



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Central Regional Office • 627 Main Street, Worcester MA 01608 • 508-792-7650

DEVAL L. PATRICK
Governor

RICHARD K. SULLIVAN JR.
Secretary

KENNETH L. KIMMELL
Commissioner

October 22, 2013

David E. Hale, Manager
Fifteen Great Road, LLC
Omni Properties
200 Baker Ave., Suite 303
Concord, MA 01742

Re: Littleton – BRP WP 79 - #X255042
314 CMR 5.00, Groundwater Discharge
Village Green, GW #936-0
Draft Permit

Dear Mr. Hale:

The Department of Environmental Protection (“MassDEP”) has completed its review of your application (#X255042) for an individual groundwater discharge permit to serve a proposed residential development project known as Village Greet located off Great Road in Littleton, Massachusetts. The proposed development consists of rental apartments, townhouses, and single family detached residences generating a design flow of 55,000 gallons per day (gpd).

The proposed wastewater treatment facility (WWTF) consists of: two 15,000 gallon pre-treatment tanks in series, 19,000 gallon duplex-pump flow equalization tank, two 5,500 gallon pre-anoxic tanks in parallel, two 8,800 gallon aerobic tanks in parallel, and a single membrane storage tank with two GE Zenon ® ZeeWeed 500a membrane cassettes. After filtration and disinfection effluent is discharged to the soil absorptions system utilizing pressure distribution via a 15,000 gallon duplex pump chamber. Wastewater generated by the project shall flow to the WWTF via privately owned sewer collection system comprised of 6" gravity sewers and individually owned grinder pumps for the single family detached housing units.

MassDEP has determined that the application complies with MassDEP guidelines and engineering practices. As part of the permit application, MassDEP received the following:

1. Design Report for Wastewater Treatment Facility BRP-WP 79 Application for 15 Great Road LLC, Village Green WWTF, Littleton, Massachusetts” prepared by On-Site Engineering, Inc., revised May 28, 2013.
2. Stamped engineering plans titled: “15 Great Road LLC, Onsite Wastewater Treatment Facility, Littleton, Massachusetts” prepared by On-Site Engineering, revised May 2013.
3. Stamped engineering plans titled: “Village Green WWTF and Groundwater Discharge Project” prepared by Tighe & Bond, Inc., stamped 10/10/13.

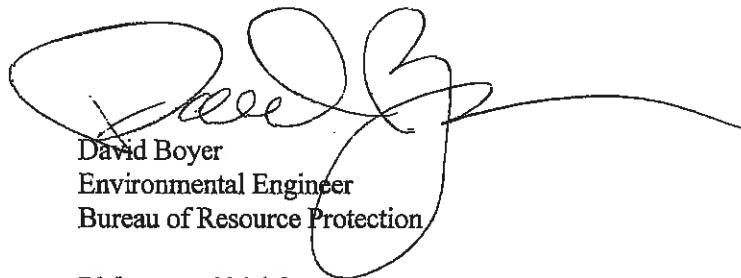
4. Stamped engineering plans titled: Village Green Apartments DEP Groundwater Discharge Permit Application at 15 Great Road, Littleton, Massachusetts" prepared by Places Associates, Inc., stamped 5/24/13.
5. Ownership documents titled: "Access and Cross Easement Agreement."

Enclosed for your review is a draft discharge permit (GW #936-0) containing specific conditions developed for this discharge. The enclosed document should be considered a draft only, because of provisions in the law requiring public notice of the Department's intent to issue the permit, and providing opportunity for public comments and/or public hearing.

Please notify this office in writing within fourteen (14) days whether the permit terms and conditions are acceptable. If notified that the terms are acceptable, the Department will issue you a public notice for publication in a newspaper of general circulation in the municipality where the facility is located. Once this office has received verification that the notice has been published, it shall commence the mandatory public comment period. Following review of any comments received the Department may determine to hold a public hearing on this permit. Upon completion of the public comment process, MassDEP will issue a final determination to either issue or deny the permit.

If you have any questions or would like to discuss the draft permit, please contact me at (508) 767-2823.

