



# *The Commonwealth of Massachusetts*

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February 10, 2006

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS  
ON THE  
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME: Carriage Hill  
PROJECT MUNICIPALITY: Merrimac  
PROJECT WATERSHED: Merrimack  
EOEA NUMBER: 13706  
PROJECT PROPONENT: Toll Brothers, Inc.  
DATE NOTICED IN MONITOR: January 11, 2006

Pursuant to the Massachusetts Environmental Policy Act (G.L. c. 30, ss. 61-62H) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **requires** the preparation of an Environmental Impact Report (EIR).

### Project Description

As described in the Environmental Notification Form (ENF), the project proposes the construction of a 216-unit townhouse development with associated site improvements on an approximately 77.46 acre site on East Main Street/Route 110 in Merrimac. The project is being proposed under the state's Comprehensive Permit framework (Chapter 40B). The development will also include a clubhouse and pool; 432 garage parking spaces; 96 surface road parking spaces; 36 clubhouse parking spaces and 14 handicapped parking spaces; landscaping; utility services; drainage improvements; and a paved wetlands crossing for the main entrance into the complex and a sewer main. The water supply and sewage discharge line are proposed to be connected to municipal utility services available at the site. Access to the development will be via a divided driveway to be located on the north side of East Main Street. The project is anticipated to generate 1,780 new daily vehicle trips.

### Jurisdiction and Project Review

The project is undergoing environmental review and is subject to the preparation of a mandatory EIR pursuant to Sections 11.03(1)(a)(2), 11.03(1)(b)(1), 11.03(2)(b)(2), 11.03(3)(b)(1)(d) and 11.03 (6)(b)(14) of the MEPA regulations because the project proposes the creation of more than ten acres of impervious surface; the project will alter more than 25 acres of land; the project may result in a "take" of a state-listed rare species in accordance with M.G.L. c. 131A; the project proposes the alteration of more than 5,000 square feet (sf) of Bordering Vegetated Wetlands (BVW); and because the project will result in the generation of more than 1,000 new daily vehicle trips and require the construction of more than 150 new parking spaces.

The project will require a National Pollutant Discharge and Elimination System (NPDES) Construction General Permit from the U.S. Environmental Protection Agency (EPA); a 401 Water Quality Certificate and Sewer Connection/Extension Permit from the Department of Environmental Protection (DEP); possibly a Conservation and Management Permit from the MA Division of Fisheries and Wildlife (DFW) Natural Heritage and Endangered Species Program (NHESP); an Access Permit from the Massachusetts Highway Department (MHD); an Order of Conditions (OOC) from the Merrimac Conservation Commission (and hence a Superceding OOC from the DEP if the local Order is appealed); and a Comprehensive Permit from the Merrimac Zoning Board of Appeals (ZBA).

Because the proponent is not seeking financial assistance from the Commonwealth for the project, and because the project has already received a Comprehensive Permit from the Merrimac ZBA, and therefore will not require approval from the Housing Appeals Committee (HAC), MEPA jurisdiction is limited to the subject matter of required or potentially required state permits. In this case, MEPA jurisdiction extends to issues of land alteration, drainage, rare species, wetlands, wastewater and transportation.

## **SCOPE**

### General

The DEIR should follow the general guidance for outline and content contained in Section 11.07 of the MEPA regulations, as modified by this Scope. The DEIR should include a copy of this Certificate and a copy of each comment received. The proponent should circulate the DEIR to those parties that commented on the ENF, to the Town of Merrimac, to any state agencies from which the proponent will seek permits or approvals, and to any parties specified in Section 11.16 of the MEPA regulations. A copy of the DEIR should be made available for public review at the Merrimac Public Library.

### Project Description and Permitting

The DEIR should include a thorough description of the project, including a detailed description of construction methods and phasing. The DEIR should include a brief description of each state permit or agency action required or potentially required, and should demonstrate that

the project will meet applicable performance standards. In accordance with Executive Order No. 385, "Planning for Growth" and Section 11.03 (3)(a) of the MEPA regulations, the DEIR should discuss the consistency of the project with the local and regional growth management and open space plans. The proponent should also provide an update on the local permitting process for the project. Finally, the DEIR should take into consideration the Department of Housing and Community Development's (DHCD) Guidelines for Project Consistency with the Commonwealth's Sustainable Development Principles.

