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September 14, 2006

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS  
ON THE  
DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT NAME: Prospect Ridge (formerly Carriage Hill)  
PROJECT MUNICIPALITY: Merrimac  
PROJECT WATERSHED: Merrimack  
EOEA NUMBER: 13706  
PROJECT PROPONENT: Toll Brothers, Inc.  
DATE NOTICED IN MONITOR: July 25, 2006

As Secretary of Environmental Affairs, I hereby determine that the Draft Environmental Impact Report (DEIR) submitted on this project **does not adequately and properly comply** with the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62H) and its implementing regulations (301 CMR 11.00). Therefore, I am requiring that the proponent submit a Supplemental Draft Environmental Impact Report (SDEIR) to address issues outlined in this Certificate.

The proposed project is a large development that will have significant impacts on natural resources and public infrastructure in Merrimac. The DEIR fails to address many of the specific issues that were outlined in the Certificate on the Environmental Notification Form (ENF) and raised in comment letters, and did not provide a meaningful consideration of design alternatives that could result in fewer environmental impacts. Furthermore, the Department of Environmental Protection (MassDEP) has noted in its comments on the ENF and the DEIR that the project as currently proposed is not permissible with regard to its impacts on wetlands, drinking water and wastewater. I cannot allow the project to proceed to the Final EIR stage until these important

issues are resolved. The SDEIR should respond to the items outlined in this Certificate and should respond to all comments submitted on the DEIR.

### Project Description

As described in the DEIR, the project proposes the construction of a 216-unit townhouse development with associated site improvements on an approximately 77.5-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 Permitting

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 requires 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 MassDEP; review by the MA Division of Fisheries and Wildlife (DFW) Natural Heritage and Endangered Species Program (NHESP); an Access Permit from the Massachusetts Highway Department (MassHighway); an Order of Conditions (OOC) from the Merrimac Conservation Commission (and hence a Superceding OOC from MassDEP 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 SDEIR should be prepared in accordance with Section 11.05 of the MEPA regulations as modified by this Certificate. The SDEIR should contain a copy of this Certificate and a copy of each comment received on the DEIR. The SDEIR should respond to all comments received from local and state agencies, and from members of the public, to the extent that the comments are within MEPA subject matter jurisdiction. The SDEIR should present additional narrative and/or technical analysis as necessary to respond to the concerns raised.

The SDEIR should be circulated in compliance with Section 11.16 of the MEPA regulations and copies should be sent to any state agencies from which the proponent will seek permits or approvals, to the list of "comments received" below, and to Merrimac officials. A copy of the SDEIR should be made available for public review at the Merrimac Public Library.

### Alternatives

The Certificate on the ENF required that the proponent conduct a comprehensive alternatives analysis in order to ascertain which site layout minimizes overall impacts to land, open space, wetlands, rare species and sensitive receptors. Specifically, the proponent was required to analyze a reduced build scenario that would address issues related to the capacity of the Town of Merrimac's drinking water and wastewater systems and reduce impervious area and impacts to wetlands. In addition, MassDEP requested that the proponent consider alternative building configurations that could leave a portion of the upland area adjacent to Cobbler's Brook undisturbed.

The proponent's preferred alternative, the "Current Development Plan" presented in the DEIR has reduced some impacts since the submission of the ENF development plan. Specifically:

- The detention/infiltration basins have been reduced in size and infiltration units have been added at each townhouse unit to allow for uniform infiltration of stormwater across the site.
- The northern detention basin has been moved further away from Cobbler's Brook.
- The community center area of impact has been reduced and moved away from the wetland areas, increasing the buffer to these areas.
- The entry boulevard to the site is at grade.
- The cul-de-sac located at the top of the hill has been removed.
- Wetlands impacts have been reduced from 11,000 sf to approximately 8,000 sf.

Despite these proposed changes, the DEIR did not adequately respond to the alternatives analysis requirements in the Certificate on the ENF. In the DEIR, the proponent evaluated the environmental impacts of four alternatives. Each of the four alternatives presented in the DEIR involve 216 residential units. None of the alternatives presented in the DEIR provide any

significant reduction in overall land alteration and impervious area. In developing a genuine reduced build alternative, the proponent should consider alternatives that eliminate certain project components and reduce the overall level of development. I expect the SDEIR to address this issue and provide sufficient data so that the overall impacts of different alternatives can be compared. I encourage the proponent to consider alternative designs that increase clustering, and reduce impervious area and land clearing. The proponent should evaluate Low Impact Development (LID) techniques and describe how LID will be incorporated to promote ecologically-sensitive project design and site planning.

The SDEIR also needs to consider alternatives analyses required as a part of the permitting process. While wetland impacts have been reduced in the Current Development Plan, the proposed wetlands alteration would occur in a resource area that is an Outstanding Resource Water (ORW) for a Public Water Supply. The 401 Water Quality Certificate regulations at 314 CMR 9.06 (3) require that ORW wetlands be bridged or spanned. MassDEP states in its comments on the DEIR that the project as currently proposed is not permissible. The SDEIR should propose an alternative to the proposed wetlands crossing that meets the performance standards of the 401 regulations.

