDRESS: _____

1. (a) Has this site ever been used for agricultural purposes (orchard, vineyard, fieldcrop)? Yes No
Please specify:

(b) List herbicides/pesticides used. (attach additional sheets)

Herbicide/Pesticide	Year(s) used
_____	_____
_____	_____

2. (a) Has this site been used for industrial or chemical activity? Yes No **Please specify:**

(b) Were hazardous substances used, generated, spilled, stored, treated or disposed on site?
 Yes No **Please specify and List:**

3. (a) Is there a waste disposal site on or adjacent to the proposed development? Yes No

WSAC I.D. Number: _____

Type of wastes (municipal, agricultural, industrial, brush, construction/demolition, hazardous wastes)

- (b) Years of operation: _____
(c) How was access to the landfill controlled? _____

- (d) Was the landfill under DEC permit? [] Yes [] No
(e) Has the landfill been properly closed? [] Yes [] No Explain: _____

4. (a) Has this site ever been used for sludge application? [] Yes [] No
(b) Where did the sludge come from? _____

- (c) Was this done under DEC permit? [] Yes [] No
(d) During what years was the sludge applied? _____
(e) Please submit a laboratory analysis for the applied sludge.

5. (a) How was the information contained in this application obtained?

- (b) List any individuals (name, address, phone #) who were interviewed regarding the history of the site:

6. (a) **Locate areas on the site plan where any of the above uses occurred. Locate likely areas of high usage or spillage.**

(b) **Provide a plan for sampling soil if any of the above uses apply to this site. Ground water sampling should be included in the plan if wells are proposed for a water supply.** Surface water/sediment sampling should be included in the plan if ditches, streams, ponds, etc. exist on the subject property. The sampling plan must include but is not limited to number of samples, sample location, depth of samples, parameters analyzed for and background sampling location.

(c) **Provide a written evaluation of the impact that any of the applicable uses will have on the proposed development.** The written evaluation must include but is not limited to: concentration of analytes detected, comparison to local background and background values cited in current literature, comparison to EPA Health Based Criteria, NYSDOH Drinking Water Standards, NYSDEC Ground Water Standards or other applicable criteria and Conclusions. **Include a Summary Table listing analytes detected, concentrations, sample ID and depths.**

This application was completed after a thorough study of all available information and is accurate and complete to the best of my knowledge.

Developer/agent signature: _____

Date: _____

Consultant's signature: _____

Date: _____

License Number: _____

NEW YORK STATE DEPARTMENT OF HEALTH
Bureau of Water Supply Protection (Ph. 518-402-7605)