### Alternatives

The DEIR requires a comprehensive alternatives analysis in order to ascertain which site layout minimizes overall impacts to land, open space, wetlands, rare species and sensitive receptors. The alternatives analysis should clearly demonstrate consistency with the objectives of MEPA review, one of which is to document the means by which the proponent plans to avoid, minimize or mitigate Damage to the Environment to the maximum extent feasible. The DEIR should fully explain any trade-offs inherent in the alternatives analysis, such as increased impacts on some resources to avoid impacts to other resources.

The alternatives analysis should include a no-build alternative that will establish baseline conditions and serve as a basis to evaluate potential impacts of the proposed project and other alternatives, and to develop appropriate mitigation. In addition, the DEIR should propose a more clustered type of housing development; and a reduced-build scenario that would minimize environmental impacts, and would address issues related to the capacity of the Town of Merrimac's drinking water and wastewater systems. I strongly encourage the proponent to consider alternatives that will reduce impervious area, impacts to wetlands and, based on the results of required habitat assessments, impacts to rare species.

The DEIR should evaluate any additional alternatives required by the state permitting processes. An alternatives analysis is required as part of the 401 Water Quality Certificate to be issued by DEP. The proposed 65-foot wide roadway will result in more than 11,000 sf of BVW impact. In consideration of alternatives that reduce wetland impacts, the proponent should evaluate a narrower roadway alternative. The proponent should note that the 401 regulations at 314 CMR 9.06(3)(e) presume that a span is practicable to avoid and minimize wetland impacts greater than 5,000 sf. Accordingly, the DEIR should evaluate a bridge alternative across the wetland.

The ENF describes a residential development that will increase site imperviousness to approximately 24 percent. The site plan should be reconsidered and redesigned where possible to take advantage of opportunities to reduce impervious areas. Because soil capacity to infiltrate runoff in the unpaved areas of the site has not been demonstrated, and may be limited, the objective should be to hold imperviousness to a minimum in order to preserve existing infiltration as much as possible. Similarly, given the important wetland and rare species habitat on the site, the proponent should consider alternative building configurations that could leave a portion of the upland area adjacent to Cobbler's Brook undisturbed.

### Land Alteration/Drainage

The project as described in the ENF will result in the creation of approximately 18.6 acres of new impervious surface at the site. The project site lies within the Town of Merrimac's watershed protection district. The parcel also contains wetlands which are tributary to Lake Attitash, an outstanding resource water (ORW) and a surface water supply reservoir that serves the entire region. Therefore, it is important that the project's stormwater management system provides the highest practicable level of treatment so as not to adversely impact groundwater in the area.

The ENF states that the stormwater management system for the proposed development has been designed in accordance with the DEP's Stormwater Management Standards. Best Management Practices (BMPs) including detention basins, catch basins with hoods and sumps and a subsurface piping network have been incorporated into the project design. The DEIR should provide more information on the stormwater management system including drainage calculations, pre and post construction run off rates and a detailed description of BMPs. The proponent should provide justification for the size of the proposed detention basins in the DEIR. Details concerning the assumptions used in designing the stormwater system, test pit evaluations within the stormwater basin indicating groundwater elevation, and sufficient information to demonstrate that the system meets DEP's Stormwater Management Policy should be included in the DEIR. The DEIR should also provide more information to demonstrate that the project conforms to the critical area standard where stormwater discharges to a stream Cobbler's Brook, which is a tributary to Lake Attitash.

The DEIR should contain a draft of the stormwater management plan. It should discuss whether the internal roads will be conveyed to the Town, and what entity will be responsible for the ongoing operation and maintenance of structural BMPs. If the roads will be maintained by the proponent, the stormwater management plan should include internal roadway sweeping, catch basin cleaning and snow removal.

To ensure that site drainage can be adequately accommodated onsite, the DEIR should contain a comprehensive drainage analysis of the state highway culverts. The proponent should make every effort possible to redirect, retain and infiltrate all stormwater discharge onsite.

I encourage the proponent to consider LID techniques in site design and storm water management plans. LID techniques incorporate stormwater best management practices (BMPs) and can reduce impacts to land and water resources by conserving natural systems and hydrologic functions. The primary tools of LID are landscaping features and naturally vegetated areas, which encourage detention, infiltration and filtration of stormwater on-site. Other tools include water conservation and use of pervious surfaces. Clustering of buildings is an example of how LID can preserve open space and minimize land disturbance. LID can also protect natural resources by incorporating wetlands, stream buffers, and mature forests as project design features. For more information on LID, visit <http://www.mass.gov/envir/lid/>. Other LID resources include the national LID manual (Low Impact Development Design Strategies: An Integrated Design Approach), which can be found on the EPA website at: <http://www.epa.gov/owow/nps/lid/>.

