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

PROJECT NAME	: 241 Sturbridge Road
PROJECT MUNICIPALITY	: Charlton
PROJECT WATERSHED	: Quinebaug River
EEA NUMBER	: 16211
PROJECT PROPONENT	: Charlton Developer, LLC
DATE NOTICED IN MONITOR	: May 20, 2020

Pursuant to the Massachusetts Environmental Policy Act (M.G.L. c. 30, ss. 61-62I) and Section 11.03 of the MEPA Regulations (301 CMR 11.00), I hereby determine that this project **requires** the preparation of a mandatory Draft Environmental Impact Report (DEIR).

Project Description

As described in the Environmental Notification Form (ENF), the project involves the construction of a 1,400,000-square foot (sf) single-story high bay warehouse with 30,000 sf of office space, 210 loading bays, 500 parking spaces, 250 trailer storage spaces, a stormwater management system and water and sewer infrastructure. The project includes off-site roadway improvements on Route 20 (Sturbridge Road), including a signalized intersection at the site driveway, widening of Route 20 to add turning lanes on the east- and westbound approaches to the intersection and the extension of a culvert conveying McKinstry Brook under Route 20 to accommodate the widening of the road.

Project Site

The project site is an approximately 194.7-acre parcel in west Charlton. It is bordered by Route 20 and commercial uses to the north, undeveloped land and a church to the west, low-density residential uses to the south and McKinstry Brook to the west. The site is approximately 0.5 miles east of the Charlton-Sturbridge municipal boundary. Route 20 is under the jurisdiction

of the Massachusetts Department of Transportation (MassDOT) with the functional classification of "rural minor arterial or urban principal arterial."

The site is undeveloped and primarily wooded. Bordering Vegetated Wetlands (BVW) associated with McKinstry Brook are located along the eastern property line and a separate wetland occupies most of the western portion of the site. A 22,030-sf Isolated Vegetated Wetland (IVW) is located at the southern end of the site. The remaining portion of the site is a drumlin landform consisting of sandy loam and fine sandy loam soils. The site rises from an elevation of approximately 710 North American Vertical Datum of 1988 (NAVD 88) on the northern portion of the site along Route 20 and 720 to 760 NAVD 88 on the southern part of the site to a peak of approximately 842 ft NAVD 88 at the center of the site.

As shown on the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) (number 25027C0768E, effective date July 14, 2011), a narrow band of land adjacent to McKinstry Brook is located within the 100-year floodplain (Zone A) with no determined Base Flood Elevation (BFE). McKinstry Brook is classified as a Coldwater Fishery by the Massachusetts Division of Fisheries and Wildlife (DFW); coldwater species such as trout are typically more sensitive than other species to alterations in stream flow, water quality and temperature.[1]

Environmental Impacts and Mitigation

Environmental impacts of the project include: alteration of approximately 80 acres of land; creation of approximately 52.58 acres of impervious area; alteration of 295 sf of BVW, 1,215 sf of Land Under Water (LUW) and 106 linear feet (lf) of Bank; generation of 2,258 average daily trips (adt); use of approximately 8,800 gallons per day (gpd) of water; generation of approximately 7,500 gpd of wastewater; and greenhouse gas (GHG) emissions associated with on-site energy use, transportation and land alteration.

Measures to avoid, minimize and mitigate impacts include roadway mitigation at the intersection of the Site Driveway at Route 20, construction of turning lanes at the approaches to the Site Driveway at Route 20 intersection, implementation of a Transportation Demand Management (TDM) plan to reduce single-occupancy vehicle (SOV) trips, restoration of impacted wetlands, and construction of a stormwater management system consistent with the stormwater management standards (SMS) of the Wetlands Regulations (310 CMR 10.00). Approximately 114.7 acres of the site will remain undeveloped, including areas containing BVW and IVW. Additional measures to minimize and mitigate the environmental impacts of the project, including GHG emissions, must be described in the DEIR.

Jurisdiction and Permitting

The project is subject to the preparation of a Mandatory EIR pursuant to the MEPA regulations because it requires State Agency Actions and will directly alter 50 or more acres of

[1] MassGIS metadata at https://docs.digital.mass.gov/dataset/massgis-data-ma-dfw-coldwater-fisheries-resources-125-000

land (301 CMR 11.03(1)(a)(1)) and create ten or more acres of impervious area (301 CMR 11.03(1)(a)(2)). It will also exceed ENF thresholds at 301 CMR 11.03(6)(b)(13), generation of 2,000 or more adt and 301 CMR 11.03(6)(b)(15), construction of 300 or more parking spaces at a single location. The project requires a Vehicular Access Permit from the Massachusetts Department of Transportation (MassDOT) and may require a Booster Pump Station Permit WS32 from the Massachusetts Department of Environmental Protection (MassDEP). It is subject to review under the May 2010 MEPA GHG Emissions Policy and Protocol (GHG Policy).

The project requires an Order of Conditions (OOC) from the Charlton Conservation Commission (or a Superseding Order of Conditions from MassDEP in the event the Order is appealed). The project requires a National Pollutant Discharge Elimination System (NPDES) Stormwater General Permit from the Environmental Protection Agency (EPA).

The Proponent is not seeking Financial Assistance for the proposed project. Therefore, MEPA jurisdiction is limited to those aspects of the project within the subject matter of any required or potentially required State Permits that have the potential to cause Damage to the Environment, as defined in the MEPA regulations.

Review of the ENF

The ENF included a project description, plans of existing and proposed conditions, including showing wetland resource areas, the stormwater management system and plans of proposed water and sewer connections. It included a Transportation Impact Assessment (TIA) and plans showing proposed roadway improvements. A more detailed description of impacts as disclosed in the ENF and areas for further analysis in the DEIR are set forth in the Scope below.

SCOPE

General

The DEIR should follow Section 11.07 of the MEPA regulations for outline and content and provide the information and analyses required in this Scope. It should demonstrate that the Proponent will pursue all feasible measures to avoid, minimize and mitigate Damage to the Environment to the maximum extent feasible.

Project Description and Permitting

The DEIR should include updated site plans for existing and post-development conditions at a legible scale. Conceptual plans should be provided at a legible scale and clearly identify buildings, public areas, impervious areas, pedestrian and bicycle accommodations, and stormwater and utility infrastructure. The DEIR should describe the project and identify any changes since the filing of the ENF. It should identify and describe State, federal and local permitting and review requirements associated with the project and provide an update on the status of each of these pending actions. The DEIR should include a description and analysis of applicable statutory and regulatory standards and requirements, and a discussion of the project's consistency with those standards.

The information and analyses identified in this Scope should be addressed within the main body of the DEIR and not in appendices. In general, appendices should be used only to provide raw data, such as drainage calculations, traffic counts, capacity analyses and energy modelling, that is otherwise adequately summarized with text, tables and figures within the main body of the DEIR. Information provided in appendices should be indexed with page numbers and separated by tabs, or, if provided in electronic format, include links to individual sections. Any references in the DEIR to materials provided in an appendix should include specific page numbers to facilitate review.

Alternatives Analysis

The ENF included an alternatives analysis that compared the Preferred Alternative to the No Action and Other Sites Alternatives. The No Action alternative would leave the site in its current undeveloped condition and avoid all impacts associated with the Preferred Alternative, but would not achieve the project purpose. According to the ENF, the Proponent searched for a suitable parcel of land throughout the south and central regions of Massachusetts, but none were available with sufficient space and infrastructure and appropriate zoning. According to the ENF, the Preferred Alternative involves development of a site located near major highways that meets the project's warehousing and transportation needs. The project design avoids direct impacts to on-site wetlands by siting the building away from resource areas and includes a stormwater management system that meets the SMS.

The DEIR should provide a supplemental alternatives analysis. It should evaluate at least one Reduced Build Alternative at the proposed site that provides a greater setback to on-site BVW and IVW. In addition, the DEIR should describe the siting criteria that were used to evaluate sites and compare how the Preferred Alternative better meets those criteria than other sites. The DEIR should include, to the extent feasible, quantitative comparisons of the impacts of each alternative with respect to land alteration, impervious area, trip generation, wetlands impacts and infrastructure. As described in more detail below, the DEIR should evaluate alternative driveway locations that would avoid or minimize impacts to McKinstry Brook.