#### Land Alteration/Drainage

The project as described in the DEIR will result in the creation of approximately 18.6 acres of new impervious surface at the site. The SDEIR should clarify discrepancies about impervious coverage at the site in the project description and appendixes to the DEIR. 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.

According to the DEIR, the proposed drainage system will consist of infiltration units located at each townhouse, new catch basins with deep sumps, curbing, drain manholes, detention ponds and associated piping. In the SDEIR, the proponent should respond to MassDEP's request to recharge rooftop runoff separately from the detention basins and nearer to the buildings, to more closely replicate predevelopment recharge conditions and reduce the size of the detention basins.

The DEIR presents a discussion of the how the proposed stormwater management system will meet the standards of MassDEP's Stormwater Management Policy (SMP). The SDEIR should respond to comments from MassDEP regarding the need to meet Standard #6 of the SMP for stormwater systems discharging to critical areas and Standard #4's requirement to achieve an 80 percent total suspended solids (TSS) removal rate. The proponent should also discuss how it will manage containment in the event of a spill.

The Stormwater Pollution Prevention Plan and the Stormwater Operations & Maintenance Plan should be included in the SDEIR for review. The Plan 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. The Plan should provide more detail on snow disposal, and the use of deicing and herbicide/pesticide use. The proponent should commit to a schedule for parking lot sweeping at a minimum of twice per year.

In the Certificate on the ENF, I encouraged 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. The SDEIR should provide a discussion of LID measures that could be incorporated into the site design.

### 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.

In response to a request from NHESP, the proponent conducted a rare species survey and habitat assessment for the Blue-spotted salamander and Blanding's Turtle. The DEIR states that the results of the survey indicated that no specimens were captured nor visually observed at the site. The Certificate on the ENF requested that the proponent submit all results of habitat assessments and field surveys in the DEIR. This information should be included in the SDEIR to allow for public review. The proponent's rare species consultant has filed for final MESA Project Review, and has received a "no take" determination for the proposed development.

In its comments on the ENF, NHESP stated that Cobbler Brook is a coldwater resource that provides habitat to the native brook trout (*Salvelinus fontinalis*) and requested that the DEIR 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. In addition to the limited response provided in the DEIR on this issue, the SDEIR should provide more details on the potential impacts of the project on cold water fisheries in Cobbler's Brook, which is designated as Class B in the Massachusetts Surface Water Quality Standards at 314 CMR 4.00. The site plan proposed in the DEIR calls for clearing within the Riverfront Area to the brook and some of the proposed residential units are within the 100 foot wetland Buffer Zone to wetlands that are tributary to the brook. The proponent should discuss in the SDEIR what measures will be taken to ensure that the project will not adversely affect the cold water fishery and what mitigation will be implemented in the case of adverse impacts.

### 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 SDEIR should provide clarification on the stream in the southeast corner of the site. The ENF noted that this stream was intermittent, while commenters have indicated that both the USGS topographic map and the MASSGIS dataset indicate that the stream is perennial. The project includes work within the 100-foot buffer zone to BVW, the filling of isolated non-jurisdictional wetlands, and the filling of approximately 8,754 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 should quantify the impacts to the Riverfront Area and Buffer Zone in the SDEIR.

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 must respond to comments from MassDEP with regard to the alternatives analysis that will be required as part of the 401 Water Quality Certificate review.

The proponent indicated in the ENF that the project will provide 22,927 sf of wetlands replication. As requested in the Scope for the DEIR, a detailed wetlands replication plan should be provided in the SDEIR 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. The DEIR notes that the Town has lost several large water users and due to these losses, and the surplus in the water withdrawal permit for the existing system, that there is no need for additional water to be withdrawn. This statement is not supported by data in the DEIR. In its comments on the ENF, MassDEP 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. MassDEP 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. This comment was not adequately addressed in the DEIR.

The SDEIR should evaluate and commit to implementing all practicable measures to reduce the potable water requirements of the project. The proponent should provide a discussion of proposed water conservation measures for residential and landscaping use. The proponent should include documentation in the SDEIR 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 SDEIR must adequately demonstrate to MEPA and MassDEP 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 SDEIR should discuss other means for providing drinking water to the project.

The SDEIR 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 SDEIR 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. There is conflicting information in the alternatives analysis in the DEIR regarding estimated wastewater flows. While not reducing the number of units, the alternatives outlined on page 3-2 and 3-3 have estimated wastewater flows that differ by almost 5,000 gpd. This discrepancy should be explained in the SDEIR. The proponent should consider the wastewater flows from other development projects in Town, in addition to the flow from the Prospect Ridge project.

