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CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
EXPANDED ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Hamilton Canal District
PROJECT MUNICIPALITY : Lowell
PROJECT WATERSHED : Merrimack
EEA NUMBER : 14240
PROJECT PROPONENT : Trinity Hamilton Canal Limited Partnership
DATE NOTICED IN MONITOR : May 7, 2008

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). In a separate Draft Record of Decision (DROD) issued today, I propose granting a Phase I Waiver to allow a portion of the project to proceed to state permitting prior to completion of the EIR for the entire project. The DROD will be noticed in the June 25, 2008 issue of the *Environmental Monitor* for a 14-day public comment period. Within seven days of the close of comments, I shall reconsider, modify, or confirm the waiver in a Final Record of Decision

Project Description

The project as proposed in the Expanded Environmental Notification Form (EENF) consists of a transit-oriented, mixed use development on a 13-acre site in the Hamilton Canal District. The project includes housing (affordable and market-rate), commercial and retail space, restaurants, a theatre, and art gallery, and includes new construction as well as adaptive reuse of historic buildings. The project is being designed to meet Leadership in Energy and Environmental Design for Neighborhood Development (LEED-ND) criteria and be LEED-certifiable.

The project is located within the boundaries of three historic districts including the Lowell National Historic Park and Preservation District, the Downtown Lowell Historic District and the Locks and Canals Historic District. The site is adjacent to the National Historical Park

Visitor Center and the proposed new Lowell Trial Court. The City of Lowell has partnered with the proponent in developing a Master Plan for the project, which is considered a significant next step in the redevelopment and revitalization of downtown Lowell. The project site includes historic mill buildings associated with former textile manufacturing operations. It is a brownfields site, which is currently undergoing assessment and remediation in accordance with the Massachusetts Contingency Plan (MCP).

The total development proposed, approximately 1.8 million square feet, includes 767,000 gross square feet (gsf) of housing (623 units), 54,800 gsf of retail space, 424,000 gsf of commercial spaces and 627,000 gsf of parking (1,964 surface, above and below-grade spaces including a 980-car garage). The EENF estimates that approximately 10,440 new vehicle trips per day will be generated by the proposed project. The project is being designed as a transit-oriented development with an expanded trolley system proposed from Dutton Street to the Gallagher Transportation Terminal, located a quarter mile south of the site. The transportation component of the project also includes a new four-way intersection and reconfiguration at the Lord Overpass, pedestrian linkages and canal walks, a new Jackson Street extension to Thorndike Street, and an extension of Broadway Street across the Merrimack Canal. The project includes new bridge construction across the Hamilton and Pawtucket Canals, rehabilitation of existing canal crossings, and a temporary bridge across the Hamilton Canal (to accommodate construction vehicles during Phase I).

The project includes restoration of the majority of the Freudenberg building (an existing building addition is proposed for demolition), and retention of historic walls remaining from other structures, primarily the Appleton Manufacturing Company buildings. The EENF indicates that several historic Appleton buildings are proposed for demolition as they are unsafe and in a state of disrepair, and restoration is infeasible.

Permits and Jurisdiction

The project is undergoing review and requires the preparation of a mandatory EIR pursuant to Section 11.03 (6)(a)(6) of the MEPA regulations because it will result in generation of 3,000 or more new average daily trips (adt) and Section 11.03 (6)(a)(7) due to construction of 1,000 or more new parking spaces at a single location.

The project is also undergoing environmental review pursuant to Section 11.03(1)(b) (3) because it involves conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97. The project is also under review pursuant to Section 11.03(1)(b)(7) because it requires approval in accordance with M.G.L. c. 121B of a modification to an existing urban renewal plan; Section 11.03(3)(b)(6) because it involves reconstruction of a pile-supported structure of 2,000 or more square foot (sf) base area that occupies waterways; Section 11.03(10)(b)(1) because it involves demolition of a historic structure located in a Historic District listed in the State Register of Historic Places; and Section 11.03(5)(b)(3)(c) because it involves construction of one-half or more miles of new sewer mains.

The proposed project will be reviewed under the Integrated MEPA/Permitting Review pilot process. Permits and approvals required include a Vehicular Access Permit from the Massachusetts Highway Department (MassHighway); a Chapter 91 License and Sewer Connection/Extension Permit from the Massachusetts Department of Environmental Protection (MassDEP); approval of an Urban Renewal Plan Amendment from the Department of Housing and Community Development (DHCD); easements from the Department of Conservation and Recreation (DCR) and the Division of Capital Assets and Management (DCAM); and possibly a short-term permit for construction of a temporary bridge from DCR. Since granting of easements on DCR-owned property constitutes a disposition of land, the project requires legislative approval pursuant to Article 97 of the Massachusetts Constitution. The project is also subject to review by the Massachusetts Historic Commission. The proposed project involves state funding (transportation funding and potentially State Historic Tax Credits). The project is subject to the EEA/MEPA Greenhouse Gas Policy.

As discussed in the EENF, there are several ownership entities involved in the project, including the City of Lowell, the Lowell National Historic Park (LNHP), DCAM and DCR. Implementation of the project will require conveyance of parcels of land from the City to the proponent and a conveyance or lease from the LNHP for redevelopment of existing parking lots. The proposed street network and pedestrian routes will require approvals for use of DCR-owned property. The City will also be conveying parcels to DCAM for the proposed Trial Court¹

The project involves state funding. Therefore, MEPA jurisdiction is broad and extends to all aspects of the project with the potential to cause Damage to the Environment as defined in the MEPA regulations.