Land Alteration

The site varies in elevation from approximately 710 ft NAVD 88 to 720 ft NAVD 88 at the north and south ends of the property to 842 ft NAVD 88 at the center of the site. The project will establish a consistent elevation of 775 ft NAVD across much of the site to accommodate the building and parking areas. Material excavated from high points will be used to raise the elevation of lower areas at the margins of the site; according to the ENF, all excavated material will be reused on site. Retaining walls will be constructed around the site and areas outside the retaining walls will be regraded at a 3:1 slope. Sections of the retaining walls and regrading of the site will occur within the Buffer Zone of BVW.

The DEIR should identify all areas to be regraded and clearly quantify the total area of alteration associated with the proposed project. It should include a plan that clearly identifies areas of cut and fill, and provide estimates of cut and fill volumes. The DEIR (in the narrative

and on plans) should identify areas of land alteration for buildings, roadways, parking, wastewater, water and stormwater infrastructure, landscaping, and other project components. It should include site plans that clearly locate and delineate areas proposed for development and areas to be left undisturbed. The DEIR should identify how the project is designed to avoid and minimize land alteration.

Traffic and Transportation

The ENF included a TIA prepared in conformance with the MassDOT/EEA *Transportation Impact Assessment Guidelines*. Using trip generation rates published by the Institute of Transportation Engineers (ITE) for Land Use Code (LUC) 150 (Warehousing), the project will generate 2,258 adt, including 193 in the weekday morning peak period and 196 in the weekday evening peak hour. According to the analysis, 60 percent of the vehicular traffic to and from the site will use be from the west, where Route 20 connects to the Massachusetts Turnpike (MassPike)/Interstate-90 (I-90) and Interstate-84 (I-84). The remaining 40 percent of trips to/from the site will use Route 20 east of the site.

The TIA reviewed existing and proposed traffic operations, crash rates at area intersections, pedestrian and bicycle facilities and public transportation options within a transportation study area that includes the following intersections:

- Route 20 at Route 31;
- Route 20 at Route 169 and South Sturbridge Road;
- Route 20 at Route 49; and,
- Route 20 at The Center at Hobbs Brook Driveway

The site is located in an area with limited pedestrian and bicycle facilities or public transportation service. Sidewalks are present at the intersection of Route 20 at Route 31, approximately 2.5 miles east of the site, and there are no bicycle facilities within the study area. The nearest public transit service is a bus route operated by the Worcester Regional Transit Authority (WRTA) along Route 169 and Route 20 over two miles east of the site.

The TIA included a review of crash rates at study area intersections for a five-year period (2013 through 2017). According to the ENF, the intersections of Route 20 at Route 31 and Route 20 at Route 169 and South Sturbridge Road have crash rates that exceed statewide crash rates. Recommendations for safety improvements at these intersections are being implemented by Tree House Brewery in connection with the expansion of its facility (EEA# 15900).

Site Access

Access to and from the site will be provided via a driveway at a new signalized intersection on Route 20. The driveway and all internal roadways will be 24-ft wide to accommodate two-way truck traffic. The site driveway will be aligned with an existing driveway to commercial uses on the opposite side of Route 20. The Proponent will modify Route 20 at the proposed intersection to add left- and right-turn lanes to the existing two through lanes. The ENF

included documentation that the intersection meets the criteria for signalization because of its anticipated eight- hour vehicular volume, four-hour vehicle volume and peak hour volume. The sight distance evaluation provided in the ENF concluded that the proposed location of the driveway will have sight lines that exceed minimum distances necessary for the roadway to function in a safe and efficient manner.

A 1,600- ft long section of Route 20 will be reconstructed to accommodate the proposed turning lanes. As a result, the culvert under Route 20 through which McKinstry Brook flows must be extended by 12 feet on each side of the roadway. According to the TIA, the location of the intersection exceeds minimum sight line requirements. The DEIR should document why the proposed location of the intersection was selected, particularly in light of impacts to McKinstry Brook. It should include an analysis of a driveway location west of the proposed location that would avoid impacts to McKinstry Brook associated with roadway widening. The DEIR should evaluate sight distance and traffic operations at the alternative location. It should review applicable standards related to the proposed design of the turning lanes and review alternative designs that would avoid or minimize wetland impacts.

Traffic Operations

Traffic operations were analyzed under 2019 Existing, 2027 No Build and 2027 Build scenarios at the study area intersections. The TIA reviewed the Level-of-Service (LOS) of each intersection under each scenario. The LOS reflects the overall peak period operations of an intersection, including traffic speed, delay, and capacity; LOS D reflects an acceptable level of operations. Traffic volumes and operations under the 2019 Existing condition were established by collecting automatic traffic recorder (ATR) counts, turning movement counts (TMC) and vehicle classification counts in September 2019. The 2027 No Build condition includes additional trips generated by four planned developments in the study area and a general background growth rate of 1.0 percent per year compounded annually. The TIA indicated that all intersections in the study area, including the proposed signalized intersection at Site Driveway at Route 20, operate at LOS D or better under the 2019 Existing, 2027 No Build and 2027 Build scenarios, suggesting that sufficient capacity exists in the study area intersection to accommodate project-generated traffic.

Parking

The project includes construction of 500 parking spaces and 250 truck storage bays. The DEIR should compare the number of proposed parking spaces to the parking demand estimated for a project of this size and type in the most recent edition of the ITE *Parking Generation Manual*. The Proponent should minimize the number of parking spaces at the site, and document in the DEIR efforts taken to minimize parking and reasons for selecting the proposed number. The DEIR should include an evaluation of potential land banking to provide a portion of the spaces in the future when demand is warranted.

Transportation Demand Management

The TIA included a Transportation Demand Management (TDM) plan. It identified the following measures that will be implemented to minimize single-occupancy vehicle (SOV) trips:

- Designation of a transportation coordinator to implement the TDM plan, including a rideshare matching program to encourage carpooling;
- Provision of information to employees regarding public transportation options, including a "welcome packet" for employees;
- On-site amenities to discourage off-site trips, including a break room with a kitchen, direct-deposit of paychecks, on-site pick-up and drop-off dry cleaning service, and allowing telecommuting and flexible work schedules; and,
- On-site secure bicycle parking and pedestrian accommodations.

The DEIR should evaluate additional TDM measures such as an Emergency Ride Home program and providing electric vehicle (EV) charging stations at a minimum of 10 percent of the employee parking spaces. The DEIR should evaluate the feasibility of scheduling trucking operations at off-peak hours and provide a draft Traffic and Construction Management plan.

Transportation Monitoring Program

The ENF did not include a proposed transportation monitoring plan. The Proponent should consult with MassDOT regarding the components of a monitoring program that may be required in connection with the issuance of a Vehicular Access Permit and include a description of the proposed monitoring plan in the DEIR. The DEIR should describe monitoring that will take place to evaluate the effectiveness of the TDM program.

Wetlands

The project will impact wetland resource areas in connection with the extension of the McKinstry Brook culvert by 24 ft (12 ft at each end) and construction of new headwalls. On-site construction of retaining walls will occur within the Buffer Zone of BVW. The DEIR should provide a detailed plan and description of the culvert extension, quantify impacts to wetland resource areas and identify mitigation measures and include an analysis of how the project will meet the performance standards of the Wetlands Regulations. I recommend that the Proponent s confirm the wetland boundaries with the Charlton Conservation Commission prior to filing the DEIR so that the project's impacts to wetlands can be described and quantified. As noted above, the DEIR should include an analysis of alternative driveway locations and roadway designs that would avoid or minimize impacts to McKinstry Brook.

The DEIR should describe the condition of the existing culvert and the consistency of its design with the Massachusetts Stream Crossing Standards (SCS). It should evaluate the feasibility of reconstructing the culvert to provide a more resilient structure that could have the capacity for increased storm events under future climate conditions and that meets the SCS. If reconstruction or replacement of the culvert is not feasible, the DEIR should describe any design

features of the culvert extension that will make the culvert more resilient and improve aquatic habitat.