### Rare Species

A portion of the project site is located within Estimated & Priority Habitat of Rare Species as indicated in the Massachusetts Natural Heritage Atlas, 11<sup>th</sup> Edition. This area has been delineated as habitat for the Blanding's Turtle (*Emydoidea blandingii*) and Blue-spotted salamander (*Ambystoma laterale*), which are both state-listed rare species. Two additional state-listed rare species, the Eastern Box Turtle (*Terrapene carolina*) and the Spotted Turtle (*Clemmys guttata*) have been documented to occur nearby, but have not been documented to occur within this Estimated & Priority Habitat.

NHESP has requested that the proponent conduct a Blue-spotted salamander and Blanding's Turtle habitat assessment. Guidelines for the habitat assessment can be found in NHESP's comment letter on the ENF and at <http://www.nhesp.org>. The assessment will be used to determine if the proposed work will result in a prohibited "take" of state-listed rare species, pursuant to the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). A project resulting in a "take" may only be permitted if it meets the performance standards for a Conservation and Management Permit (321 CRM 10.23). Alternatively, it may be possible based on habitat assessment, to design the project to avoid a "take".

In addition, NHESP has stated that Cobbler Brook is a coldwater resource that provides habitat to the native brook trout (*Salvelinus fontinalis*). The DEIR should present a discussion of how the proponent will ensure that the project does not diminish the ability of the brook to support cold water fish species.

The proponent should continue to coordinate with NHESP with regard to the habitat assessments. The DEIR should describe all impacts to habitat of state-listed rare species and demonstrate compliance with the MESA. The results of all habitat assessments and field surveys, in addition to plans for the long-term management of the habitat on site and any relevant communication with the NHESP, should be included in the DEIR.

### Wetlands

Resource areas on the project site include an intermittent stream, BVW located to the south and east of the proposed development, two Isolated Wetlands on the northern portion of the site, and a perennial stream located on the eastern portion of the site. The project includes work within the 100-foot buffer zone to BVW, the filling of isolated non-jurisdictional wetlands, and the filling of 11,464 sf of BVW for primary access under a Limited Project. A stormwater detention basin will be installed within the outer riparian zone in the Riverfront Area. The proponent intends to file a Notice of Intent with the Merrimac Conservation Commission for the proposed work.

The DEIR should include plans that clearly delineate all applicable resource area boundaries on the project site including Riverfront Areas, buffer zones, 100-year flood elevations, priority and/or estimated habitat, and the delineation of the Mean Annual High Water

Line on all perennial rivers. The DEIR should quantify the project's estimated impact on each resource area. It should describe the nature of all likely impacts that cannot be avoided, including crossings, grading, overstory clearing and construction-related disturbances and whether they are temporary or permanent in nature. The proponent should also explain how the project would comply with the performance standards in the wetlands regulations and demonstrate that the alteration of resource areas has been avoided and minimized.

The project will require a 401 Water Quality Certificate for impacts to BVW and isolated vegetated wetland, pursuant to 314 CMR 9.04(1). The proponent should provide a description of the isolated vegetated wetland resources on site and a quantification of the extent of unavoidable wetland alteration. The proponent should note comments from DEP with regard to the alternatives analysis that will be required as part of the 401 Water Quality Certificate review.

The proponent has indicated that the project will provide 22,927 sf of wetlands replication. A detailed wetlands replication plan should be provided in the EIR which, at a minimum, should include: replication location(s); elevations; typical cross sections; test pits or soil boring logs; groundwater elevations; the hydrology of areas to be altered and replicated; list of wetlands plant species of areas to be altered and the proposed wetland replication species; planned construction sequence; and a discussion of the required performance standards and long-term monitoring.

### Drinking Water

The project is anticipated to require 66,330 gpd of drinking water. The proponent should clarify how it arrived at its estimated potable water demand. In its comments on the ENF, DEP states that an Administrative Consent Order (ACO) has been issued to the Town of Merrimac because from 1999 to 2003 the Town exceeded its Water Management Act (WMA) registered volume of 0.36 million gallons per day (MGD) by more than 100,000 gallons. DEP has stated that the existing capacity of the water infrastructure in the Town of Merrimac appears to be inadequate to support the needs of this project, and that as a result, the project may not be permissible.

The DEIR should evaluate and commit to implementing all practicable measures to reduce the potable water requirements of the project. The proponent should include documentation in the DEIR from the Merrimac Water Department indicating that there is adequate hydraulic capacity to provide safe drinking water to the proposed project area at the anticipated post development demand flow. The DEIR must adequately demonstrate to MEPA and DEP that there is sufficient capacity in the municipal water system, and that the increased demand resulting from the proposed project will not adversely impact the system or result in negative impacts in other parts of Merrimac. If the proponent cannot demonstrate this, the DEIR should discuss other means for providing drinking water to the project.