**Application for Approval of Plans
for Public Water Supply Improvement**

1. Applicant:	2. Location of works: (C,V,T)	3. County: MONROE	4. Water District: (specific area served)
5. Type of ownership: <input type="checkbox"/> Industrial <input type="checkbox"/> Private-Institutional <input type="checkbox"/> Board of Education <input type="checkbox"/> Federal <input type="checkbox"/> Municipal <input type="checkbox"/> Commercial <input type="checkbox"/> Private-Other <input type="checkbox"/> Authority <input type="checkbox"/> State			
6. Nature of Project: <input type="checkbox"/> New Works. If checked, provide capacity development (viability) analysis* <input type="checkbox"/> Modifications to existing System. If checked, provide PWS ID# NY _____			
7. Estimated Project Cost:			
Source \$ _____ Treatment \$ _____ Storage \$ _____ Distribution \$ _____			
Pumping \$ _____ Engineering \$ _____ Legal/Permitting \$ _____ Total \$ _____			
Funding Source: <input type="checkbox"/> Private <input type="checkbox"/> DWSRF** <input type="checkbox"/> Federal <input type="checkbox"/> Other _____			
If DWSRF is checked, provide DWSRF # _____			
8. Type of Project: <input type="checkbox"/> Corrosion Control <input type="checkbox"/> U.V. Light Disinfection <input type="checkbox"/> Distribution <input type="checkbox"/> Source <input type="checkbox"/> Pumping Unit <input type="checkbox"/> Fluoridation <input type="checkbox"/> Storage <input type="checkbox"/> Transmission <input type="checkbox"/> Chlorination <input type="checkbox"/> Other Treatment <input type="checkbox"/> Other			
9. Project Description: _____ _____ _____			
10. Latest total consumption data (in MGD):			
Avg. day _____ Year _____ Total Population of service area: _____			
Max. day _____ Year _____ % population actually served: _____			
Peak hr. _____ Year _____ % population served affected by project: _____			
11. Name of Design Engineer: _____ NYS License No.: _____ Firm: _____ Address: _____ E-Mail: _____ Tel. No.: _____ Fax. No.: _____		12. NYS Professional Licensed Engineer Stamp & Signature*** Return approved plans to: <input type="checkbox"/> Engineer <input type="checkbox"/> Applicant	
13. Applicant and Representative Information:			
Name: _____ Title: _____			
Address: _____ _____ _____ / _____ / _____			
Signature of applicant			Date
NOTE: All applicants must be accompanied by 3 sets of plans, 3 sets of applications and an Engineer's Report describing the project in detail. The project must first be discussed with the appropriate city, county, district or regional public health engineer. Signature by a designated representative <i>must</i> be accompanied by a letter of authorization. * Additional information regarding capacity development may be found at: http://www.health.state.ny.us/nysdoh/water/main.htm ** Current DWSRF project listings may be found at: http://www.health.state.ny.us/nysdoh/water/main.htm *** By affixing the stamp and signature the Design Engineer agrees that the plans and specifications have been prepared in accordance with the most recent version of <i>Recommended Standards for Water Works</i> in accordance with the NYS Sanitary Code.			

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
APPLICATION FOR APPROVAL OF PLANS FOR A WASTEWATER DISPOSAL SYSTEM**

1. NAME OF APPLICANT		2. LOCATION OF WORKS (City, Village, Town)		3. COUNTY Monroe	
4. ENTITY OR AREA SERVED		5. TYPE OF OWNERSHIP			
		<input type="checkbox"/> Commercial <input type="checkbox"/> Sewage Works Corp <input type="checkbox"/> Private - Home		<input type="checkbox"/> Private - Other <input type="checkbox"/> Private - Institutional <input type="checkbox"/> Board of Education	
		<input type="checkbox"/> Municipal <input type="checkbox"/> Industrial		<input type="checkbox"/> Authority <input type="checkbox"/> Federal <input type="checkbox"/> State	
				<input type="checkbox"/> Interstate <input type="checkbox"/> International <input type="checkbox"/> Indian Reservation	
6. TYPE AND NATURE OF CONSTRUCTION			7. ESTIMATED COST OF CONSTRUCTION		
Collection System		Treatment and/or Disposal	Collection System		Treatment and/or Disposal
<input type="checkbox"/> New		<input type="checkbox"/> New	\$		\$
<input type="checkbox"/> Additions or Alterations		<input type="checkbox"/> Additions or Alterations			
8. TYPE OF WASTE					
<input type="checkbox"/> Sewage <input type="checkbox"/> Industrial (Specify) <input type="checkbox"/> Other (Specify)					
9. NAME OF RECEIVING TREATMENT WORKS			10. POINT OF DISCHARGE		Class
			Surface Water: (Name of Watercourse)		
			Ground Water: (Name of Watercourse to which ground water is tributary)		Class
11. IS STATE OR FEDERAL AID APPLIED FOR?			LOCATION (City, Village, Town)	TYPE OF PERMIT	PERMIT NO.
<input type="checkbox"/> Yes <input type="checkbox"/> No				<input type="checkbox"/> NYDES <input type="checkbox"/> SPDES	DATE ISSUED
12. NAME OF DESIGN ENGINEER				NEW YORK STATE LICENSE NO.	
ADDRESS				TELEPHONE NO.	
13. WATER CONSUMPTION (GPD)					
Present		Future		Design Year	
14. POPULATION SERVED					
Present		Future		Design Year	
15. AVERAGE DAILY FLOW FOR NEW OR EXISTING TREATMENT WORKS (GPD)					
Present		Future		Design Year	
16. SOURCE OF WATER SUPPLY (if private well; give location, type, depth and character of soil)			17. DESIGN EQUIVALENT POPULATION (BOD Basis)		
			Design Flow	GPD	Design Plant Efficiency
18. GIVE NUMBER, CHARACTER AND DISTANCE OF ANY BUILDINGS WHICH MAY BE AFFECTED BY THE PROPOSED TREATMENT WORKS			19. DESCRIBE PROPOSED OR EXISTING STORM WATER DISPOSAL		
ADDITIONAL INFORMATION MUST BE SUBMITTED FOR PRIVATE AND INSTITUTIONAL SYSTEMS.					
20. INDICATE OF U.S.G.S. TOPOGRAPHIC MAP EXACT LOCATION OF SEWAGE TREATMENT WORKS AND ADJACENT BUILDINGS. SHOW LOCATION OF ALL WELLS OR OTHER SOURCES OF WATER SUPPLY WITHIN 200' OF THE PROPOSED WORKS. GIVE DESCRIPTION OF THESE SOURCES AND CHARACTER OF SOIL					
21. STATE DEPTH BELOW EXISTING GROUND SURFACE AT WHICH GROUND WATER IS ENCOUNTERED			22. DESCRIBE SOIL AT SITE OF PROPOSED WORKS. GIVE DESIGN BASIS AND OBSERVED SOIL PERCOLATION RATE DATA (Use additional sheet, if necessary)		
DATE:					