Sincerely,



David Boyer
Environmental Engineer
Bureau of Resource Protection

Db/hs: gw 936 drft cvr-158
Cc: Littleton Board of Health

Onsite Engineering, Inc.
279 West Central Street
PMB 241
Franklin, MA 02038

Tighe & Bond, Inc.
446 Main Street
Worcester, MA 01608

Susan Carter
Places Associates, Inc.
510 King Street, Suite 9
Littleton, MA 01460



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INDIVIDUAL GROUNDWATER DISCHARGE PERMIT

Name and Address of Applicant: Fifteen Great Road LLC

Date of Application: March 11, 2013

Application/Permit No.: 936-0

Date of Issuance: DRAFT

Date of Expiration: DRAFT

Effective Date: DRAFT

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AUTHORITY FOR ISSUANCE

Pursuant to authority granted by Chapter 21, Sections 26-53 of the Massachusetts General Laws, as amended, 314 CMR 2.00, and 314 CMR 5.00, the Massachusetts Department of Environmental Protection (the Department or MassDEP) hereby issues the following permit to: Fifteen Great Road LLC (hereinafter called "the permittee") authorizing discharges to the ground from the on site wastewater treatment facility located at a development project known as Village Green located off Great Road in Littleton, Massachusetts. The project consists of rental apartments and townhouses located on Magnolia Way, Lilac Drive, Boxwood Circle, Azalea Drive, Holly Lane and Blueberry Lane; and single family detached homes (Lots 1 through 21 on McIntosh Lane and Lots 56-A, 25-B, and 20-B on Grist Mill Road) for a total 498 bedrooms and a retail management office such authorization being expressly conditional on compliance by the permittee with all terms and conditions of the permit hereinafter set forth.

[Signature & Title]

[Date]

I. SPECIAL CONDITIONS

A. Effluent Limits

The permittee is authorized to discharge into the ground from the wastewater treatment facilities for which this permit is issued a treated effluent whose characteristics within one month of startup and continuing thereafter shall not exceed the following values:

<u>Effluent Characteristics</u>	<u>Discharge Limitations</u>
<u>Flow</u>	<u>55,000 gpd</u>
<u>Biochemical Oxygen Demand (BOD₅)</u>	
<u>(5 Day at 20°C)</u>	<u>30 mg/l</u>
<u>Total Suspended Solids (TSS)</u>	<u>30 mg/l</u>
<u>Nitrate Nitrogen</u>	<u>10 mg/l</u>
<u>Total Nitrogen (NO₂ + NO₃ + TKN)</u>	<u>10 mg/l</u>
<u>Oil & Grease</u>	<u>15 mg/l</u>

- a) The pH of the effluent shall not be less than 6.5 nor greater than 8.5 at any time or not more than 0.2 standard units outside the naturally occurring range.
- b) The discharge of the effluent shall not result in any demonstrable adverse effect on the groundwater or violate any water quality standards that have been promulgated.
- c) The monthly average concentration of BOD and TSS in the discharge shall not exceed 15 percent of the monthly average concentrations of BOD and TSS in the influent into the permittee's wastewater treatment facility.
- d) When the average annual flow exceeds 80 percent of the permitted flow limitations, the permittee shall submit a report to the Department describing what steps the permittee will take in order to remain in compliance with the permit limitations and conditions, inclusive of the flow limitations established in this permit.

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B. Monitoring and Reporting

1) The permittee shall monitor and record the quality of the influent and the quality and quantity of the effluent prior to discharge to the leaching facilities according to the following schedule and other provisions:

INFLUENT:

<u>Parameter</u>	<u>Minimum Frequency of Analysis</u>	<u>Sample Type</u>
<u>BOD₅</u>	<u>Monthly</u>	<u>24-Hr. Composite</u>
<u>TSS</u>	<u>Monthly</u>	<u>24-Hr. Composite</u>
<u>pH</u>	<u>Daily</u>	<u>Grab</u>
<u>Ammonia Nitrogen</u>	<u>Monthly</u>	<u>24-Hr. Composite</u>

EFFLUENT:

<u>Parameter</u>	<u>Minimum Frequency of Analysis</u>	<u>Sample Type</u>
<u>Flow</u>	<u>Daily</u>	<u>Max., Min., Avg.</u>
<u>pH</u>	<u>Daily</u>	<u>Grab</u>
<u>UV Intensity</u>	<u>Continuous</u>	<u>Reading</u>
<u>BOD₅</u>	<u>Monthly</u>	<u>24-Hr. Composite</u>
<u>TSS</u>	<u>Monthly</u>	<u>24-Hr. Composite</u>
<u>Nitrate Nitrogen</u>	<u>Monthly</u>	<u>24-Hr. Composite</u>
<u>Total Nitrogen</u> <u>(NO₂ + NO₃ + TKN)</u>	<u>Monthly</u>	<u>24-Hr. Composite</u>
<u>Fecal Coliform</u>	<u>Monthly</u>	<u>Grab</u>
<u>Oil & Grease</u>	<u>Quarterly</u>	<u>Grab</u>
<u>Total Phosphorus* (as P)</u>	<u>Quarterly</u>	<u>Grab</u>
<u>Orthophosphate* (as P)</u>	<u>Quarterly</u>	<u>Grab</u>
<u>Volatile Organic Compounds</u> <u>(US EPA Method #624)</u>	<u>Annually</u>	<u>Grab</u>

* After one full year of monitoring the Total Phosphorus and Orthophosphate results, the Department may determine, upon the request of the permittee, that the frequency of monitoring may be reduced if, in the judgment of the Department, the results of the sampling indicate that existing phosphorus levels will not adversely impact downgradient receptors. If the Department reduces the frequency of monitoring for Total Phosphorus and Orthophosphate, the Department reserves the right to resume more frequent monitoring if the Department determines that phosphorus levels are impacting downgradient receptors.

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2) The permittee shall install the approved monitoring wells at least 90 days prior to treatment facility start-up. The permittee shall install the upgradient monitoring well(s) MW-2 and the downgradient monitoring wells MW-4 and MW-5 as shown on the approved plan entitled "Village Green Hydrogeologic Report", prepared by Tighe & Bond and dated January 2012. Labels identifying each monitoring well's identification in accordance with the above-referenced approved plan shall be affixed to the steel protective casing of each monitoring well.

The permittee shall monitor, record, and report the quality of water in the approved monitoring wells according to the following schedule and other provisions:

<u>Parameter</u>	<u>Minimum Frequency of Analysis</u>
pH	Monthly
Static Water Level*	Monthly
Specific Conductance	Monthly
Nitrate Nitrogen	Quarterly
Total Nitrogen($\text{NO}_2 + \text{NO}_3 + \text{TKN}$)	Quarterly
Total Phosphorus** (as P)	Quarterly
Orthophosphate** (as P)	Quarterly
Volatile Organic Compound US EPA Method #624)	Annually

* Static Water Level shall be expressed as an elevation and shall be referenced to the surveyed datum established for the site. It shall be calculated by subtracting the depth to the water table from the surveyed elevation of the top of the monitoring well's PVC well casing/riser.

** After one full year of monitoring the Total Phosphorus and Orthophosphate results, the Department may determine, upon the request of the permittee, that the frequency of monitoring may be reduced if, in the judgment of the Department, the results of the sampling indicate that existing phosphorus levels will not adversely impact downgradient receptors. If the Department reduces the frequency of monitoring for Total Phosphorus and Orthophosphate, the Department reserves the right to resume more frequent monitoring if the Department determines that phosphorus levels are impacting downgradient receptors.

3) Any grab sample or composite sample required to be taken less frequently than daily shall be taken during the period of Monday through Friday inclusive. All composite samples shall be taken over the operating day.

The permittee shall submit all monitoring reports within 30 days of the last day of the reporting month. Reports shall be on an acceptable form, properly filled and signed and shall be sent to: the Deputy Regional Director, Bureau of Resource Protection, Department of Environmental Protection, Central Regional Office, 627 Main Street, Worcester, MA 01608, and to the

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Department of Environmental Protection, Bureau of Resource Protection, Wastewater Management Program, One Winter Street/5th Floor, Boston, MA 02108, and to the Littleton Board of Health, P.O. Box 1305, Littleton, MA 01460.