Phase I

The project is proposed as a phased development. The proponent has requested a Phase I Waiver to allow a portion of the project to proceed prior to completion of the EIR for the entire project. The Phase I portion includes adaptive reuse of the historic Appleton Mill complex for housing (220,000 sf) and the Freudenberg Building for office space (50,000 sf). Phase I also includes construction of a temporary bridge.

As noted in the DCR comment letter, a properly conditioned permit or temporary easement may be required for the proponent to construct a temporary bridge during construction of Phase I because the existing bridges may not be able to support the load of vehicles and equipment required. The proponent may apply to DCR for a short-term revocable permit authorizing the construction of a temporary bridge. The granting of a temporary easement for such use would invoke the requirements of Article 97. If a temporary easement is required, the proponent should coordinate with DCR and DCAM regarding the draft legislation and to develop a mitigation plan.

Based on information provided in the EENF transportation study, Phase I is expected to generate 1,460 vehicle trips on an average weekday and 940 trips on an average Saturday. The

¹ The proposed new Lowell Trial Court is not part of the Hamilton Canal District Project but was considered in the EENF traffic analysis.

proponent has proposed mitigation for Phase I impacts consisting of widening at the Middlesex Street westbound approach to the Lord Overpass, restriping of the Lord Overpass and approaching roadways, and retiming of existing traffic signals to optimize overall traffic flow. The analysis in the EENF has demonstrated that upon implementation of the proposed mitigation measures, the existing infrastructure can generally accommodate the traffic associated with Phase I of the project. The Executive Office Transportation and Public Works (EOTPW) does not object to the granting of a Phase I Waiver.

The proposed temporary bridge for Phase I construction will also require a Chapter 91 License from MassDEP. The proponent should provide additional information to MassDEP identifying the exact location and construction methodologies proposed. The proponent should also coordinate with MHC regarding adverse effects to historic resources and to provide additional information that may be required for MHC review.

Expanded ENF Review

The EENF provides an overview of the project, including a description of the site, its historical use, and the master planning process for the proposed redevelopment. The EENF includes a breakdown and a map indicating the proposed development for each of the 17 parcels on the project site. The EENF includes a detailed description of the proposed project, a timeline for the phased development, and a list of permits and approvals required. The EENF also includes an analysis of alternatives, environmental impacts and proposed mitigation measures.

Consistency with state, local and regional policies

The project as presented in the EENF is the result of a joint master planning process between the proponent and the City of Lowell, which includes five public charettes, also referred to in the EENF as "Vision Sessions". The fourth vision session was held on May 29th, 2008 and included presentation and discussion of the draft form-based zoning code for the project. As noted in the EENF, the intent of the form-based zoning code is to establish clear design expectations for the project early in the development process. The EENF includes a discussion of land use controls for the project and consistency with local and regional plans. The City of Lowell, in its comment letter, supports the project and the Phase I Waiver request. The Northern Middlesex Council of Governments (NMCOG) in its comment letter, expresses support for the project, including the Phase I Waiver request, and notes that the project is consistent with the NMCOG regional growth policy plan, and is identified as a priority project within the Greater Lowell Comprehensive Economic Development Strategy (CEDS). In addition, NMCOG has also worked with the City of Lowell in designating the site as a Priority Development Site for Chapter 43D expedited permitting.

The EENF notes that the proponent intends to use the Commonwealth's Ten Sustainable Development Principles as a guide in developing the master plan for the site. As discussed in the EENF, the Jackson Appleton Middlesex (JAM) Plan, created in 1987 and later amended in 2000, emphasized industrial expansion, which is now considered inappropriate for current conditions. Hence, the EENF proposal for a transit-oriented mixed-use development, consistent with the City's Comprehensive Plan and the Commonwealth's emphasis on smart-growth strategies. The

proposed project master plan and the form-based zoning code will be submitted as part of an amendment to the JAM Plan, which will require approval from the Lowell City Council and the Department of Housing and Community Development (DHCD).

The EENF includes a discussion of compliance with the EEA Article 97 Disposition Policy. The project requires easements over DCR property (considered a change in use of parkland) and is therefore subject to legislative approval of the disposition for proposed construction and reconstruction of bridges and pedestrian crossings. As described in the EENF, the project cannot provide public access without crossing the canals, and therefore there is no feasible alternative that would not involve the use of Article 97 lands. In addition, the project will support redevelopment and revitalization of the Hamilton Canal district and Downtown Lowell, and the proponent proposes to swap an on-site parcel as mitigation for the land included in the proposed disposition.

Sustainable Design

The EENF includes a chapter on urban design that describes site layout and design principles, as well as proposed development and open space for each of the 17 parcels. The EENF indicates that the project will be designed to LEED Neighborhood Development standards and all buildings will be LEED-certifiable. The project includes green walls and roof for the parking garage. The EENF includes a LEED-ND project checklist and a summary of how the project scores for different LEED-ND categories. As described in the EENF, the project meets all the pre-requisites for the Smart Location and Linkage category and qualifies for many credits in the Neighborhood Pattern and Design and the Green Construction and Technology categories. The proponent expects that the project will score in the Silver category for LEED-ND and will evaluate other potential design elements that may warrant a Gold rating.