NOTE: All applications must be accompanied by plans, specifications and completed Form BSP-65 (appropriate portions). The submission must conform to a previously approved engineering report describing the system in detail. The plans must be stamped with the designing engineer's seal and must be of sufficient clarity and eligibility to permit satisfactory microfilming. Only white prints will be accepted because of the difficulty of microfilming blue prints. There must be a blank area, at least 4" X 7", in the lower right corner of each sheet so that the approval stamp may be placed on the face of the plans.

Any deviation from the Department's standards for wastewater collection and treatment facilities must be explained in detail.

Approved plans are to be returned to: Applicant Engineer

If the application is signed by a person other than the applicant shown in Item 1, the application must be accompanied by a letter of authorization. Failure to comply with this provision may be grounds for the rejection of any submission.

I hereby affirm under penalty of perjury that information provided on this form is true to the best of my knowledge and belief. False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Signatures and Official Titles: _____

Mailing Address: _____

Date of Application: _____

REMARKS:

**SAN-65
SANITARY SEWER SYSTEM**

Ref.*	Standard Under Review	Standard	This Project	Remarks
31.	Is the proposed sewer system separate or combined?	Separate		
	Does sewage overflow from proposed intercepting sewers?	No		
32.	Is sewer system designed for estimated ultimate tributary population?	Yes		
32.	Are sewers sized to meet requirements of Section 32?	Yes		
32.	What average unit sewage flow (gpcd) is proposed for design? (See paragraph 11.24)	100 gpcd		
33.1	What is minimum diameter of sewers?	8"		
33.2	Are sewers designed deep enough to receive wastewater from basements and to prevent freezing?	Yes		
33.4	Will all sewers be constructed at or greater than the specified minimum gradient?	Yes		
	Does the design comply with requirements stated in subsections 33.5, 33.6,33.7,33.8,33.9	Yes		
34.	Are manholes designed and specified according to section 34?	Yes		
34.3	What is minimum manhole diameter?	48"		
35.	Are inverted siphons, if any,designed in accordance with section 35?	Yes		
36.	Sewer near stream comply with section 36?	Yes		
38.	Where water lines are close to proposed sewers, does design protect water supplies according to section 38?	Yes		

Remarks including explanation of departures from standard practice:

*Reference numbers refer to numbers of Paragraphs, in Chapter 30, Recommended Standards for Wastewater Facilities – 2014 Edition

Chapter 40 – Wastewater Sewage Pumping Stations*
General Design Information

Flood Protection

25 Year Flood Elevation _____

100 Year Flood Elevation _____

Location _____

Type of pumping station Wet well/Dry well Submersible Screw pump
 Package Built-in-place Suction lift

Number of pumps _____

Maximum flow expected _____

<u>Capacity of each pump</u>	Rated Head	Computed Head
1.		
2.		
3.		