Stormwater

The project will add over 52 acres of impervious area. The ENF included a brief description of the proposed stormwater management plan and a schematic plan showing proposed locations of Best Management Practices (BMP). On the west side of the site, the stormwater management system will include deep sump catch basins that direct runoff to water quality units prior to discharge into a large detention basin with a sediment forebay or a subsurface infiltration system. Runoff from parking areas and driveways on the east side of the building will be directed to one of two subsurface detention basins. Roof runoff will be discharged into the subsurface infiltration systems.

The DEIR should describe the stormwater management system and how it will be designed to satisfy all standards of the SMS, including requirements for land uses with higher potential pollutant loadings (LUHPPL) and discharges to critical areas such as coldwater fisheries. McKinstry Brook has been designated as a waterbody requiring a Total Maximum Daily Loading (TMDL) for debris, trash and bacteria; the DEIR should describe how any discharges to the brook will address these pollutants. The DEIR should include detailed plans at a readable scale of the proposed drainage system and provide calculations of water quality volume, infiltration volume, total suspended solids removal, and peak rates of runoff for predevelopment and post- development site. The drainage system should be designed and sized to have the capacity for large and intense storm events projected during the likely lifespan of the project using extreme precipitation data for the region available from the NOAA Atlas 14[2] or the Northeast Regional Climate Center[3] to model 24-hour design storm depths. The DEIR should describe stormwater management improvements associated with the widening of Route 20 and runoff from the roadway into McKinstry Brook.

Water and Wastewater

The project will use 8,000 gpd of water, which will be supplied by a connection to a water main in Route 20 approximately 0.25 miles east of the site. In addition to providing potable water to the warehouse building, the connection to the water main will supply the site's fire protection system, ,which includes a pump house, a 200,000-gallon storage tank next to the pump house and fire hydrants throughout the site. The Proponent should consult MassDEP's comment letter for guidance on water supply and plumbing requirements that may be applicable to the project. A permit from MassDEP may be required if a booster pump is needed to supply water to the warehouse. The DEIR should describe water conservation measures to be incorporated into the project design, including water-conserving plumbing fixtures and reuse of gray water and roof runoff for irrigation. The DEIR should address MassDEP's comments concerning a potential connection to the site's water infrastructure by an adjacent property affected by high sodium and chloride concentrations in its drinking water supply well.

[2] https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=ne
[3] http://resilientma.org/resources/resource::1399/extreme-precipitation-in-a-changing-climate

The project will generate 7,500 gpd of wastewater. The project includes the construction of an approximately one-mile long, 3-inch diameter force main that will convey wastewater from the site to the Town's sewer system. According to MassDEP, a force main of this length carrying such a low volume of wastewater may cause the anaerobic waste to aerate and create odors, and collect within the system; the DEIR should identify any design or flow measures that will be implemented to ensure that adequate flow will be maintained in the wastewater system. I encourage the Proponent to consult with MassDEP and the Charlton Water and Sewer Commission regarding the proposed design of the wastewater system. If necessary, the DEIR should describe any changes to the design and/or permitting requirements. Additional information requested by MassDEP should be provided in the Response to Comments section of the DEIR.

Climate Change

Governor Baker's Executive Order 569: Establishing an Integrated Climate Change Strategy for the Commonwealth (EO 569; the Order) was issued on September 16, 2016. The Order recognizes the serious threat presented by climate change and directs Executive Branch agencies to develop and implement an integrated strategy that leverages state resources to combat climate change and prepare for its impacts. The Order seeks to ensure that Massachusetts will meet GHG emissions reduction limits established under the Global Warming Solution Act of 2008 (GWSA) and will work to prepare state government and cities and towns for the impacts of climate change. I note that the MEPA statute directs all State Agencies to consider reasonably foreseeable climate change impacts, including additional greenhouse gas emissions, and effects, such as predicted sea level rise, when issuing permits, licenses and other administrative approvals and decisions. M.G.L. c. 30, § 61.

The GHG Policy and requirements to analyze the effects of climate change through EIR review play an important role in this statewide strategy. These analyses advance proponents' understanding of a project's contribution and vulnerability to climate change. I strongly encourage the Proponent to consider complementary approaches – such as incorporation of renewable energy generation and inclusion of low impact development in site design - which can improve the project's resiliency, reduce GHG emissions and conserve and sustainably employ the natural resources of the Commonwealth.

Adaptation and Resiliency

The region's climate is expected to experience higher temperatures and more frequent and intense storms. The Northeast Climate Science Center at the University of Massachusetts at Amherst has developed projections of changes in temperature, precipitation and sea level rise for each river basin in Massachusetts. This data is available through the Climate Change Clearinghouse for the Commonwealth at www.resilientMA.org. By the end of the century, average temperature in the Quinebaug Basin is expected to rise by 3.9 to 11.1 degrees Fahrenheit (F), including an increase in the number of days with temperatures over 90 degrees F from 11 to 66 days. During the same time span, the average annual precipitation in the Quinebaug Basin is

expected to increase by 1.7 to 8.9 inches, most of which is expected to occur in the winter with increasing dry days in the summer.

The Town is a participant in the Commonwealth's Municipal Vulnerability Preparedness (MVP) program. The MVP program is a community-driven process to define natural and climate-related hazards, identify existing and future vulnerabilities and strengths of infrastructure, environmental resources and vulnerable populations, and develop, prioritize and implement specific actions the Town can take to reduce risk and build resilience. The DEIR should discuss potential effects of climate change to the project site and describe features incorporated into the designs of the projects that will increase the resiliency of the site to likely climate change impacts. I encourage the Proponent to consult the data available from the Town, including the findings of its *Community Resilience Building Workshop* (May 2018) and additional reports it may have prepared, and the resilientMA.org website to develop climate change scenarios for the site and identify potential adaptation measures. The *Massachusetts State Hazard Mitigation & Climate Adaptation Plan* (2018) and EEA's *Climate Change Adaptation Report*[4] (September 2011) may provide additional resources to assist in this analysis.

The DEIR should describe the proposed storage tank and how it will improve the resiliency of the site. It should identify site elements that will be designed to minimize impacts associated with sea level rise, more frequent and intense storms and extreme heat waves including, but not limited to:

- Ecosystem-based adaptation measures to reduce heat island effect and mitigate stormwater runoff, such as integration of tree canopy cover, rain gardens, and low impact development (LID) stormwater management techniques;
- Stormwater management system design that will accommodate rainfall under projected climate conditions;
- Use of on-site renewable energy systems that may provide added resiliency during periods of power loss during storms;
- Protection of critical infrastructure and emergency generator fuel supplies from effects of extreme weather;
- Elevation of first floor uses and critical infrastructure above designated or projected base flood elevations or riverine peak flows, based on best available data and modeling;
- Emergency generators to allow for select common areas and other emergency and life safety systems, including water and wastewater pumps, to remain operational in the event of an extended power outage.

As noted above, the site may be subject to increased temperature through the urban heat island effect and increased stormwater flooding caused by storms under future climate conditions. The DEIR should review potential risks and vulnerabilities of the site and identify design measures intended to increase the project's resiliency to these risks and vulnerabilities. I note that increasing landscaped open space may help minimize urban heat island effects and

[4] Available online at http://www.mass.gov/eea/docs/eea/energy/cca/eea-climate-adaptation-report.pdf

flood damage. In the DEIR, the Proponent should describe any additional design features that may provide resiliency and support adaptation under future climate scenarios.

Greenhouse Gas Emissions

This project is subject to review under the GHG Policy. The DEIR should include an analysis of GHG emissions and mitigation measures in accordance with the standard requirements of the Policy, which requires projects to quantify carbon dioxide (CO_2) emissions and identify measures to avoid, minimize or mitigate these emissions. The analysis should quantify the CO_2 emissions associated with building energy use (stationary sources), transportation-related emissions (mobile sources) and lost carbon and sequestration associated with the extensive land alteration.

The ENF did not provide an analysis of the project's GHG emissions or review potential mitigation measures. The DEIR should include a GHG analysis prepared in accordance with the GHG Policy, guidance provided in the comment letter submitted by the Department of Energy Resources (DOER), which is incorporated in this Certificate in its entirety, and this Scope. The DEIR should identify and commit to mitigation measures to minimize the project's GHG emissions.