The project will require a Sewer Extension/Connection Permit from MassDEP. In its comments on the ENF, MassDEP voiced 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 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. MassDEP states in its comments on the DEIR that there will be no increase in the permit's present limitation on flow, and that no further connections to the town's sewer system will be allowed, unless and until, infiltration and inflow (I/I) are removed from the wastewater system to bring the Town back into compliance with the permit requirements.

As stated in the Certificate on the ENF, the SDEIR should evaluate and commit to implementing all practicable measures to reduce the wastewater flows from the project. The proponent should provide documentation in the SDEIR 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 SDEIR must adequately demonstrate to MEPA and MassDEP 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 SDEIR should discuss other means of treating the wastewater generated by the project. The SDEIR should also discuss how the project will meet the applicable performance standards of the required MassDEP 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. However, the DEIR indicates that the project will generate up to 71,280 gpd of flow. The proposed mitigation does not even address the flows from the project on a one to one basis. MassDEP states in its comments on the DEIR that because there would be a net increase in flow from the project, which would exacerbate present flow violations, a sewer connection will not be permitted. The proponent must consult with MassDEP's Northeast Regional Office on the required volume of I/I to be removed in order to receive a Sewer Connection Permit. The details of the proposed mitigation work to reduce leakage into the sewer system needs to be further explained in the SDEIR. The proponent should discuss in the SDEIR how the targeted removal will be quantitatively measured and what guarantees are to be provided to the Town that the proposed I/I removal rate will be achieved.

### 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 MassHighway permit for access to East Main Street/Route 110. The DEIR included a transportation study that was prepared in general conformance with the Executive Office of Environmental Affairs/Executive Office of Transportation and Construction Guidelines for EIR/EIS Traffic Impact Assessments. The proponent should respond to comments regarding the validity of the data collected to establish baseline traffic conditions for the project. The study identified mitigation measures for areas where the project will have an impact on traffic operations; however there are some outstanding issues related to the project's impacts on traffic that should be addressed in the SDEIR.

The DEIR presented capacity analyses and a summary of average vehicle queues for Route 110 at its intersection with the proposed Site Drive, Broad Street and Bear Hill Road. The proponent has committed to implement mitigation measures, primarily in the form of traffic control signage and roadway markings, at the site driveway intersections with Route 110. As originally requested by MassHighway in their comments on the ENF, the proponent should extend the study area to include the Route 110/School Street intersection. The Town of Merrimac is interested in making improvements to the town center. As an additional mitigation measure, the proponent should work with the town to examine traffic operations at the town center and develop alternatives for future improvements through the Transportation Improvement Program (TIP). The proponent should include documentation of the outcome of these discussions in the SDEIR.

The DEIR did not include conceptual plans for the proposed roadway improvements. Therefore, the SDEIR should include conceptual plans that should be of sufficient detail, preferably 80-scale, to verify the feasibility of constructing the proposed improvements. The conceptual plans should clearly show proposed lane widths and offsets, layout lines and jurisdictions, and the land uses (including access drives) adjacent to areas where improvements are proposed. Any proposed mitigation within the state highway layout must conform to



MassHighway standards, including but not limited to, provisions for lane, median and shoulder widths and bicycle lanes and sidewalks.

The proponent has committed to Transportation Demand Management (TDM) measures in the form of posting information and schedules onsite regarding the Merrimack Valley Regional Transportation Authority buses serving Route 110 and the Massachusetts Bay Transportation Authority (MBTA) Commuter Rail Haverhill/Reading line. The site plan provides for pedestrian crossings on Route 110. However, the proponent has yet to include a commitment 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. The proponent will be responsible for installing sidewalks on the south side of Route 110 to ensure pedestrian safety. The proponent should also establish contact with the town council on aging in the event that transportation services are needed for the elderly.

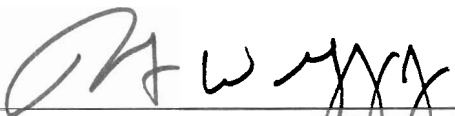
The SDEIR should provide an update of the local permitting processes for the proposed project, particularly with respect to any state highway issues being discussed. The proponent should consult with MassHighway to resolve the issues the Department raised in its comment letter on the DEIR.

#### Mitigation

The DEIR outlined proposed mitigation for the project's environmental impacts but did not present Draft Section 61 Findings for state permits. The proponent should refine the discussion on mitigation based on comments submitted on the DEIR and consultation with permitting agencies, and adjust the proposed mitigation as necessary. The SDEIR should submit Draft Section 61 Findings and a Draft Letter of Commitment for use by MassHighway 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. The SDEIR should provide a schedule for the implementation of the mitigation, based on the construction phases of the project.

September 14, 2006

Date



Robert W. Golledge, Jr.

#### Comments received:

9/7/2006	Janet Terry
9/7/2006	Jon R. Pearson
9/7/2006	Executive Office of Transportation
9/7/2006	Department of Environmental Protection, Northeast Regional Office

RWG/BA/ba