Wetlands and Waterways

The project, as described in the EENF, includes new and replacement pedestrian and vehicular bridges over the Hamilton and Lower Pawtucket Canals in order to connect the proposed development to the surrounding community. Given the nature of the project site, which is bounded by canals and has no interior roadways connecting to existing public ways, I concur with MassDEP that the proposed crossings qualify for consideration as water-dependent infrastructure crossing facilities.

The canals in the project area are considered to be wetland resource areas. The banks of the canals play a role in control of flood waters and storm damage prevention. The EENF includes a graphic outlining Land Under Water (LUW) and Bank resource and buffer areas. As discussed in the EENF, the bridge work proposed will occur on upland portions of the site and bridge structures will span the canals. Potential impacts include shading, which is considered insignificant in the context of this project. Impacts to navigation will also be considered as part of the Chapter 91 licensing required for the project. According to the EENF, the proposed bridges will have the same or greater clearances as existing bridges and will therefore not adversely impact navigation. The proponent has committed to stormwater and erosion controls to prevent any adverse affects to water quality from proposed work in the buffer zone.

Air Quality

The EENF includes a mesoscale analysis as required for projects that exceed the MassDEP review threshold of 6,000 daily trips for mixed-use projects. The purpose of the analysis is to determine the potential increase in volatile organic compounds (VOCs) and nitrogen oxides (NO_x) emissions in the project study area and to identify mitigation measures to reduce project-related trips and associated emissions.

The mesoscale analysis predicted VOC and NO_x emissions using the current USEPA emission model (MOBILE 6.2) and traffic flow conditions for the 2007 existing, 2012 Phase I Build, 2017 No Build, and 2017 Build and Build with Mitigation conditions. The modeling results indicate an 8.8 percent increase of VOC and NO_x under the 2017 Build compared to the No Build conditions. The proponent has committed to several traffic mitigation and transportation demand management (TDM) measures that would result in a five percent reduction in the project's average daily traffic, and less than a one percent reduction in NO_x and VOC emissions.

The EENF also analyzes Greenhouse Gas (GHG) emissions in accordance with the EEA/MEPA GHG Emissions Policy and Protocol. The GHG analysis in the EENF includes an analysis of direct and indirect GHG emissions. CO₂ emissions for the project's energy use are estimated at 28,116 tons per year. The EENF includes proposed mitigation measures that are expected to reduce CO₂ emissions by 26 percent overall (this includes an estimated 5 percent reduction in CO₂ from TDM). The EENF includes a meso-scale analysis of transportation-related impacts and compares CO₂ emissions for the 2007 Existing conditions, the 2017 No-Build condition and the 2017 Build and 2017 Build with Mitigation conditions. The analysis estimates that the 2017 Build condition produces 959.2 tons per year (tpy) compared with 910.7 tpy produced by the 2017 Build with Mitigation condition. According to the EENF, the combined traffic mitigation and TDM measures proposed will reduce CO₂ emissions by five percent. MassDEP accepts the modeling assumptions and accuracy of the analysis and results. However, MassDEP also believes that the level of estimated CO₂ reductions does not adequately meet the GHG policy requirements to identify measures to avoid, minimize, and mitigate these emissions. While MassDEP is not recommending a particular threshold of acceptable CO₂ emission reductions, analyses from comparable projects have estimated that mitigation programs could achieve approximately ten percent overall reduction in mobile source CO₂ emissions.

According to the EENF, the project is being designed to reduce the demand for electricity, thereby reducing indirect CO₂ emissions, and to reduce direct emissions associated with fuel combustion for heating and other uses. A key component of the mitigation plan for VOC, NO_x and CO₂ emissions includes efforts to reduce the number of single-vehicle occupant trips to and from the site. The project is located in close proximity to the Lowell Regional Transit Authority (LRTA) Gallagher Transit Terminal, the Kennedy Bus Transfer Center, and the Massachusetts Bay Transit Authority (MBTA) Lowell Commuter Rail Station. The proponent has committed to work with LRTA, MBTA and Merrimack Valley Regional Transit Authority (MVRTA) to develop a comprehensive transportation plan for the project, and will work with the National Park Service and the City of Lowell to expand the existing trolley system. The

proponent should expand upon the GHG analysis and mitigation plan as further detailed in the Scope below.

Geotechnical and Groundwater Analysis

The proposed project includes buildings ranging from three to fifteen stories and may include up to two levels of underground parking. The proponent has conducted a preliminary analysis of subsurface conditions on-site and included a summary in the EENF. A more detailed geotechnical subsurface investigation will be conducted for each parcel to inform recommendations for site-specific foundation design. Underground parking may require excavation of up to 15 feet, which will require temporary earth support systems and discharge of construction dewatering. Groundwater quality will be monitored during construction.

Waste Site Clean-up

The EENF discusses environmental assessments and other investigations under the Massachusetts Contingency Plan (MCP) that have been conducted because of contamination associated with historic uses of the site. Sixteen Release Tracking Numbers (RTN) have been assigned to ten of the parcels on-site. The proponent is working with MassDEP to coordinate investigations and clean-up required under the MCP. Six of the RTN sites have been cleaned up to applicable standards and achieved a Response Action Outcome (RAO). Two of the RTNs are still undergoing investigation and/or remediation and eight RTNs are under a Special Project Designation Permit which defers MCP deadlines to a schedule consistent with the development plan for the site. The EENF indicates that soil and groundwater testing program will be implemented to assess conditions prior to construction, and notification will be provided to MassDEP as required under the MCP. Excess soil will be characterized for off-site disposal, treatment, reuse and recycling in accordance with MassDEP and MCP requirements.