Submission of monitoring reports in electronic format is available through eDEP and serves as data submission to both the Regional and Boston offices. To register for electronic submission go to: <http://www.mass.gov/dep/service/compliance/edeponlf.htm>

C. Financial Assurance Mechanisms

(1) a) The permittee shall establish and maintain a financial assurance mechanism that provides for the continued availability of an immediate repair and replacement account to be used by the permittee solely for the immediate repair and replacement of any failing components of the PWT. To create an immediate repair and replacement account, the permittee shall deposit at least 15% of the estimated construction cost of the PWT into an interest bearing escrow account in accordance with the financial assurance mechanism and 314 CMR 5.15.

b) The permittee shall also establish and maintain a financial assurance mechanism in accordance with 314 CMR 5.15 that provides for the accumulation in a capital reserve account of sufficient funds to make any necessary modifications to the PWT and other related equipment within twenty years from the date the PWT commenced operation or such other period determined to be appropriate by the Department based on the age and condition of the PWT. The financial assurance mechanism shall provide for the accumulation in the capital reserve account of an amount equal to at least 25% of the estimated construction cost of the PWT.

c) On or before January 31st of each year, the permittee shall submit an annual financial report identifying the initial and current balances in the immediate repair and replacement account and the capital reserve account and confirming the continuing availability of the funds in said account for the purposes specified in the permit and 314 CMR 5.15. Said report shall be prepared in accordance with generally accepted accounting principles. Reports pertaining to the required financial assurance mechanism(s) shall be sent to the Wastewater Management Section Chief at the appropriate Regional Office

(2) The permittee shall meet the obligation to establish all required financial assurance mechanisms by using Department-approved form documents and shall submit said Department-approved form documents to the Department for its review and approval as follows:

a) A permittee that constructs the wastewater treatment facility after the issuance of the Individual permit may submit the financial assurance mechanism(s) to the Department for its review and approval no later than ninety (90) days prior to the start-up of the facility. Such a permittee shall not operate the facility unless and until

the Department has approved the required financial assurance mechanism(s), the financial assurance mechanisms are in full force and effect, and the permittee has made all contributions required thirty (30) days prior to the start-up of the facility.

b) A permittee with a wastewater treatment facility in existence prior to the submission of the individual permit renewal application may submit the financial assurance mechanisms to the Department for its review and approval no later than ninety (90) days from the date of submission of the individual permit renewal application. Said permittee shall be in compliance with the provision of each approved financial assurance mechanism requiring contributions to the immediate repair and replacement account and the capital reserve account no later than thirty (30) days prior to the date on which the renewal is issued.

(3) The permittee shall maintain the current form documents evidencing all required financial assurance mechanisms approved by the Department. The permittee shall perform all its obligations under the required financial assurance mechanisms as approved by the Department.

(4) For purpose of the financial assurance mechanism requirement, the estimated construction cost of the wastewater treatment facility shall include the cost of constructing the wastewater treatment plant, collection system, associated mechanical equipment, but not including the land, ground and disposal area.

D. Supplemental Conditions

- 1) The permittee shall notify the Department at least thirty (30) days in advance of the proposed transfer of ownership of the facility for which this permit is written. Said notification shall include a written agreement between the existing and new permittees containing a specific date for transfer of permit, responsibility, coverage and liability between them.
- 2) A staffing plan for the facility shall be submitted to the Department once every two years and whenever there are staffing changes. The staffing plan shall include the following components:
 - a) The operator(s)'s name(s), operator grade(s) and operator license number(s);
 - b) The number of operational days per week;
 - c) The number of operational shifts per week;
 - d) The number of shifts per day;
 - e) The required personnel per shift;
 - f) Saturday, Sunday and holiday staff coverage;
 - g) Emergency operating personnel
- 3) The permittee is responsible for the operation and maintenance of all sewers, low pressure force mains, pump stations, and treatment units for the permitted facility, which shall be operated and maintained under the direction of a properly certified wastewater

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operator. The permittee shall have access to all individual grinder pumps for the single family lots on McIntosh Lane and/or Grist Mill Road for repair and replacement if needed. The permittee shall have on site a fully operational portable backup generator for connection to grinder pumps in the event of a power outage.