Stationary Sources

The DEIR should include an analysis that calculates and compares GHG emissions associated with: 1) a Base Case that conforms to the 9th Edition of the Massachusetts Building Code, which references the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 90.1-2013 and the International Energy Conservation Code (IECC) 2015 and 2) a Mitigation Alternative that achieves greater reductions in GHG emissions. The Town has adopted the Massachusetts Stretch Energy Code (SC). Therefore, the project will be required to meet the applicable version of the SC in effect at the time of construction. The SC increases the energy efficiency code requirements for new construction (both residential and commercial) and for major residential renovations or additions in municipalities that adopt it. The current SC requires a reduction in energy use of 10 percent compared to that achieved by complying with the baseline energy provisions of the State Building Code. As noted by DOER, an updated SC will take effect in August 2020 with new Massachusetts amendments to ASHRAE 90.1-2013-Appendix G. The base Code provisions will not change. To accurately evaluate mitigation measures for this project, and in light of the imminency of these amendments, the Base Case for the proposed building should be established using the base Building Code with comparisons to building performance based on the updated SC.

The GHG analysis should clearly demonstrate consistency with the key objective of MEPA review, which is to document the means by which Damage to the Environment can be avoided, minimized and mitigated to the maximum extent feasible. The DEIR should identify the model used to analyze GHG emissions, clearly state modeling assumptions, explicitly note which GHG reduction measures have been modeled, and identify whether certain building design or operational GHG reduction measures will be mandated by the Proponent to future occupants or merely encouraged for adoption and implementation. The DEIR should include the modeling

printouts for each alternative and emission tables that compare base case emissions in tons per year (tpy) with the Preferred Alternative showing the anticipated reduction in tpy and percentage by emissions source. Other tables and graphs, such as the table of mitigation measures recommended by DOER, may also be included to convey the GHG emissions and potential reductions associated with various mitigation measures as necessary. The DEIR should provide the data and analyses in the format requested in DOER's letter.

The DEIR should present an evaluation of mitigation measures identified in the GHG Policy Appendix and in DOER's comment letter. In particular, the feasibility of each of the mitigation measures outlined below should be assessed for each of the major project elements, and if feasible, GHG emissions reduction potential associated with major mitigation elements should be evaluated to assess the relative benefits of each measure. The DEIR should explain, in reasonable detail, why certain measures that could provide significant GHG reductions were not selected, either because it is not applicable to the project or is deemed technically or financially infeasible. It should include a review of available financial incentives potentially available for the project, as described in DOER's comment letter. At a minimum, the DEIR should consider the following GHG mitigation measures:

- Above-Code continuous roof and wall insulation and avoiding glass curtain wall assemblies to minimize heat loss and uncontrolled infiltration through the building envelope;
- Electric space heating and water heating using air source heat pumps (ASHP) or variable refrigerant flow (VRF) systems;
- High-albedo roofing materials, external shading and windows with improved solar heat gain coefficient (SHGC);
- Energy recovery ventilation;
- Rooftop solar PV systems and/or solar-ready roofs;
- LED lighting, both exterior and interior; and,
- Incorporating lighting motion sensors, climate control and building energy management systems

The DEIR should thoroughly analyze the feasibility and benefits of incorporating on-site energy generation and renewable energy sources. At a minimum, the DEIR should analyze the feasibility of employing solar PV systems and document the expected energy savings and reduction in GHG emissions. The DEIR should include an analysis of utility company incentives, Alternative Energy Credits (AEC) and other incentives for energy-efficiency design and on-site renewable energy generation and evaluate the applicability of the incentive programs to the project.

The DEIR should describe the potential output of one or multiple rooftop solar PV systems, an economic analysis associated with a first-party or third-party installation, and an analysis of how mechanical systems could be arranged to maximize the area that could be dedicated to PV systems. This analysis should include assumptions about available rooftop areas, potential system outputs, and installation costs ($/watt). The Proponent should refer to DOER's comment letter and additional information on DOER's web site

(http://www.mass.gov/eea/energy-utilities-clean-tech/renewable-energy/solar/). Roofs should be constructed in such a way that they are "solar ready" in order to facilitate future installation of PV systems. If PV is not financially feasible, the Proponent should commit in the DEIR to revisit the PV financial analysis on a regular basis and to implement PV when the financial outcomes meet specified objectives.

Mobile Sources

The GHG analysis should include an evaluation of potential GHG emissions associated with mobile emissions sources. The DEIR should follow the guidance provided in the Policy for *Indirect Emissions from Transportation* to determine mobile emissions for Existing Conditions, Build Conditions, and Build Conditions with Mitigation. The DEIR should describe truck loading and staging activities and estimate GHG emissions from idling.

The Proponent should thoroughly explore means to reduce overall single occupancy vehicle trips. The DEIR should also review measures to promote the use of low-emissions vehicles, including installing electric vehicle charging stations and providing designated parking spaces for these vehicles. More information on electric vehicle infrastructure can be found at the following websites: http://www.afdc.energy.gov/afdc/fuels/electricity.html and http://www.oregon.gov/ODOT/HWY/OIPP/docs/EVDeployGuidelines3-1.pdf. The Build with Mitigation model should incorporate TDM measures and any roadway improvements implemented by the project, and document the associated reductions in GHG emissions.

Land Alteration

This project will alter approximately 80 acres of land. In accordance with the GHG Policy, projects that alter over 50 acres of land are generally required to analyze the carbon associated with removal of trees and soil disturbance during the construction period and loss of carbon sequestration. The purpose of this analysis is to develop an *estimate*, not an exact accounting of GHG emissions associated with land alteration, including removal of trees and release of sequestered carbon in soil. The DEIR should describe the methodology and data used to develop the analysis, identify associated impacts on GHG emissions, and identify measures to avoid, minimize and mitigate impacts.

I encourage the Proponent to consult with the MEPA Office on the development of this analysis. The Proponent may use accepted estimators such as the EPA's Greenhouse Gas Equivalencies calculator[5] or develop its own analysis that should consider current and proposed land uses, forest types, and soil types; assumptions regarding carbon sequestration of soils and trees; and the ability to consider a one-time loss of sequestration (e.g. tree clearing) as well as loss of potential sequestration over a certain time period.

I expect the DEIR to identify significant mitigation measures commensurate with the project's impacts on the site's capacity to sequester and store carbon. Potential mitigation measures may include a commitment to install rooftop solar PV, funding programs that add or

[5] https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references

maintain biomass for sequestration purposes (such as tree planting, carbon credits, forest conservation or commitments to implement forest restoration practices), protecting forested land through a Conservation Restriction or other means and reusing forested material for furniture or building materials.

Construction Period

The ENF listed mitigation measures that will be implemented to minimize sedimentation and erosion and air quality impacts and committed to the reuse and/or recycling of construction waste. The DEIR should identify the schedule for construction of various elements and phases. It should describe all construction-period impacts and mitigation relative to noise, air quality, water quality, and traffic. It should confirm that the project will require its construction contractors to use Ultra Low Sulfur Diesel fuel, and discuss the use of after-engine emissions controls, such as oxidation catalysts or diesel particulate filters. More information regarding construction-period diesel emission mitigation may be found on MassDEP's web site at http://www.mass.gov/dep/air/diesel/conretro.pdf.

The DEIR should provide more information regarding the project's generation, handling, recycling, and disposal of construction and demolition debris (C&D) and identify measures to reduce solid waste generated by the project. I encourage the Proponent to commit to C&D recycling activities as a sustainable measure for the project. The Proponent is reminded that any contaminated material encountered during construction must be managed in accordance with the MCP and with prior notification to MassDEP. The project will be required to develop a Stormwater Pollution Prevention Plan (SWPP) in accordance with its NPDES CGP to manage stormwater during the construction period. The DEIR should describe stormwater management measures that will be implemented during construction. It should describe potential construction period dewatering activities and identify mitigation measures. All construction-period mitigation measures should be listed in the draft Section 61 Findings.

Mitigation and Draft Section 61 Findings

The DEIR should include a separate chapter summarizing all proposed mitigation measures, including construction-period measures. This chapter should also include draft Section 61 Findings for each permit to be issued by State Agencies. The DEIR should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and a schedule for implementation. The DEIR should clearly indicate which mitigation measures will be constructed or implemented based upon project phasing, either tying mitigation commitments to overall project square footage/phase or environmental impact thresholds, to ensure that adequate measures are in place to mitigate impacts associated with each development phase.