*Refers to Chapter 40, Recommended Standards Wastewater Facilities 2014 Edition.

DESIGN PROFESSIONAL CERTIFICATION OF CHECKLIST, PAGES 1-10

NAME _____

LICENSE # _____

STAMP

Chapter 40 – Wastewater Pumping Stations

Standard Ref.	Item Under Review	Stand.	This Project	Plans & Specs Ref.
41	General			
41.1	Structures and electrical and mechanical equipment protected from physical damage by 100 yr. flood and will remain fully operational and accessible during the 25 yr. flood?	Yes		
41.2	Pumping station is readily accessible by maintenance vehicles during all weather conditions?	Yes		
41.3	Special consideration given to design of the wet well and piping to avoid operational problems from the accumulation of grit?	Yes		
41.4	Are adequate provisions made to protect maintenance personnel from hazards?	Yes		
42	Is equipment provided for confined space entry in accordance with OSHA standards? (See Section 57)	Yes		
42.1	Design Type of sewage pumping station?	Wet Well/ Dry Well Submersible Suction Lift Screw Pump		
42.21	Dry wells, including their superstructure, are completely separated from the wet well?	Yes		
42.22	Provisions made to facilitate removal of pumps, motors, and other mechanical and electrical equipment?	Yes		
42.231	Suitable and safe means of access provided to dry wells, and to wet wells containing either bar screens or mechanical equipment?	Yes		
42.232	For built-in place pump stations, a stairway with rest landings provided at vertical intervals not to exceed 12 ft.?	Yes		
	For factory built pump stations over 15 ft. deep, a rigidly fixed landing provided at vertical intervals not to exceed 10 ft?	Yes		
	Where landing is used, a suitable and rigidly fixed barrier provided to prevent an individual from falling past the intermediate landing?	Yes		
	If manlift or elevator used, emergency access included in design?	Yes		
42.24	Stairway designed to meet the provisions of 56.5?	Yes		
	Are adequate provisions made for protection from buoyancy of the pumping station in high ground water conditions?	Yes		

42.25	Selection of materials – Consideration given to the presence of hydrogen sulfide and other corrosive gases, greases, oils, and other constituents frequently present in sewage?	Yes		
42.3	Pumps			
42.31	At least 2 pumps provided?	Yes		
	Minimum of 3 pumps provided for flows >1mgd?	Yes		
	If only 2 units provided, both have same capacity and each is capable of handling the design peak hourly flow?	Yes		
	If 3 or more provided, units designed to fit actual flow conditions and of such capacity that with any one unit out of service the remaining units will have capacity to handle maximum sewage flow?	Yes		
42.32	Pumps handling combined sewage preceded by rapidly accessible bar racks?	Yes		
	Max. bar rack spacing per 61.121? (1" max. between bars w/ max clear opening 1¾")	Yes		
	Mechanical hoist provided with bar rack?	Yes		
42.322	Where warranted, mechanically cleaned and/or duplicate bar racks provided?	Yes		
	Pumps handling separate sanitary sewage from 30" or larger diameter sewers protected by bar racks?	Yes		
	For small pumping stations, protection from clogging considered?	Yes		
42.33	Sphere size that can be passed by pumps (except grinder pumps)?	3" min.		
	Diameter of pump suction piping (except grinder pumps)?	4" min.		
	Diameter of pump discharge (except grinder pumps)?	4" min.		
42.34	Under normal operating conditions pump will operate under a positive suction head?	Yes		
42.35	Electrical systems and components in raw sewage wet wells, or in enclosed or partially enclosed spaces where flammable gases may be present, comply with NEC requirements for Class I, Division 1, Group D locations (explosion-proof)?	Yes		
	Equipment in wet well suitable for use under corrosive conditions?	Yes		
	Each flexible cable provided with watertight seal and separate strain relief?	Yes		
	Fused disconnect switch provided above ground, and weatherproof (NEMA 3R or 4)?	Yes		
	Outdoor control panels provided with a 110 volt power receptacle with ground fault protection?	Yes		
42.36	Each pump has an individual intake?	Yes		
	Wet well design avoids turbulence near intake, with intake piping as straight and short as possible?	Yes		