The DEIR should include more information on the boundaries of the Town's watershed protection district, and discuss and show on plans those portions of the project that will be within the Zone A and Zone B districts. The DEIR should also discuss the project's landscape irrigation needs and the proposed location of private wells on the site for irrigation water.

### Wastewater

The projected 66,330 gpd of wastewater for the project will be connected to the municipal sewer system to be treated at the Town of Merrimac's wastewater treatment plant (WWTP). The proponent should provide justification for its anticipated wastewater flow. The project will require a Sewer Extension/Connection Permit from DEP. DEP has also indicated serious concern that there is insufficient capacity in the municipal system to treat the proposed wastewater flows. Merrimac's WWTP has exceeded its permitted, twelve-month rolling average of 0.45 million gpd during the past year. The proposed Carriage Hill project would have a significant impact on that facility; wastewater generated by the project is equivalent to about 15 percent of the facility's design flow.

The DEIR should evaluate and commit to implementing all practicable measures to reduce the wastewater flows from the project. The proponent should provide documentation in the DEIR from the Town of Merrimac indicating that there is adequate capacity in the wastewater system to accommodate the increase in flow from the proposed project. The DEIR must adequately demonstrate to MEPA and DEP that there is sufficient capacity in the municipal sewer system, and that the increased demand resulting from the proposed project will not adversely impact the system or result in negative impacts in other parts of Merrimac. If the proponent cannot demonstrate this, the DEIR should discuss other means of treating the wastewater generated by the project. The DEIR should also discuss how the project will meet the applicable performance standards of the required DEP wastewater permit.

As part of the project's Comprehensive Permit, the proponent has committed to providing sewer mitigation in the form of infiltration/inflow (I/I) removal on Shore Road and Bison Street. The proponent will provide improvements to result in the removal of 40,000 gpd of I/I. The DEIR should provide more detailed information on the I/I removal plan and note comments from DEP that recommend I/I removal at at least a 1:1 ratio. The proponent should clarify how the success of the I/I removal will be measured and monitored.

### Transportation

The proposed development will result in 1,780 new daily vehicle trips. Access to the development will be via a divided driveway to be located on the north side of East Main Street, and the project will require a Mass Highway permit for access to East Main Street/Route 110. The proponent conducted a transportation study as part of the project's review by the Town of Merrimac's Comprehensive Permit. The DEIR should include the traffic study, which should be prepared in conformance with the Executive Office of Environmental Affairs/Executive Office of Transportation and Construction Guidelines for EIR/EIS Traffic Impact Assessments, and should identify appropriate mitigation measures for areas on Route 110 where the project will have an impact on traffic operations.

The DEIR should provide capacity analyses and a summary of average and 95<sup>th</sup> percentile vehicle queues for each intersection within the study area. At a minimum, the traffic

study should analyze the Route 110 corridor, from the site drive to the limit of the state highway at School Street and include the Route 110/Broad Street intersection.

The proponent should provide a clear commitment to implement mitigation measures and should describe the timing of their implementation based on the construction of the project. The DEIR should include conceptual plans for the proposed roadway improvements that should be of sufficient detail to verify the feasibility of constructing such improvements. In its comment letter on the ENF, MHD states that the Town of Merrimac has expressed interest in making improvements to the town center. Accordingly, the proponent should make every effort to work with the town to examine traffic operations and development alternatives for future improvements.

The proponent has committed to Transportation Demand Management (TDM) measures in the form of posting information and schedules onsite regarding the Merrimac Valley Regional Transportation Authority Commuter Rail Haverhill/Reading line. In addition, the DEIR should include a commitment from the proponent to coordinate with the Town of Merrimac toward the development of a pedestrian mitigation plan, including the installation or reconstruction of sidewalk connections from the site to the town center.

### Sustainable Design

The proponent should evaluate sustainable design alternatives that can serve to avoid or minimize potential environmental impacts. Such alternatives may also reduce project development and long-term operational costs. The DEIR should discuss sustainable design alternatives evaluated by the proponent and describe measures proposed to avoid and minimize environmental impacts.