Responses to Comments

The DEIR should contain a copy of this Certificate and a copy of each comment letter received. It should include a comprehensive response to comments on the ENF that specifically address each issue raised in the comment letter; references to a chapter or sections of the DEIR

alone are not adequate and should only be used, with reference to specific page numbers, to support a direct response. 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.

Circulation

The Proponent should circulate the DEIR to those parties who commented on the ENF, 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. Per 301 CMR 11.16(5), the Proponent may circulate copies of the EIR to commenters in CD-ROM format or by directing commenters to a project website address. However, the Proponent must make a reasonable number of hard copies available to accommodate those without convenient access to a computer and distribute these upon request on a first-come, first-served basis. The Proponent should send correspondence accompanying the CD-ROM or website address indicating that hard copies are available upon request, noting relevant comment deadlines, and appropriate addresses for submission of comments. The DEIR submitted to the MEPA office should include a digital copy of the complete document. A copy of the DEIR should be made available for review at the Charlton Public Library.[6]

K. Theoharides

June 26, 2020
Date

Kathleen A. Theoharides

Comments received:

06/02/2020 Charlton Conservation Commission
06/04/2020 Michael J. Savage
06/04/2020 Michael C. Jacobs
06/05/2020 Charlton Water and Sewer Commission
06/11/2020 Town of Sturbridge
06/11/2020 Worcester Regional Chamber of Commerce
06/15/2020 Elizabeth Gilbride
06/16/2020 Board of Underwater Archaeology (BUAR)
06/16/2020 Massachusetts Department of Transportation (MassDOT)
06/16/2020 Robert F. Lemansky
06/17/2020 Massachusetts Department of Environmental Protection (MassDEP)/Central Regional Office (CERO)
06/23/2020 Department of Energy Resources (DOER)

KAT/AJS/ajs

[6] Requirements for hard copy distribution or mailings will be suspended during the Commonwealth's COVID-19 response. Please consult the MEPA website for further details on interim procedures during this emergency period: https://www.mass.gov/orgs/massachusetts-environmental-policy-act-office.

Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Stephanie Pollack, MassDOT Secretary & CEO

massDOT
Massachusetts Department of Transportation

June 16, 2020

Kathleen Theoharides, Secretary
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114-2150

RE: Charlton: 241 Sturbridge Road–ENF
(EEA #16211)

ATTN: MEPA Unit
Alex Strysky

Dear Secretary Theoharides:

On behalf of the Massachusetts Department of Transportation, I am submitting comments regarding the Environmental Notification Form for the 241 Sturbridge Road project in Charlton, as prepared by the Office of Transportation Planning. If you have any questions regarding these comments, please contact J. Lionel Lucien, P.E., Manager of the Public/Private Development Unit, at (857) 368-8862.

Sincerely,

David J. Mohler
Executive Director
Office of Transportation Planning

DJM/jll

Ten Park Plaza, Suite 4150, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
www.mass.gov/massdot

cc: Jonathan Gulliver, Administrator, Highway Division
Patricia Leavenworth, P.E., Chief Engineer, Highway Division
Barry Lorion, P.E., MassDOT District 3 Highway Director
Neil Boudreau, Assistant Administrator of Traffic and Highway Safety
Ann Sullivan, MassDOT District 3 Traffic Engineer
Central Massachusetts Regional Planning Commission
Planning Board, Town of Charlton

TO: David J. Mohler, Executive Director
Office of Transportation Planning

FROM: J. Lionel Lucien, P.E, Manager
Public/Private Development Unit

DATE: June 16, 2020

RE: Charlton: 241 Sturbridge Road – ENF
(EEA #16211)

The Public/Private Development Unit (PPDU) has reviewed the Environmental Notification Form (ENF) submitted by Vanasse and Associates, Inc. on behalf of Charlton Developer, LLC ("the Proponent") for the 241 Sturbridge Road project in Charlton. Located at 241 Sturbridge Road (State Route 20), the 194.7 acre site currently consists of undeveloped land. The project proposes to develop a 1.4 million square foot warehouse facility.

Based on the information presented in the ENF, the project is expected to generate 2,258 unadjusted weekday daily vehicle trips, exceeding the MEPA threshold for trip generation. The project will also include 500 parking spaces, 210 loading bays, and 250 trailer storage spaces.

Access to the site will be provided via a new driveway onto Route 20, therefore requiring a Vehicular Access Permit from MassDOT. The site is also 2.3 miles from the Interstate 84 (I-84) and Interstate 90 (I-90) interchanges in Sturbridge. The ENF includes a transportation impact study that generally conforms to *MassDOT/EEA Transportation Impact Assessment (TIA) Guidelines*. MassDOT offers the following comments on the TIA.

Study Area

The TIA includes the following roadways and intersections in the TIA study area:

- Route 20 (Charlton Road, Sturbridge Road, and Worcester Road) at:
  - Route 31 (signalized)
  - Route 169/South Sturbridge Road (signalized)
  - Route 49 (signalized)
  - The Center at Hobbs Brook Driveway (signalized)

The study area is sufficient for capturing the transportation impacts of the project.

Trip Generation

Vehicle trip generation provided in the TIA is estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition). The project entails

constructing 1.4 million square feet of industrial warehouse space. As such, Land Use Code (LUC) 150: Warehousing was used. Accordingly, the unadjusted trip generation is 2,258 average weekday daily trips. Of these trips, 193 would occur in the morning peak hour, and 196 trips would take place in the evening peak hour.

Trip Distribution

The directional distribution of trips to and from the project site was determined based on a review of existing traffic patterns within the study area and proximity to I-84 and I-90. 40% of trips will enter/exit the site directly to/from the east on Route 20. After that, 35% total of trips continue to utilize Route 20 to/from the east, while 5% of traffic utilizes Sturbridge Road. Moving further east, 30% of total trips continue to use Route 20 while 5% of total trips use Masonic Home Road. Meanwhile, 60% of trips will enter/exit the site from the west on Route 20. From there, 55% of total trips continue to utilize Route 20 to/from the west with 5% using Route 49.

Site Access

Access to the site is proposed via a new signalized driveway onto Route 20. According to the TIA, a review of the warrants specified in the Manual on Uniform Traffic Control Devices (MUTCD) indicates that the installation of a traffic control signal at the project site driveway intersection with Route 20 is warranted under 2027 Build conditions. The Proponent recommends that the traffic control signal be installed at the intersection to serve both the project and the driveway to the JRD Technology Center located opposite the project site.

The signalized driveway and internal roadways will be a minimum of 24 feet wide to accommodate the wide turning movements of trucks and the taper lengths for the proposed turn lanes on Route 20 at the site driveway will be designed in accordance with MassDOT's Project Development and Design Guide. The TIA states that the lines of sight at this location exceed the minimum distances necessary for the intersection to function safely and efficiently. In addition, the stopping sight distance for eastbound vehicles approaching the projected back of queue at the proposed traffic signal should be evaluated to determine if adequate sight distance will be provided.

The Proponent should address the above comments as part of the permitting process, commit to the implementation of this proposed improvement prior to site occupancy, as well as coordinate with MassDOT for any design work.

Safety

Crash data was collected for the study area intersections for the most recent five-year period available (2013 to 2017). Two intersections have notable crash statistics. The crash rate for the Route 20 at Route 31 intersection for this time period is .80, which is slightly higher than the .78 statewide average crash rate and lower than the .89 MassDOT District 3 average crash rate. Likewise, the Route 20 at Route 169/South Sturbridge Road intersection has a 1.60 above-

average crash rate. This intersection is also listed as a 2014-2016 Highway Safety Improvement Program (HSIP) High Crash Cluster location. A Road Safety Audit (RSA) was conducted at both intersections in 2019 by Toole Design Group as part of a nearby project (Tree House Brewing) that resulted in a series of recommendations for safety enhancements that are being implemented by Tree House Brewing. These improvements include: adding retroreflective back plates to the signal indications; replacement/upgrading of existing signs; reapplying pavement markings; and adjusting traffic signal timing.