42.37	For dry wells, a separate sump pump with dual check valves provided, with discharge located above max. high water level of wet well?	Yes		
	Floor and walkway surfaces adequately sloped to point of drainage?	Yes		
	Pump seal leakage water piped or channeled directly to sump? (See Section 45)	Yes		
42.38	Pumps selected to operate at varying delivery rates to minimize hydraulic surges?	Yes		
	Is the station design capacity based on peak hourly flow (from section 11.24) and adequate to maintain min. velocity of 2 ft/sec in force main?	Yes		
42.4	Controls Type of Control system: (a) air bubbler, (b) encapsulated float or (c) flow measuring?	(a), (b) or (c)		
	Control system electrical equipment complies with NEC requirements for Class I, Division 1, Group D location?	Yes		
	Water level control sensing devices located away from turbulence of incoming flow and pump suction?	Yes		
	Provisions included to automatically alternate the pumps in use?	Yes		
42.5	Valves			
42.51	Suitable shutoff valves on suction lines of dry pit pumps?	Yes		
42.52	Suitable shutoff and check valves on discharge line of each pump? (except screw pumps)	Yes		
	Check valve located between shutoff valve and pump?	Yes		
	Check valves suitable for material being handled?	Yes		
	Check valve location on horizontal portion of discharge piping acceptable? (except ball checks, which may be placed vertically)	Yes		
	All valves capable of withstanding normal pressure and water hammer?	Yes		
	All valves operable from floor level and accessible for maintenance?	Yes		
	Valves located outside of wet well?	Yes		
42.6	Wet Wells			
42.61	Is wet well divided into multiple sections, properly interconnected, to facilitate repairs and cleaning?	Yes (Desirable)		
42.62	Effective volume of wet well based on design average flow (11.24) and filling time not to exceed 30 minutes?	Yes		

	Sized to accommodate pump manufacturer's duty cycle recommendations?	Yes		
	Size adequate to avoid heat buildup in pump motor and to avoid septic conditions due to excessive detention time?	Yes		
42.63	Slope of wet well floor to hopper bottom?	1:1 min.		
42.64	Does the covered wet well have provisions for air displacement to the atmosphere?	Yes		
42.7	Ventilation			
	Adequate ventilation provided?	Yes		
	If below ground, has mechanical ventilation been provided and so arranged as to independently ventilate the dry well and the wet well, with no interconnection, if equipment requiring maintenance or inspection is located in wet well?	Yes		
42.72	Does the dry well have adequate air inlets and outlets?	Yes		
	Dampers used on exhaust or fresh air ducts?	No		
42.73	Are electrical controls switches for operation of ventilation equipment marked and conveniently located?	Yes		
	Is all intermittently operated ventilation equipment interconnected with the respective pit lighting system?	Yes		
42.74	Fan wheel for mechanical ventilation fabricated from non-sparking material?	Yes		
	Are automatic heating and dehumidification equipment provided in the dry well?	Yes		
42.75	Continuous wet well ventilation, complete air changes per hour	12 min.		
	Intermittent wet well ventilation, complete air changes per hour	30 min.		
	Air forced into wet well by mechanical means rather than solely exhausted?	Yes		
42.76	Continuous dry well ventilation, complete air changes per hour	6 min.		
	Intermittent dry well ventilation, complete air changes per hour	30 min.		
42.8	Suitable devices provided for measuring sewage flow?	Yes		
42.9	If potable water brought to station, supply complies with Section 56.23? (No physical connection with pumping station).	Yes		