Construction

The proponent has committed to a Construction Management Plan (CMP) which will be submitted to the City of Lowell Public Works Department for review prior to construction. The CMP will include detailed information on construction and demolition, mitigation measures, traffic routing, and access and staging areas. The proponent intends to coordinate extensively with the City on transportation planning for the construction period.

Transportation

The EENF included a transportation study that generally confirms to the EEA/EOTPW Guidelines for EIR/EIS Traffic Impact Assessments. The EENF includes the results of a traffic study conducted to analyze potential impacts in the study area, which includes 34 intersections. The EENF includes a summary of the existing conditions assessment of transportation infrastructure and traffic operations conducted by the proponent. The analysis in the EENF includes potential impacts projected to the year 2017 and considers planned roadway improvements and other planned development projects. The project is expected to generate 746 new trips during weekday morning peak hour, 1,032 trips during the weekday evening peak hour

and 1,063 new trips during the Saturday midday peak hour. The EENF also projects additional pass-by trips during those peak hours (14, 50, and 146 respectively). The total vehicle trip estimate for the project is approximately 10,450 trips per day. Phase I of the project is expected to generate 1,460 vehicle trips on an average weekday.

The EENF concludes that several signalized intersections already are operating at or above capacity, or will do in the future even without the proposed development. According to the EENF, the proposed project will result in one additional intersection operating at or above capacity and/or with delays greater than 55 seconds. The EENF concludes that the project will result in an additional five unsignalized intersections operating at or above capacity.

The EENF includes a mitigation section describing proposed site access and roadway improvements. These improvements include the Revere Street and Jackson Street extensions and proposed intersection improvements at the Lord Overpass and 17 other intersections. The EENF includes an intersection capacity analysis that incorporates the proposed roadway and traffic signal improvements, and concludes that the project's traffic can be accommodated with no significant impact on future traffic operations.

The EENF proposes pedestrian improvements on-site and in the project area, including widening to incorporate sidewalks on existing canal bridges, a trolley expansion, and a sidewalk on Jackson Street (which would connect with the Hamilton Canal Walk, completing a pedestrian connection from the Revere Street Bridge to Central Street). The proponent has also committed to a Transportation Demand Management (TDM) program to reduce single occupancy vehicle (SOV) trips. The TDM program will include an on-site Transportation Coordinator, a carpool/preferred parking program, and bicycle racks, and the proponent will explore opportunities with the Lowell Regional Transit Authority (LRTA) to increase bus access to the project site.

SCOPE

General

The proposed project is the first project to be reviewed under the Integrated MEPA/Permitting Review Process. As part of the integrated review process, an Inter-Agency meeting for the proposed project was held during the EENF review period, which included representatives of state agencies, the City of Lowell and the regional planning agency (North Middlesex Council of Governments). Pursuant to the policy on Integrated MEPA/Permitting Review, state agencies are expected to submit comments identifying information they require in the DEIR and in permit applications.

Several state agencies have submitted detailed comments on the EENF. In addition to a general response to comments, the proponent shall provide in the DEIR a detailed response to the comment letters dated June 6, 2008 submitted by DCR, MassDEP and EOT and the comment letter dated June 5, 2008 from MHC. The proponent may choose to submit draft permit

applications with the DEIR. The Scope for the Final EIR will require inclusion of permit applications for public review and comment.

The proponent should prepare a Draft EIR (DEIR) in accordance with the general guidance for outline and content found in Section 11.07 of the MEPA regulations as modified by this Scope. The DEIR should include maps and plans at a reasonable scale, a project summary and schedule, a list of permits required and a description of any changes since the filing of the EENF.

Alternatives

The DEIR should include an analysis of alternatives to removal and reconstruction of the two bridges associated with the Lord Overpass reconfiguration. As further detailed in the EOTPW letter, the proponent must demonstrate that there are no other feasible alternatives that could mitigate the project's traffic impacts. The DEIR should include an evaluation of alternative Article 97 replacement property, transportation improvement options, and additional Low Impact Development (LID), GHG, and other sustainable design mitigation measures as further detailed in other sections of the Scope below.

Article 97 Disposition

As further detailed in its comment letter, the DCR has care and control of Commonwealth-owned property and associated air rights on the site including narrow strips of land abutting sections of the Hamilton and Pawtucket Canals, and land to the easterly side of the Merrimack Canal. The DCR easements requested by the proponent would constitute a disposition of property under Article 97 of the Massachusetts Constitution requiring approval of the legislature. In addition, a permit or temporary easement may be required for the proposed Phase I temporary bridge required for Phase I construction.

The DEIR should include an update on the status of the proposed temporary bridge permitting process and clarify whether the proponent has applied for a short-term permit or intends to request a temporary easement under Article 97. The proponent should consult with DCR before filing Article 97 legislation, and during preparation of the DEIR. As further detailed in the DCR comment letter, there are a number of issues that must be resolved relating to land ownership, bridge construction, and compensation and mitigation.