I encourage the proponent to consider high-performance/green building and other sustainable design measures to avoid and minimize environmental impacts. Such measures may include:

- Leadership in Energy and Environmental Design (LEED) certification;
- water conservation and reuse of wastewater and stormwater;
- use of renewable energy;
- ecological landscaping;
- optimization of natural day lighting, passive solar gain, and natural cooling;
- an annual audit program for energy and water use, and waste generation;
- energy-efficient Heating, Ventilation and Air Conditioning (HVAC), lighting systems, and appliances, and use of solar preheating of makeup air;
- use of building supplies and materials that are non-toxic, made from recycled materials, and made with low embodied energy;
- incorporation of an easily accessible and user-friendly recycling system infrastructure into building design; and
- implementation of a solid waste minimization and recycling plan.



In addition, I encourage the proponent to consider LID techniques in site design and storm water management plans. LID techniques incorporate stormwater best management practices (BMPs) and can reduce impacts to land and water resources by conserving natural systems and hydrologic functions. The primary tools of LID are landscaping features and naturally vegetated areas, which encourage detention, infiltration and filtration of stormwater on-site. Other tools include water conservation and use of pervious surfaces. Clustering of buildings is an example of how LID can preserve open space and minimize land disturbance. LID can also protect natural resources by incorporating wetlands, stream buffers, and mature forests as project design features. For more information on LID, visit <http://www.mass.gov/envir/lid/>. Other LID resources include the national LID manual (Low Impact Development Design Strategies: An Integrated Design Approach), which can be found on the EPA website at: <http://www.epa.gov/owow/nps/lid/>.

### Construction Period Impacts

The DEIR should include a discussion of construction phasing, evaluate potential impacts associated with construction activities, and propose feasible measures to avoid or eliminate these impacts. The proponent must comply with DEP's Solid Waste and Air Quality Control regulations. The proponent should implement measures to alleviate dust, noise and odor nuisance conditions which may occur during the construction activities.

### Mitigation

The DEIR should contain a separate chapter on mitigation measures. It should include a Draft Section 61 Finding for all state permits that includes a clear commitment to mitigation, an estimate of the individual costs of the proposed mitigation, and the identification of the parties responsible for implementing the mitigation. A Draft Letter of Commitment for use by MHD should also be included. The DEIR should provide a schedule for the implementation of the mitigation, based on the construction phases of the project.

### Comments

The DEIR should respond to the comments received from state agencies, local officials and public citizens. The DEIR should present additional narrative and/or technical analysis as necessary to respond to the concerns raised.

February 10, 2006  
Date

  
Stephen R. Pritchard

Comments received:

1/19/2006      Lori Hilts  
1/19/2006      Patricia M. McGinn, Jeffrey C. Morrill & Maggie McGinn-Morrill

1/19/2006 Michael & Lana Mann  
1/19/2006 Nancy Arnette  
1/19/2006 Henry Thomas Nicklas  
1/19/2006 Steven Provencal  
1/19/2006 Dave & Marilyn Dutton  
1/19/2006 Diane C. Dubin & Gregory F. Rahe  
1/19/2006 Janet Terry  
1/19/2006 Cynthia D. Jackson  
1/19/2006 Andrea J. E. Mann  
1/19/2006 Alicia Couturier  
1/19/2006 Robert J. Paradis  
1/19/2006 Ken & Thelma Gibbs  
1/19/2006 Deborah Woodward  
1/19/2006 Nancy Bachelder  
1/19/2006 J. Leonard Bachelder  
1/19/2006 Laura Mailman  
1/19/2006 Dorothy A. Cloyd  
1/19/2006 Joyce Gariepy  
1/19/2006 Susan Miller  
1/19/2006 Daniel P. Healey III  
1/19/2006 Heidi M. Beland  
1/19/2006 Lianne C. Paradis & Alan R. Deuplisea  
1/19/2006 Mr. & Mrs. Dan Russell  
1/19/2006 Rachel A. Healey  
1/19/2006 Scott & Amy Dumas  
1/21/2006 Eleanor Hope-McCarthy  
1/25/2006 Division of Fisheries & Wildlife, Natural Heritage and Endangered Species  
Program  
1/26/2006 Patrick Noore  
1/27/2006 Kendra Bowker  
1/30/2006 Division of Fisheries & Wildlife, Natural Heritage and Endangered Species  
Program  
1/30/2006 Donald J. Bongiovi & Linda C. O'Leary  
1/20/2006 Executive Office of Transportation  
1/31/2006 Department of Environmental Protection, Northeast Regional Office  
1/31/2006 Karen D. McLaughlin  
1/31/2006 Mark R. Meserve  
1/31/2006 Marie Artman  
2/1/2006 Tim Simmons  
2/1/2006 Jon R. Pearson

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