- 4) Operation and maintenance of the proposed facility must be in accordance with 314 CMR 12.00, "Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Discharges", and, 257 CMR 2.00, "Rules and Regulations for Certification of Operators of Wastewater Treatment Facilities".
 - a) The facility has been rated (in accordance with 257 CMR 2.00), to be a Grade _____ facility. Therefore, the permittee shall provide for oversight by a Massachusetts Certified Wastewater Treatment plant operator (Chief Operator) Grade _____ or higher. The permittee will also provide for a backup operator who shall possess at least a valid Grade _____ license.
 - b) The date and time of the operator's inspection along with the operator's name and certification shall be recorded in the log book on location at the treatment facility. All daily inspection logs consistent with the O&M Manual requirements shall be kept at the facility for a period of three (3) years.
 - c) Records of operation of wastewater treatment facilities or disposal systems required by the Department shall be submitted on forms supplied by the Department or on other forms approved by the Department for such use. Monthly reports shall be certified by the wastewater treatment plant operator in charge and shall be included in the discharge monitoring reports submitted each month.
- 5) If the operation and maintenance of the facility is to be contracted to a private concern, the permittee shall submit a copy of the contract, consistent with what is required by the approved Operation & Maintenance manual and signed only by the contractor, to the appropriate MassDEP Regional Office for review and approval ninety (90) days prior to the start up of the facility. Along with the contract, a detailed listing of all contract operation obligations of the proposed contractor at other facilities shall also be submitted. The permittee shall not begin operation of the treatment facility until the Department approves the contract.
- 6) Any additional connections to the sewer system, beyond the 48 1-bedroom apartments, 142 2 or 3-bedroom townhouses, 24 single family lots of 3 and 4 bedrooms (total bedroom count = 498) and a management office shall be approved by MassDEP and the local Board of Health prior to the connection.
- 7) All tests or analytical determinations to determine compliance with permit standards and requirements shall be done using tests and procedures found in the most recent version of *Standard Methods for the Examination of Water and Wastewater* and shall be performed by a Massachusetts Certified laboratory.

8) The permittee shall notify the appropriate MassDEP Regional Office, in writing, within thirty (30) days of the following events:

- a) The date of treatment plant start up.
- b) Any interruption of the treatment system operation, other than routine maintenance.
- c) Final shutdown of the treatment system.

9) The permittee shall contract to have any and all solids and sludges generated by the treatment system for which this permit is issued removed off site by a properly licensed waste hauler for disposal at an EPA/MassDEP approved facility. The name and license number of the hauler along with the quantity of wastes removed and the date(s) of removal shall be reported by the permittee in writing to the appropriate MassDEP Regional Office.

10) Simultaneously with the permit renewal application at year fifteen (calendar year 2028) following the initiation of plant operations, the permittee shall submit two reports to the Department for its review and approval:

- a. An engineering report, prepared by a registered professional engineer, that outlines in sufficient detail what modifications (if any) to the facility or other changes are required to insure that the facility can remain in compliance with its GWDP and other applicable requirements through the next 5 year permit term (year 2033) and beyond; and
- b. A financial plan that contains the cost estimates for implementing the facility modifications or other changes identified in the engineering report, and describes and demonstrates, how and when the permittee will finance the needed facility modifications or other changes.

11) In the event that effluent limits are not met, or the discharge is determined to impair groundwater quality in accordance with 314 CMR 5.16(1), the permittee may be obligated to modify, supplement or replace the permitted treatment process so as to ensure that the discharge does not impair the ability of the groundwater to act as an actual or potential source of potable water.

E. Appeal Rights

During the thirty (30) day period following issuance of this permit, a Notice of Claim for an Adjudicatory Appeal may be sent by any person aggrieved (the "Petitioner") by the issuance to:

Case Administrator
Office of Appeals and Dispute Resolution
Department of Environmental Protection
One Winter Street/2nd Floor
Boston, MA 02108

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310 CMR 1.01(6)(b) requires the Notice of Claim to: include sufficient facts to demonstrate aggrieved person status; state the facts which are grounds for the appeal specifically, clearly and concisely; and, state relief sought. The permit shall become or remain effective at the end of the 30 day appeal period unless the person filing the Notice of Claim requests, and is granted, a stay of its terms and conditions. If a permit is modified under 314 CMR 2.10, only the modified terms and conditions may be subject to an Adjudicatory Appeal. All other aspects of the existing permit shall remain in effect during any such Adjudicatory Appeal.

Per 310 CMR 4.06, the hearing request to the Commonwealth will be dismissed if the filing fee is not paid. Unless the Petitioner is exempt or granted a waiver, a valid check payable to the Commonwealth to Massachusetts in the amount of \$100.00 must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

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The filing fee is not required if the Petitioner is a city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority effective January 14, 1994, or any municipal housing authority; or, per MGL 161A s. 24, the Massachusetts Bay Transportation Authority. The Department may waive the adjudicatory hearing filing fee for a Petitioner who shows that paying the fee will create an undue financial hardship. A Petitioner seeking a waiver must file, along with the hearing request, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