Traffic Analysis

The TIA includes capacity analyses for the 2019 Existing, 2027 No-Build, and 2027 Build conditions for the study area intersections. In addition to background growth and project-related trip generation, the Proponent incorporated anticipated traffic from four nearby projects in the development of future traffic conditions. Moreover, the Proponent included the roadway changes from the aforementioned safety improvements in the analysis. The TIA also includes a queue length analysis and associated tables/graphs.

In the 2019 Existing conditions, most of the study area intersections operate at LOS B or better in both morning and evening peak hours, though the Route 20 at Route 31 intersection currently operates at LOS C in both peaks. Little to no change in LOS is anticipated between the 2019 Existing, 2027 No-build and 2027 Build conditions. The exception to this is the evening peak hour at the Route 21 at Route 31 intersection, which will operate at LOS C in the 2027 No-build conditions and LOS D in the 2027 Build conditions. Moreover, evening peak hour LOS at the Route 20 at Route 169 and South Sturbridge Road intersection, which currently operates at LOS A, would drop to LOS B in the 2017 No-build and Build conditions. The Route 20 at Site Driveway intersection will operate at LOS B in the 2027 Build conditions with the proposed traffic signal in place. Based on the information in the TIA, the study area roadways can accommodate the anticipated site-generated traffic.

Multimodal Access and Facilities

Currently, no regular scheduled transit services are provided along the segment of Route 20 near the project site. The Proponent should monitor available transit services in the event that new transit services are provided near the project site in the future. The Proponent plans to provide bicycle storage onsite. Pedestrian accommodations to be provided on the site should be detailed as part of the permitting of the project. All internal site circulation must be consistent with a Healthy transportation Policy design approach that provides adequate and safe accommodation for all roadway users, including pedestrians, bicyclists, and public transit riders. Guidance on healthy transportation design is included in the MassDOT *Project Development and Design Guide*.

Parking

The TIA states that the project will include 500 vehicle parking spaces, 210 loading bays, and 250 truck storage spaces. The Proponent should compare the amount of proposed parking spaces to the average demand for parking set forth in ITE's Parking Generation Manual (4th edition). The Proponent should also consider land banking some of these spaces until and unless needed.

Transportation Demand Management Program

The TIA proposes a Transportation Demand Management (TDM) program intended to promote travel to and from the site by way of transit, biking, or walking. The following TDM measures were included in the TIA:

- A transportation coordinator will be assigned to coordinate the TDM program;
- Information regarding commuting options will be posted in a central location and/or otherwise made available to employees of the project;
- The transportation coordinator will facilitate a rideshare matching program for employees to encourage carpooling;
- A "welcome packet" will be provided to employees detailing available commuter options and will include the contact information for the transportation coordinator and information to enroll in the employee rideshare program;
- Specific amenities will be provided to discourage off-site trips, including providing a break-room equipped with a microwave and refrigerator; offering direct deposit of paychecks; flexible work schedules; and other such measures to reduce overall traffic volumes and travel during peak traffic volume periods;
- Consideration of installation of electric vehicle charging stations within the project site and providing preferential parking for car/vanpools;
- Pedestrian accommodations will be incorporated within the project site; and
- Secure bicycle parking should be provided at an appropriate location within the site.

The Proponent should consider scheduling as much of its trucking operations as possible outside of peak hours. The Proponent should also utilize a Traffic and Construction Management plan during construction, which will be coordinated with MassDOT and the Town of Charlton.

MassDOT recommends that no further environmental review be required based on transportation-related issues. The Proponent should work with MassDOT and the Town of Charlton to finalize plans for the installation of the traffic signal at the Route 20/Site Driveway intersection as part of the permitting process. If you have any questions regarding these comments, please contact me at (857) 368-8862.

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Central Regional Office • 8 New Bond Street, Worcester MA 01606 • 508-792-7650

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Kathleen A. Theoharides
Secretary

Martin Suuberg
Commissioner

June 17, 2020

Secretary Kathleen A. Theoharides
Executive Office of Environmental Affairs
100 Cambridge Street, 9th Floor
Boston, MA 02114

Attention: MEPA Unit – Alex Strysky

Re: Environmental Notification Form (ENF)
241 Sturbridge Road
Charlton
EEA #16211

Dear Secretary Theoharides,

The Massachusetts Department of Environmental Protection's ("MassDEP") Central Regional Office has reviewed the ENF for the proposed distribution warehouse on 241 Sturbridge Road in Charlton (the "Project"). Charlton Developer LLC (the "Proponent") is proposing to construct a 50-foot-high 1,408,840 square foot (sf) warehouse on 80 acres of an undeveloped 194.7-acre site on Sturbridge Road (State Route 20). The Project includes 207 loading bays, four garage entrances, a 500-space employee parking area and a 30,000 sf office area. A 1,200-foot driveway will run from Sturbridge Road to the front entrance of the warehouse and around its circumference. There will be storage for up to 250 trailers on the eastern and western lengths of the warehouse opposite the loading bays. The Project site is located approximately 2.3 miles east of the I-90/I-84 Interchange.

McKinstry Brook, identified as a Coldwater Fisheries Resource ("Coldwater Fishery") by the Massachusetts Division of Fisheries and Wildlife, flows along the northeastern edge of the property. The 114.7 acres on the Project property that are not part of the Project contain Bordering Vegetated Wetlands (BVW) and Isolated Vegetative Wetlands. A Limited Project to widen the culvert at McKinstry Brook on Sturbridge Road will temporarily alter 190 sf of BVW, 960 sf of Land Under Waterbody/Waterway (LUWW) and 57 linear feet of Bank. The Limited Project will permanently alter 105 sf of BVW, 255 sf of LUWW and 49 linear feet of Bank. The ENF states that "there are no BVW or other wetland alterations planned at the Project site. Alterations are at the Limited Project on Sturbridge Road widening at McKinstry Brook culvert." The (wetlands) Limited Project part of the Project but it is not clear whether the 80 acres comprising the Project includes this area. The Proponent should clarify this issue in the Draft Environmental Impact Report (DEIR).

The Project is under MEPA review because it meets or exceeds the following review thresholds:

- 11.03(1)(a)(1) - Direct alteration of 50 or more acres of land;
- 11.03(1)(a)(2) - Creation of 10 or more acres of impervious area;
- 11.03(6)(b)(13) - Generation of 2,000 or more New adt on roadways providing access to a single location;
- 11.03(6)(b)(15) - Construction of 300 or more New parking spaces at a single location.

The Project is required to file an EIR.

The Project requires the following State Agency Permits:

MassDEP - Superseding Order of Conditions (if local Order is appealed);
MassDEP - Booster Pump Station Permit - WS32 (if a booster pump station is needed)
MassDEP - Stormwater Discharge Well - BRP WS 06 UIC Registration
Massachusetts Department of Transportation - Application for Permit to Access State Highway

Alternatives Analysis:

The Proponent considered three alternatives to the Project. The first alternative, "No Action," leaves the Project site undeveloped. This alternative would result in no adverse environmental impacts but would not meet the Project goal of providing temporary and permanent jobs in an area zoned for industrial development. The second alternative, "Alternative Sites in South Central Massachusetts," states that GFI Partners had searched for suitable locations throughout South Central Massachusetts for a new warehouse. The Project site was considered the only one of adequate size with the necessary infrastructure and appropriate zoning. The relationship between GFI Partners and the Proponent is not explained, nor is the "South Central Massachusetts" search area described. The ENF does not identify other potential sites that were considered in the search area and rejected. The third alternative, "Driveway Location," discussed placement of the driveway entrance further west along the Project site. However, the placement of the driveway at that location did not offer a safe and clear sight distance for westbound drivers on Sturbridge Road. The fourth alternative, "Warehouse Facility," is the Preferred Alternative.

MassDEP offers the following comments:

Water Supply

The Project will use 8,800 gallons per day (gpd) of water, which will be supplied by an 8-inch water line under Sturbridge Road at the junction of Sturbridge Road and Mayberry Drive. The water line will continue along Sturbridge Road and then proceed up the 1,200-foot driveway to a 25'x25' fire protection pump house. No details were provided regarding the plumbing equipment or configuration within the pump house. A 3-inch high-pressure water line will circle the warehouse and a 2-inch water line will connect to the warehouse for potable water. There will be seven hydrants along the high-pressure line for fire protection. Exhibit C, Proposed Conditions, shows a 200,000-gallon insulated steel bolted water storage tank adjacent to the pump house. This tank was not mentioned in the description and MassDEP assumes it is for fire suppression water. The Proponent should verify that this water is for fire protection rather than for drinking water because MassDEP would not approve potable water coming from this line. If the tank is for fire protection, a cross connection device must be provided on the water line connecting to it to prevent water in the fire tank from re-entering the distribution system.