43	Suction Lift Pumps			
43.1	Type of suction lift pumps provided: (a) self-priming, or (b) vacuum-priming?	(a) or (b)		
43.11	Pumping stations using dynamic suction lifts exceeding the limits outlined in sections 43.11 and 43.12 have factory certification of pump performance and detailed calculations submitted for review?	Yes		
43.11	Self-Priming Pumps Pumps capable of rapid priming and re-priming at the “lead pump on” elevation, automatically, under design operating conditions?	Yes		
	Suction piping not exceeding pump suction size and not exceeding 25 ft. in total length?	Yes		
43.12	Priming lift at “lead pump on” elevation includes safety factor of at least 4 ft. from max. allow. priming lift at design operating conditions?	Yes		
43.12	Combined total dynamic suction lift at “pump off” elevation and required NPSH at design operating conditions?	22 ft. max.		
43.12	Vacuum – Priming Pump Dual vacuum pumps provided capable of automatically and completely removing air from suction lift pump?	Yes		
43.2	Combined total dynamic suction lift at “pump off” elevation and required NPSII at design operating conditions?	22 ft. max.		
43.2	Equipment, Access, Location Pump equipment compartment above grade or offset and effectively isolated from wet well?	Yes		
44	Wet well access other than through equipment compartment? And at least 24” in diameter?	Yes		
44	Valving located outside wet well?	Yes		
44.1	Submersible Pump Stations Provisions under Section 42 being met?	Yes		
44.1	Pumps and motors designed specifically for raw sewage use, including totally submerged operation during a portion of each pumping cycle and meet requirements of the National Electrical Code?	Yes		
	Effective method provided to detect shaft seal failure or potential seal failure?	Yes		
	Motor of squirrel-cage type design without brushes or other are producing mechanisms?	Yes		

44.2	Pumps readily removable and replaceable without dewatering wet well or disconnecting any wet well piping?	Yes		
44.31	Strain relief and disconnection from outside wet well provided for electrical supply, control and alarm circuits?	Yes		
	Terminals and connectors – located outside wet well or use water-tight seals. If outside, use weather proof equipment.	Yes		
44.32	Motor control center located outside wet well and protected by conduit seal or other appropriate measures meeting NEC requirements, with seal located so that motor may be removed and electrically disconnected without disturbing seal?	Yes		
44.33	Pump motor power cords meet requirement of the National Electrical Code?	Yes		
	Ground Fault Interruption protection provided to deenergize the circuit in event of failure in cable electrical integrity?	Yes		
	Power cord terminal fittings corrosion-resistant, constructed to prevent entry of moisture into cable, provided with strain relief, and designed to facilitate field connection?	Yes		
44.4	Valves required under 42.5 located in a separate valve chamber, drain to the wet well, or to the soil?	Yes		
45	Screw Pump Stations – Special Considerations			
	Meet requirements of section 42?	Yes		
45.1	Covers or other means of excluding direct sunlight provided (as needed) to eliminate adverse effects of temperature change?	Yes		
45.2	Positive means of isolating individual screw pump wells provided?	Yes		
45.3	Submerged bearings lubricated by an automated system without pump well dewatering?	Yes		
46	Alarm Systems			
	Alarm system provided to activate in cases of power failure, dry well sump and wet well high water levels, sump pump failure, pump failure, use of lag pump, unauthorized entry, or any cause of pump station malfunctions?	Yes		
	Alarms transmit conditions to a municipal facility staffed 24 hours a day? (Unless unavailable, then during business hours). OR audio-visual alarm system provided? (only accepted in some cases).	Yes		