The DEIR should include a revised parcel map that identifies any changes since the EENF based on consultation with DCR regarding property ownership. The proponent should work with DCR to reach agreement on the details of proposed compensation as well as mitigation required under EEA's no-net loss policy. The EENF proposes Parcel 3 (Point Park) as mitigation. The DEIR should clarify whether DCR or the City of Lowell Parks Department would accept this replacement land. If replacement property is to be placed under the care and control of DCR, the DEIR should identify other opportunities for compensation and mitigation in the Lowell area as DCR maintains a minimal presence in the project area.

The DEIR should include details of proposed compensation and mitigation based on agreements reached with DCR. The DEIR should clarify whether land transfer will be accomplished through easements or the DCR-preferred approach, which is outright disposition of a fee interest in DCR-owned land. The proponent should also coordinate with DCAM on land transfer, compensation and mitigation issues. The DEIR should include an update on consultations with DCR and DCAM and the status of the Article 97 draft legislation, and a discussion of the project's consistency with the EEA Article 97 Land Disposition Policy.

The DEIR should include additional information on the proposed bridge construction and rehabilitation including a description of how the bridges will be designed to avoid stress on canal walls. The proponent should consult with DCR prior to filing the DEIR and provide DCR with additional details on existing and proposed bridge footings as requested in its comment letter.

Wetlands and Waterways

Pursuant to 310 CMR 9.35(2)(a), Chapter 91 jurisdiction extends to any activities that would impact continued navigation within the canal system. The proponent should work closely with the National Park Service (NPS), which currently provides canal tours on the Pawtucket Canal, to address issues relating to clearance. The DEIR should describe how the project will be consistent with Chapter 91 requirements and maintain adequate clearance in construction and expansion of proposed bridges and reconstruction of existing bridges.

The DEIR should describe and quantify the extent of wetland alteration associated with the project. The DEIR should explain how the project will comply with the performance standards in the wetlands regulations, and demonstrate that alteration of resource areas has been avoided and minimized.

Stormwater Management and Low Impact Development (LID)

The DEIR should describe in detail how the project will comply with MassDEP's revised stormwater management standards, which require an analysis of applicable LID measures as a precursor to implementation of structural stormwater management measures. The MassDEP Stormwater Management Policy was revised and incorporated into the Wetlands and 401 Water Quality Certification regulations on January 2, 2008. As noted in the MassDEP comment letter, LID, when combined with pollution prevention measures, can be less costly than conventional gutter and pipe drainage systems and can provide redundancy for stormwater control. I commend the proponent for its commitment to incorporate green roofs and other sustainable design measures. I also acknowledge that the proposed redevelopment may result in a decrease of impervious area compared to prior conditions. However, the DEIR should include a more detailed evaluation of LID measures and specific best management practices (BMPs) proposed as further detailed below and in the MassDEP comment letter.

The DEIR should evaluate stormwater runoff impacts during construction and post-construction. The DEIR should demonstrate that source controls, pollution prevention measures, erosion and sedimentation controls, and the post-development drainage system will be designed in compliance with the MassDEP Stormwater Management Regulations (SMR) and the City of

Lowell's Stormwater Management Program. The DEIR should include calculations, stormwater design plans at a readable scale, best management practices (BMP) designs, and supporting information in conformance with the SRM and National Pollutant Discharge Elimination System (NPDES) permit. The DEIR should respond to MassDEP's comments regarding stormwater including comments on illicit discharge elimination and stormwater infiltration. As noted by MassDEP, the project would be considered a land use with higher potential pollutant load and subject to SMR Standard 5, and it would not be appropriate to infiltrate in areas where there is potential to mobilize and transport contaminants in soils and groundwater.

Historical Resources

The project involves either a ground lease or sale of property by the National Park Service and is therefore subject to Section 106 of the National Historic Preservation Act. The Massachusetts Historical Commission (MHC) has determined that the proposed project will have an "adverse effect" (950 CMR 71.05(a)) on historic properties through the partial demolition of the Freudenberg Building (Sacco-Lowell Shops #14) and through removal of extensive structural fabric at the Appleton Mills Complex. Phase I of the proposed project includes demolition and rehabilitation of these historic resources. As noted in the MHC comment letter, the Appleton Mill buildings are currently in an advanced state of disrepair and MHC has no objection to the Phase I Waiver request. However, MHC also notes in its comment letter that the current proposal for adaptive reuse of the Appleton Mills Complex would not qualify for Federal Investment Tax Credits because the work involved would not meet the Secretary of the Interior's Standards for the Rehabilitation of Historic Properties

The proponent should consult with MHC regarding mitigation of adverse effects to historic resources (36 CFR 800.6 and 950 CMR 71.07(3)). The DEIR should include additional information on the proposed new construction in order for MHC to assess impacts of the new construction on the character and setting of the historic districts in which the project is located. The proponent should consult with MHC to identify specific details required. MHC has expressed concern regarding the proposed high-rise buildings on parcels 2, 3 and 4. The DEIR should include the results of visual and shadow studies and an assessment of effects on historic resources. The DEIR should also include an assessment of the impacts associated with proposed bridge construction and reconstruction on historic resources. The DEIR should include an update on plans for the waterwheel and raceway (located under the Appleton Mills building), which the proponent indicates will not be impacted during Phase I.