The Project is located at the top of a hill. The Town of Charlton is currently developing a hydraulic model to determine the system's water pressure at the proposed area. At this time, the Town of Charlton believes there will be enough pressure to serve the warehouse. If the hydraulic model determines a booster pump station is needed to provide water to the Project, then a WS32 permit application for the booster station must be submitted to MassDEP for review.

An Assembly of God Church (the "Church") is located across the street from the Project driveway. The Church has a registered public water supply well (PWS# 2054071) with extremely high concentrations of sodium and chloride. The proposed warehouse and steep driveway are upgradient to the Church well and will likely have salt applied during the winter, which may exacerbate the salt and chloride concentrations at the Church well. The new water line should include a tee at the location where the water line connects to the Project driveway so the Church can tie into the water line and abandon its public water supply well. In addition, MassDEP recommends that the Proponent develop a program to minimize the use of salt while maintaining safety for the vehicles during cold weather. This is of particular concern because nearby McKinstrey Brook is a Coldwater Fishery.

The top of the hill will be removed as fill for the lower part to build the warehouse. If ledge is encountered at the top of the hill and blasting is required, then perchlorate-free blasting material must be used.

The Town of Southbridge must approve all connections to the Charlton Water line because Southbridge treats and supplies the water. Southbridge was not notified of the Project prior to the ENF filing.

Wastewater

The Project will generate 7,500 gpd of wastewater. A pump station located outside the warehouse will pump the wastewater through a 3-inch force main and convey it to an existing 8-inch-diameter municipal sewer line located approximately one mile east of the Project driveway on Sturbridge Road. The 8-inch sewer line will carry the wastewater to the Charlton Wastewater Treatment Facility (WWTF) for treatment and final disposal. It is not clear how the projected wastewater flow was determined, or what the proposed pump station pumping capacity will be. The force main is very long for such a small amount of flow. When the wastewater discharges into the sewer, the anaerobic waste will aerate and could be odorous.

The DEIR should identify the party responsible for maintaining the pump station, either the Charlton Sewer Department or the Proponent. The force main should include air releases at all high points. The ENF does not describe how the pump station will be provided with power during a power outage. The DEIR should discuss this issue. The Proponent may consider placing the pump station at the base of the Project driveway. The pump station could be maintained by the Charlton Sewer Department, and this location would allow other businesses in the area to connect to the sewer.

The WWTF has met its discharge permit limits with the exception of zinc and occasional effluent bacteria. The WWTF wet weather flows are high due to infiltration and inflow (I/I) entering the collection system. The Proponent is encouraged to assist the Town with I/I removal.

The Proponent should discuss its wastewater management plan in the DEIR, addressing the following issues:

1. Whether the proposed warehouse facility includes a cafeteria.
2. Whether any non-sanitary wastewater is expected to be generated from the Project.
3. How the rate of wastewater generation (7,500 gpd) was determined.
4. The design of the proposed sewer system (pump and force main), which should provide a minimum of 2 feet per second cleaning velocity, prevent potential odor issues, and ensure the downstream sewer has adequate capacity for the proposed pump station flow.

The proposed sewer does not require a MassDEP sewer permit.

Wetlands

The widening of Sturbridge Road at and within the vicinity of McKinstry Brook is proposed within BVW, LUWW, Bank, Bordering Land Subject to Flooding ("BLSF"), Riverfront Area, and Buffer Zone. A portion of the grading, driveways, and parking associated with the proposed distribution warehouse at 241 Sturbridge Road will be located in Buffer Zone, however the Project will not alter wetland resource areas at this location.

The ENF quantifies 190 sf of temporary and 105 sf of permanent impacts to BVW; 960 sf of temporary and 255 sq. ft. of permanent impacts to LUWW; and 57 linear feet of temporary and 49 linear feet of permanent impacts to Bank, all associated with the extension of the McKinstry Brook culvert beneath Sturbridge Road. The Proponent does not quantify alterations to BLSF and Riverfront Area, although it is likely that these resources will be impacted by the widening of Sturbridge Road at, and within 200 feet of, the culvert. FEMA Flood Maps estimate that Sturbridge Road floods at McKinstry Brook during a 100-year flood. The ENF also does not discuss potential temporary impacts due to the installation of a new water line and sewer main beneath Sturbridge Road. The DEIR should include accurate resource area impacts for all impacted wetland resources, and should clarify if the 328,325 sf of Buffer Zone impacts quantified in the ENF includes Buffer Zone work proposed along Sturbridge Road.

The Proponent will be required to file a Notice of Intent ("NOI") for the Project with the Charlton Conservation Commission ("the Commission") and MassDEP. Upon receipt of the NOI, MassDEP may provide comments to the Proponent and the Commission in the File Number Notification Letter issued following MassDEP's technical review of the NOI.

The NOI and DEIR should clarify which Limited Project applies to the widening of Sturbridge Road, accurately quantify all areas of temporary and permanent impacts to wetland resource areas and Buffer Zones, provide detailed restoration and replication plans for all resource area impacts, and describe how the Project will meet the Performance Standards for work in Bank (310 CMR 10.54(4)), BVW (310 CMR 10.55(4)), LUWW (310 CMR 10.56(4)), BLSF (310 CMR 10.57(4)(a)), and Riverfront Area (310 CMR 10.58(4)).

Stormwater

The Project will create 52 acres of new impervious surfaces, and is subject to the Massachusetts Stormwater Standards. The Proponent must demonstrate compliance with the DEP Stormwater Management Regulations at 310 CMR 10.05(6)(b) and 310 CMR(6)(k-q). The stormwater management design at 241 Sturbridge Road includes hydrodynamic separators, subsurface infiltration chambers, and an infiltration basin to achieve compliance with the requirements of the Massachusetts Stormwater

Standards. The ENF did not describe any proposed stormwater management improvements associated with the widening of Sturbridge Road. The Proponent should incorporate improvements to the stormwater management system along Sturbridge Road and the stormwater discharges to McKinstry Brook into the plan for widening Sturbridge Road.

Stormwater discharges to or near a Coldwater Fishery are subject to the requirements of Stormwater Standard 6, which in part requires the removal of 44% Total Suspended Solids prior to discharge into an infiltration BMP. The DEIR and NOI should include a discussion of the existing and proposed culverts carrying McKinstry Brook beneath Sturbridge Road that evaluates whether the existing culvert meets the Massachusetts Stream Crossing Standards ("SCS"), whether the proposed culvert will meet SCS, and if not, whether a larger culvert can be installed to provide improved passage for fish and wildlife, and reduce the likelihood that Sturbridge Road will flood during large storm events.

The DEIR and NOI should demonstrate that source controls, pollution prevention measures, erosion and sediment controls, and the post-development drainage system will be designed in compliance with the stormwater elements of the Massachusetts Wetlands Protection Act regulations (310 CMR 10.00), applicable standards, and the Massachusetts Stormwater Handbook. A stormwater management report should be prepared that includes, at a minimum, 1) calculations of water quality volume, infiltration volume, total suspended solids removal, and peak rates of runoff for predevelopment and post-development site, 2) a description of stormwater Best Management Practices (BMPs) and structural features, and 3) stormwater system design plans presented at a readable scale. Documentation to support statements that the stormwater system design provides adequate protection for wetland resources also should be included in the DEIR and NOI to show compliance with the stormwater standards and Stormwater Management Handbooks. The Proponent should use precipitation data provided in the TR-55 or that required by the local municipality, whichever is more conservative, for the purposes of preparing the stormwater analysis. The potential impact of increased precipitation frequency and volume due to climate change should be considered during the design of the stormwater management system.