47	Emergency Operation Suitable controlled high-level wet well overflow and/or use of storage/detention tanks or basins provided to supplement alarm systems and emergency power generation for times of flood, power failure or other reasons?	Yes		
47.2	Which of the following methods utilized to prevent or minimize emergency overflows? (a) Storage Capacity of System (b) Connection of station to at least two independent utility substations (c) In-place or portable internal combustion engine equipment to generate electrical or mechanical energy (d) Portable pumping equipment	(a),(b), (c) or (d)		
47.411	Engine protection equipment capable of shutting down and activating an alarm on site as provided in Section 46?	Yes		
	Engine protective equipment monitors conditions of low oil pressure and overheating, except for engines with splash lubrication?	Yes		
47.412	Engine of adequate rated power to start and continuously operate all connected loads?	Yes		
47.413	Type of fuel adequate for cold weather conditions expected?	Yes		
47.414	Underground fuel storage and piping in accordance with all state and federal regulations?	Yes		
47.415	Engine located above grade with adequate ventilation of fuel vapors and exhaust gases?	Yes		
47.416	Instructions provided for all emergency equipment indicating need for regular starting and running at full loads?	Yes		
46.417	Emergency equipment protected from damage at the restoration of regular electrical power?	Yes		
47.418	Consider air quality regulations?	Recommended		
47.419	Provide noise control?	Recommended		
47.42	Engine Drive Pumps			
47.421	Engine-driven pumps meet design pumping requirements unless storage capacity is available for excess flows, with pumps designed for anticipated operating conditions?	Yes		
47.422	Engine and pump equipment to provide automatic start-up and operation?	Yes		

	Manual start-up also provided?	Yes		
47.423	Where manual start-up and operation justified, storage capacity, and alarm system meet 46 and 47.423?	Yes		
47.43	Where engine-driven pumping equipment is portable, sufficient storage capacity is provided?	Yes		
47.431	Engine Driven Generating Equipment			
	Generating unit size adequate for pump motor starting current and for lighting, ventilation, and other auxiliary equipment?	Yes		
	Operation of only one pump during periods of auxiliary power supply adequately justified?	Yes		
47.432	Special sequencing controls provided to start pump motors? (unless generating capacity available to start all pumps simultaneously)	Yes		
	Automatic and manual start-up and load transfer provided?	Yes		
	Generator protected from damaging operating conditions?	Yes		
47.433	Where manual start-up and transfer justified, storage capacity and alarm system meet 47.433?	Yes		
	Where portable generating equipment or manual transfer provided, sufficient storage capacity with alarm system is provided?	Yes		
	Special electrical connections and double-throw switches provided for connecting portable generating equipment?	Yes		
47.44	Where independent substations used for emergency power, each separate substation and its associated distribution lines capable of starting and operating pump station at rated capacity?	Yes		
48	Instructions and Equipment			
	Complete set of operational instructions provided? (to be included in O&M Manual)	Yes		
49	Tools and spare parts provided as necessary?	Yes		
	Force Mains			
49.1	Velocity at design pumping rate? (8 fps max. recommended)	2.0 fps min.		
	Size of force main for raw wastewater?	4" min.		
49.2	Automatic air relief valves at high points?	Yes		
49.3	When entering gravity sewer, smooth flow transition provided with force main at a point not more than 1.0 ft. above the flow line of receiving manhole?	Yes		
49.4	Force main and fittings designed to withstand normal pressure and pressure surges?	Yes		

49.5	Force main near streams or for aerial crossings meet requirements of Sections 36, 37 and 38?	Yes		
	Horizontal separation between water mains and sanitary sewer force mains?	10 ft. min.		
	Min. vertical separation between outside of force main and outside of water main when crossing water mains?	18 in.		
	At crossings of water mains, one full length of water pipe located so both joints as far from the force main as possible?	Yes		
49.61	Design value used for "C" in Hazen-Williams formula? (100 for unlined iron or steel; higher value, 120 max., allowed smooth pipe such as PVC, polyethylene or lined ductile iron)	100-120		
49.7	Force main properly identified, if needed, to avoid confusion with potable water main in vicinity?	Yes		
48.8	Force main testing specified including test methods and allowable leakage?	Yes		
49.9	Isolation valves considered where force mains connect into common force mains?	Recommended		
	Cleanouts at low points and chambers for pig launching and catching considered?	Recommended		
49.10	Force mains covered with sufficient earth or insulation to prevent freezing?	Yes		

Standard Ref.	Remarks-Explanations/Justifications for Departures from Standards (Attach additional sheets if necessary)

Engineering Plan Review

ENGINEERS REPORT CONTENTS

An engineering report shall be submitted with each application, and shall contain, at a minimum:

General (for all projects):

- Brief description of existing site
 - Address all environmental factors impacting design such as flood plains, wetlands, ponds, streams, water table, soils, slopes, orchards, etc.
- Brief description of proposed actions
- Approvals requested from MCDPH

For OWTS:

- Method and calculations determining design flow
- Septic Tank sizing
- Soil testing results
- Description of proposed system
- Compliance with MCDPH OWTS Design and Construction Standards

For Water Main Extension:

- Supplier of water
- Type, size, and location of proposed main
- Flow test data
- Hydraulic calculations – which at a minimum shall include projected average and maximum (peak) daily demands including fire flow; and calculations should consider the “worst case” or peak demand.
- Method of disinfection and leakage testing

For Sewer System Extension:

- Supplier of sewerage service
- Type, size, slopes, and location of proposed sewer
- Design flows and velocities
- Proximity to water supply
- Method of testing manholes and sewers

For Pump Stations to Municipal Sewers:

- Average and peak flows, including ultimate tributary population
- 10 States Chapter 40 checklist
- Pump curve(s) with operating point(s)
- Calculations showing system curve
- Air vent calculations, if necessary
- Emergency storage capacity calculations
 - The emergency storage capacity is the volume that is available in the sanitary sewer system (wet well, manholes and pipes) after the high water alarm has been triggered and before sewage backs-up and discharges at the lowest critical point in the sewer system. The critical point could be where sewage backs-up into a basement or overflows to the surface of the ground from a manhole. The design criterion used by the MCDPH to determine the necessary storage capacity for a telemetered alarmed station is two hour storage capacity calculated at peak flow rate, defined as 2.5 times the average daily flow rate.
- Emergency operation during power or pump failure
- Description of alarm system
- Method of testing force main

Engineering Plan Review 2016 FEE SCHEDULE

Current fees can be confirmed by calling the MCDPH Plan Review office at 753-5060.

<u>Realty Subdivision</u>	<u>Fee*</u>
Realty Subdivision w/ Public Utilities (per lot)	\$100 (includes \$25 State filing fee)
Revised Plan Review	\$100
Plan Review Involving Pump Station	\$275
Revised Plan w/ Pump Station	\$100
<u>Sewer Extension (non-subdivision)</u>	
Plan Review	\$220
Revised Plan Review	\$100
Plan Review with Pump Station	\$465
Revised Plan with Pump Station	\$100
<u>Community Water Supply</u>	
Water Main Plan Review	\$220
Water Main Revised Plan Review	\$100
Water Treatment Plant Operator Certification	\$75
<u>Cross Connection Control</u>	
Plan Review	\$270
Revised Plan Review	\$100
Residential Irrigation System	\$30
Residential Basement Infiltration System	\$30
<u>Non-Community Water Supply</u>	
Plan review	\$225
<u>Individual On-Site Wastewater Treatment System (OWTS)</u>	
Plan review – first lot	\$300
Each Additional Lot	\$210
Revised Plan Review	\$100
<u>OWTS Realty Subdivision Plan Review</u>	
First Lot	\$325 (includes \$25 State filing fee)
Each Additional Lot	\$250
<u>Commercial OWTS</u>	
Plan Review – First Lot	\$325
Each Additional Lot	\$230
Commercial Wastewater Revised Plan	\$100
<u>Bathing Facilities – Pool / Spa / Hot Tub / Beach / Spray Park</u>	
Plan Review – New	\$225
Plan Review – Renovation	\$150
Revised Plan	\$100
Wading Pool	\$150
Beach Plan Review – 5,000 sq. ft. or less	\$220
Beach Plan review – 5,000 sq. ft. or more	\$300

* Charitable, non-profit organizations with annual operating budgets of \$50,000 or more are assessed a fee equal to fifty percent (50%) of the standard fee. Charitable, non-profit organizations with an operating budget of less than \$50,000 will remain fee-exempt from Environmental Health Fees. Governmental agencies that receive more than fifty percent (50%) of their operating funds from general tax revenues will be assess a fee equal to fifty percent (50%) of the standard fee.