The DEIR should include an update on consultations with MHC and development of a Memorandum of Understanding (MOU), as well as any design changes since the filing of the EENF and a description of measures to avoid, minimize or mitigate impacts to historic resources.

Environmental Justice

Although the project is not subject to the EEA Environmental Justice Policy, as a participant in the Integrated MEPA/Permitting Review, the proponent has agreed to conduct expanded outreach to Environmental Justice (EJ) communities in the project area. As further detailed in a letter dated June 6, 2008, the proponent has committed to implement an EJ plan and

will work with the City of Lowell to translate project information into Spanish, Portuguese, and Khmer and work with community groups to disseminate information, and to ensure proper representation and that the project will not have a disproportionate impact on EJ communities. The DEIR should include an update on implementation of the EJ plan.

Transportation

The project will require permits from MassHighway for implementation of proposed roadway improvements including the extension of Jackson Street to create a new four-way intersection and the reconfiguration of the Lord Overpass to improve traffic flow. As noted in the EOTPW comment letter, the roadways and Lord Overpass are under state highway jurisdiction while the bridges (with the exception of the Chelmsford Street Bridge over the B&M railroad) and the traffic signals are owned and maintained by the City of Lowell.

The EENF proposes reconstruction of the Dutton Street/Fletcher Street/Thorndike Street intersection to create a four-way signalized intersection with the Jackson Street extension. The conceptual layout of the new intersection proposed in the EENF indicates that the proposed design may require significant structural modifications to the bridge and potential environmental impacts to the Hamilton Canal. The DEIR should address this issue and include plans of sufficient detail as further detailed in the EOTPW comment letter.

The proposed improvements to the Lord Overpass would require removal of the Middlesex Street Bridge and reconstruction of Chelmsford Street/Appleton Street Bridge to accommodate the diverted traffic. EOTPW has expressed concerns in its comment letter regarding removal and reconstruction of two bridges that have not been deemed to be structurally deficient, particularly if state funds are proposed to be used. The proponent should work closely with EOTPW/MassHighway during preparation of the DEIR to clearly demonstrate that there are no other feasible alternatives, other than reconfiguration of the Lord Overpass, that could mitigate the traffic impacts of the project. The DEIR should include additional information to support the proponent's preferred alternative and explain why other alternatives are considered infeasible.

The DEIR should include updated information regarding the project's proposed traffic mitigation. As noted in the NMCOC comment letter, traffic mitigation is being slightly modified to address comments recently received from downtown residents and businesses. The DEIR should address comments received from residents regarding components of the traffic mitigation plan that may adversely affect businesses in the Middlesex Street area by eliminating an existing bridge providing access to the district. I encourage the proponent to also consider the comments and recommendations in the letter from WalkBoston in order to enhance pedestrian and bicycle networks and access to public transit.

The DEIR should include an update on the local permitting process with respect to state highway issues. The DEIR should include an update on the proposed TDM plan, including discussions with MBTA, LRTA and MVTA and incentives and amenities for commuters. The DEIR should include a letter of commitment that identifies all proposed mitigation measures as well as parties responsible for implementing improvements. I encourage the proponent to meet



with the Public/Private Development Unit and the MassHighway District 4 Office during preparation of the DEIR.

Air Quality

Greenhouse Gas (GHG) Emissions

A project at this early stage of development provides a multitude of opportunities for designing buildings and transportation management measures that reduce energy consumption and substitute fossil fuel with renewable energy sources. As further detailed in the MassDEP comment letter, recent studies have demonstrated the growing market demand for green buildings and the performance efficiencies associated with LEED-rated buildings. I refer the proponent to MassDEP's comment letter for additional information and references to relevant studies.

The DEIR should include additional information and analysis, as outlined below and in the MassDEP comment letter, to show that the preferred alternative would achieve significant reductions in GHG emissions with building design, selection of building materials, and water and sewer infrastructure upgrades and efficiencies that reduce and/or offset the fossil fuel energy demand for the project. The revised GHG analysis should incorporate the mitigation measures identified in the MassDEP comment letter, in order to quantify additional emission reductions that are potentially achievable. If the proponent is not able to adopt any of these measures, the DEIR should provide technical and cost analyses to document the rationale for not making a commitment to a recommended mitigation.

The proponent should undertake additional analyses as recommended by MassDEP to assess feasible GHG reduction measures. The DEIR should include an assessment of feasible GHG reduction measures for the project, starting with measures that offer the greatest energy reductions and then consider opportunities to improve ongoing operations. The DEIR should evaluate the feasibility of LEED and/or Energy Star elements. If a particular efficiency or green power generation component is not proposed, the DEIR should explain why it is considered impracticable. The DEIR should include an assessment of the feasibility of implementing solar and other alternative energy sources for the project, and explore opportunities to purchase power generated by renewable energy sources. The proponent has committed to some energy efficient elements such as lighting, insulation and high-albedo roof materials, which is commendable. The DEIR should also consider other energy efficient measures as recommended by MassDEP.

Consistent with the GHG policy, the DEIR should model at least one mitigation alternative that would result in greater GHG reductions than the preferred alternative, which will help identify opportunities for energy savings achievable by varying building design and layout strategies. The DEIR should explain why certain energy efficient techniques are not selected, to assist in the determination that the preferred alternative has avoided, minimized and mitigated CO₂ emissions.

Based on the Department of Energy Resources (DOER) review of the EENF, the proponent's energy model must be optimized for the Massachusetts Building Code, which is the

baseline alternative for energy usage in calculating GHG emissions, pursuant to the MEPA GHG Policy and Protocol. The proponent should consider contacting the construction division of its natural gas and electricity utility in Lowell (National Grid) to take advantage of potential rebates available for installation of highly energy efficient equipment.

The EENF notes that certain energy-efficient measures, such as daylighting, on-site renewables, use of motion sensors, tracking energy performance, and third party building commissioning are infeasible or inappropriate. These potential mitigation measures should be reconsidered in the DEIR. The DEIR should include additional information on the Heating, Ventilating and Air Conditioning (HVAC) system, exterior lighting, insulation, daylighting, on-site renewable energy sources, third party building commissioning, and building energy management systems to address DOER comments (which are incorporated in the MassDEP comment letter). If the proponent is not adopting the measures recommended by DOER, the DEIR should provide technical and cost analyses to document the rationale for not making a commitment to a mitigation measure.

The DEIR should describe the proponent's strategy for monitoring energy performance of buildings to ensure the energy systems function as designed over the long-term. As noted by DOER, a system for monitoring energy performance would be expected to pay for itself by eliminating potential inefficient energy operations. A system to monitor energy performance will be necessary to demonstrate that the performance improvements expected have been achieved.

The DEIR should address the contradictions noted by DOER in relation to on-site renewable energy. Table 6 of the EENF indicates that on-site renewables are inappropriate for the project. However, the EENF also indicates that the project would achieve LEED-ND with Credits 1 and 13 for solar orientation and on-site renewable energy sources, respectively. The DEIR should clarify commitments to solar energy and other renewable sources. The proponent should evaluate the feasibility of constructing roofs for new buildings to support the added weight of a solar photovoltaic (PV) system for potential installation during project construction or at a future date. DOER has recommended that a life-cycle analysis be included in the EIR, considering the support of subsidies through the Commonwealth Solar and Renewable Portfolio Standard (RPS) Program, to evaluate the installation of a PV system during project construction under two scenarios: 1) construction, ownership and operation of a PV system by the building owner; or 2) construction, ownership, and operation of a PV system by a third party that will then enter into a long-term power purchase agreement with the building owner for the electricity produced by the system. If PV is considered economically infeasible at this time, DOER recommends that the proponent consider PV installation for a future date and state its willingness to host a third-party-owned PV array under a favorable power purchase agreement.

Given the project location near the canals, the DEIR should consider the potential for water-source heat pumps to provide energy for heating and cooling. The DEIR should also evaluate GHG mitigation measures to address energy use associated with water use and wastewater treatment. Based on the research data referenced in the MassDEP comment letter, the project will require approximately 35,522 kilowatt hour (kWh) over the course of a year for wastewater treatment and 21,410 kWh to supply water to the project.



As requested by MassDEP, the DEIR should include a quantification of GHG impacts associated with materials management so that mitigation efforts can be more clearly identified and targeted appropriately. I refer the proponent to MassDEP's comment letter for resources to assist with this component of the assessment. The DEIR should include a list of the environmentally preferred products (EPP) to be used, the GHG impacts associated with use of these materials, and an explanation of why an expanded commitment to use additional EPP materials (including on-site use of demolition materials, regionally produced materials, recycled content materials) is not applicable or cannot be confirmed (as noted in the EENF).

The DEIR should include revised Tables 3-8 (from Appendix E - GHG Emissions) to reflect updates to the proponent's assessment and selection of mitigation measures.

Indirect emissions associated with transportation

The mesoscale analysis in the EENF included estimates of expected increases in VOC and NO_x from project-related traffic impacts. The mitigation proposed in the EENF to address VOC and NO_x emission increases will result in approximately one percent emission reduction. The proponent should continue to seek opportunities to further reduce project-related trips and associated emissions.

The mesoscale analysis estimates the indirect emissions from transportation-generated CO₂ emissions associated with vehicle trips and proposes mitigation. Although the EENF proposes a reasonable list of traffic mitigation and TDM measures, the project would still generate a significant number of vehicle trips per day (over 10,000) despite the mitigation program and a ten percent trip reduction credit for TOD. In addition, the proponent's commitment to several potential TDM measures is vague or rejected as "inappropriate to the project type". Table 7 of the EENF (Appendix E-GHG Emissions) contains seven mitigation measures deemed inappropriate, including purchase of alternative fuel and/or fuel efficient vehicles, support of expansion of parking at park-and-ride or transit stations, shared parking, transit pass subsidies, and on-site amenities such as banks, dry-cleaning, food service and childcare, use of pre-tax dollars for HOV commuting costs, on and off-site improvements to reduce vehicle miles traveled (VMT). The DEIR should reconsider these mitigation measures and demonstrate commitments that all feasible measures will be implemented to further reduce VOC, NO_x, and CO₂ emissions.

The proponent has committed to compliance with the idling provisions of the Massachusetts Air Pollution Control Regulations (310 CMR 7.11) and the Rideshare Regulation (310 CMR 7.16) and has committed to install devices to reduce construction-related engine emissions. The proponent should consider commitment to the additional measures recommended by MassDEP to further reduce vehicle trips and construction-vehicle emissions within the project area.

Sustainable Design

The DEIR should include an update on sustainable design elements of the project based on re-evaluation of GHG mitigation measures as required by this Scope. The DEIR should

include an evaluation of the proposed project in the context of each of the Commonwealth's Ten Principles of Sustainable Development, which the proponent intends to use as guiding principles for the project master plan.

The DEIR should include additional detail on the proponent's comprehensive waste management plan to address waste reduction, environmentally preferable materials use and the need to design for storage and collection of recyclables. The proponent should consider implementing a waste prevention purchasing policy as recommended by MassDEP. The DEIR should include additional information on proposed storage and collection of recyclables as requested by MassDEP in its comment letter. The DEIR should also address MassDEP comments and recommendations regarding compliance with MassDEP waste bans and target-recycling goals.

Wastewater

The proponent should submit its Sewer Connection/Extension Permit application to MassDEP during the MEPA review process in order to expedite review and permitting. Given that the project is participating in the Integrated MEPA/Permitting pilot program, the EIR should include a copy of the permit application, either at the DEIR or FEIR stage. The proponent should confer with the Lowell Regional Wastewater Utility and the City's engineering staff during the design work for the sewer system. I refer the proponent to the MassDEP comment letter for additional guidance on the permit application.

Waste Site Clean-up

As further detailed in the MassDEP comment letter, there are several properties in the project site requiring further response actions under the Massachusetts Contingency Plan (MCP). Two of the RTNs are classified as Tier II sites and do not require a permit. MassDEP has granted two Special Project Designations for the remainder of the RTNs to allow the proponent to better coordinate response actions with proposed development schedule.

The proponent should assess the potential for indoor air quality impacts to existing or proposed buildings from chlorinated volatile organic compounds (VOCs), which have been reported as a contaminant at locations on-site. The assessment should include all relevant site data, such as contamination concentrations in soil and groundwater, depth to groundwater, and soil gas concentrations. A summary of the impact assessment should be provided in the DEIR.

The DEIR should include a draft plan for management of groundwater during proposed dewatering activities that describes how exacerbation of site conditions will be avoided. In addition, because there is potential for release of contaminants to surface water bodies, the DEIR should also describe plans for investigation of surface and sediment quality in the canals to determine if remedial actions are necessary, as recommended by MassDEP. The DEIR should describe plans for dust monitoring and suppression as recommended by MassDEP to address potential impacts associated with contaminants.

I refer the proponent to MassDEP's comment letter for additional guidance and information relating to construction and site investigation timelines. The DEIR should include an update on MCP-related site investigations and response actions.

The project will likely require abatement and removal of asbestos from existing buildings. The proponent should ensure that MassDEP requirements for asbestos remediation are met as further detailed in its comment letter (items 1-9). The DEIR should include an update on asbestos investigations and remediation plans.

Construction and Demolition

The proposed demolition and reconstruction will generate a significant amount of construction and demolition (C&D) debris. The EENF commits to recycling 50 percent of construction debris. As further detailed in the MassDEP comment letter, demolition activities must comply with both Solid Waste and Air Pollution Control regulations, including those related to asphalt, brick and concrete (ABC) rubble, and asbestos-containing materials. The DEIR should discuss the project's consistency with applicable regulations and identify any additional MassDEP permits or approvals required.

MassDEP has requested that the proponent commit to developing a construction waste management plan (CWMP) that fully complies with the Massachusetts waste bans and establishes a minimum reuse/recycling goal of 50 per cent. I refer the proponent to MassDEP comment letter for additional guidance. The DEIR should include an update on the proponent's CWMP commitments.

Mitigation and Section 61 Findings

The DEIR should include a separate chapter on mitigation measures, which should include a summary table of all mitigation commitments as well as detailed proposed Section 61 Findings for all state permits. The Section 61 Findings should describe proposed mitigation measures, contain clear commitments to mitigation and a schedule for implementation, and identify parties responsible for funding and implementing the mitigation measures. The proposed Section 61 Findings will serve as the primary template for permit conditions.

Response to Comments

In order to ensure that the issues raised by commenters are addressed, the DEIR should include a response to comments to the extent they are within MEPA jurisdiction. This directive is not intended to, and shall not be construed to, enlarge the scope of the DEIR beyond what has been expressly identified in this certificate. The DEIR should also include a copy of this Certificate and a copy of each comment letter received on the EENF.

Circulation

The DEIR should be circulated in compliance with Section 11.16 of the MEPA regulations and copies should be sent to the list of "comments received" below. A copy of the DEIR should be made available for public review at the Lowell Public Libraries.



June 13, 2008

Ian A. Bowles, Secretary

Comments Received

5/23/08	Stephen Kaiser
6/01/08	Joseph P. Smith
6/05/08	Massachusetts Historical Commission
6/05/08	WalkBoston
6/05/08	Lowell Downtown Neighborhood Association
6/06/08	Department of Environmental Protection, Northeast Regional Office
6/06/08	Department of Conservation and Recreation
6/06/08	James T. Lichoulas, Jr.
6/06/08	Durkin Realty Trust
6/06/08	City of Lowell, Office of the City Manager
6/06/08	Northern Middlesex Council of Governments
6/06/08	Fort Point Associates (on behalf of the proponent)
6/09/08	Executive Office of Transportation, Public/Private Development Unit
6/09/08	Mark E. Goldman

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