McKinstry Brook is listed in the Final Massachusetts Year 2016 Integrated List of Waters (December 2019) as Category 5 "Water Requiring a TMDL," with impairments for debris, trash, and Escherichia Coli. Discharges to McKinstry Brook, including those associated with the widening of Sturbridge Road, should be consistent with the established water quality standards and goals for the reduction of Escherichia Coli, debris, and trash. Accordingly, the DEIR and NOI should provide sufficient information to demonstrate that the stormwater management system will be designed to address the water quality impairments covered by the applicable Total Maximum Daily Loads.

Pollution prevention and source control measures are required for compliance with Standard 4 in the Stormwater Management regulations. Deicing and contaminated snow stockpiling and disposal should be controlled in accordance with a source control and pollution prevention plan for this project. Snow should not be stored or disposed in wetland resources and snow management should be done in accordance with the MassDEP Snow Disposal Guidance. This guidance document is available at the following MassDEP website: https://www.mass.gov/guides/snow-disposal-guidance. MassDEP recommends that the Proponent commit to using the minimum amount of deicing and abrasive agents. In addition, a schedule for parking lot sweeping should be timed to occur a minimum of twice per year (preferably once in spring and once in fall) for removal of leaves and sediment.

The Project includes a land use with higher potential pollutant load ("LUHPLL"). As a site with a LUPPHL, the stormwater management system must be designed, constructed, and operated in compliance with Standard 5 of the Stormwater Management Standards. Specifically, the stormwater management system must include a treatment train that provides for at least 44% Total Suspended Solids (TSS)

removal prior to discharge to the infiltration BMP and be designed to treat 1.0 inch of runoff times the total impervious area at the post-development site. If the parking lot, trailer parking, and/or loading bays have the potential to generate runoff with high concentrations of oil and grease, the treatment trains for these areas must include oil grit separators, sand filters, filtering bioretention areas, or the equivalent. Stormwater discharges from LUHPPLs must also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L.c. 21, §§ 26-53 and the regulations promulgated thereunder at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.

The proposed stormwater management system includes the use of subsurface stormwater infiltration structures/units. The Proponent should be aware that all underground infiltration structures are subject to jurisdiction of the MassDEP Underground Injection Control (UIC) program. The structures must be registered with the MassDEP UIC program through the submittal of a BRP WS 06 UIC Registration – Stormwater Discharge Well.

The Project construction activities will disturb one or more acres of land and therefore will require a NPDES Stormwater Permit for Construction Activities. The Proponent can access information regarding the NPDES Stormwater requirements and an application for the Construction General Permit at the EPA website: https://www.epa.gov/npdes/2017-construction-general-permit-cgp.

The Proponent should also determine if a U.S. EPA NPDES Dewatering General Permit is required prior to commencing project construction (https://www.epa.gov/npdes-permits/dewatering-general-permit-dgp-massachusetts-new-hampshire).

MassDEP encourages the Proponent to incorporate rooftop solar into the final design of the building in order to mitigate anticipated adverse environmental impacts caused by the destruction of forest, increased traffic, and increased impervious surfaces associated with the Project.

The ENF describes the preservation of an existing access path to McKinstry Brook. The DEIR should discuss how the Proponent plans to provide public access to and potential parking for this path in the future.

Air Quality

Construction activity for the Project must conform to current Massachusetts Air Pollution Control regulations governing nuisance conditions at 310 CMR 7.01, 7.09 and 7.10 and not cause or contribute to a condition of air pollution due to dust, odor or noise. The Proponent should institute measures to prevent and minimize dust, noise, and odor nuisance conditions, which may occur during construction of the Project.

Vehicles and Equipment

All non-road diesel equipment rated 50 horsepower or greater should meet EPA's Tier 4 emission limits, which are the most stringent emission standards currently available for off-road engines. If a piece of equipment is not available in the Tier 4 configuration, then the Proponent should use construction equipment that has been retrofitted with appropriate emissions reduction equipment. Emission reduction equipment includes EPA-verified, CARB-verified or MassDEP-approved diesel oxidation catalysts (DOCs), or Diesel Particulate Filters (DPFs). The Proponent should maintain a list of the engines, their emission tiers, and, if applicable, the best available control technology installed on each piece of equipment on file for MassDEP review.

MassDEP reminds the Proponent that unnecessary idling (i.e., in excess of five minutes), with limited exception, is not permitted during the construction and operations phase of the project (310 CMR 7.11). With regard to construction period activity, typical methods of reducing idling include driver training, periodic inspections by site supervisors, and posting signage. In addition, to ensure compliance with this regulation once the Project is occupied, MassDEP requests that the Proponent commit to installing permanent signs limiting idling to five minutes or less on-site.

MassDEP appreciates the opportunity to comment on the Project. If you have any questions regarding these comments, please do not hesitate to contact JoAnne Kasper-Dunne, Central Regional Office MEPA Coordinator, at (508) 767-2716.

Very truly yours,

Mary Jude Pigsley
Regional Director

cc: Commissioner's Office, MassDEP

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF
ENERGY AND ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENERGY RESOURCES
100 CAMBRIDGE ST., SUITE 1020
BOSTON, MA 02114
Telephone: 617-626-7300
Facsimile: 617-727-0030

Charles D. Baker
Governor

Karyn E. Polito
Lt. Governor

Kathleen A. Theoharides
Secretary

Patrick Woodcock
Commissioner

23 June 2020

Kathleen Theoharides, Secretary
Executive Office of Energy & Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02114
Attn: MEPA Unit

RE: 241 Sturbridge Road Warehouse, Charlton, Massachusetts, EEA #16221

Cc: Maggie McCarey, Director of Energy Efficiency, Department of Energy Resources
Patrick Woodcock, Commissioner, Department of Energy Resources

Dear Secretary Theoharides:

We've reviewed the Environmental Notification Form (ENF) for the above project. The proposed project consists of a 1.4M sf warehouse. We understand that an office portion may also be a part of the warehouse. For this project, we expect key mitigation measures to include:

- Quality envelope with framed, insulated walls, continuous insulation, low air infiltration, and no thermal-bridging;
- Energy recovery ventilation;
- Electrification of space and water heating with air source heat pump/VRF systems;
- Rooftop solar PV readiness;
- LED lighting and integrated lighting controls;

Codes and Baseline

Massachusetts Stretch Code applies to this project. Stretch Code requires a 10% energy performance improvement over ASHRAE 90.1-2013-Appendix G plus Massachusetts amendments. Accordingly, the baseline for this project should be based on ASHRAE 90.1-2013 plus Massachusetts amendments.

In August 2020, an update to the Massachusetts Stretch Code is planned to take effect. The Stretch Code planned to take effect in August also uses ASHRAE 90.1-2013-Appendix G and the 10% improvement remains unchanged. However, there will be several new, or changed, Massachusetts amendments including: C402.1.5 (envelope), C405.3 and C405.4 (lighting), C405.10 (EV charging), and C406 (additional efficiency measures). In addition, the additional C406 measures are increased from 2 to 3 while the list of additional measures to choose from are expanded.

To accurately estimate Mitigation Level for this project, we recommend that the baseline be set at the Stretch Code provisions planned to take effect in August 2020 as this will likely be the code that will be used for building construction.

Key Mitigation Strategies

Integrity of Building Envelope

High-performing envelope is essential to successful GHG mitigation, affordability, and resilience. Key strategies for maintaining integrity of envelope are:

- Continuous insulation;
- Reducing air infiltration;
- Eliminating thermal bridges;
- Limiting or eliminating use of glass “curtain wall” and spandrel assemblies;
- Maximizing framed, insulated walls sections;
- Avoiding excessive window areas.

The thermal performance of windows, curtain walls, and spandrels is typically about **70 to 80% less** than the thermal performance of the framed, insulated wall assemblies. Accordingly, buildings which use extensive curtain wall, spandrel, and windows have compromised envelope performance which impacts energy consumption, emissions, resiliency, and affordability.

External Shading and Solar Heat Gain Coefficient (SHGC)

External shading and improved window solar heat gain coefficient (SHGC) can greatly reduce cooling peaks and end uses. For subsequent submissions, we recommend examining building self-shading, external shading, and varying window SHGC as a function of exposure. Shading and using lower SHGC-rated glass can be targeted and strategic to serve areas more exposed to sun and/or less shaded. Subsequent submissions should examine effect of strategic external shading and improved SHGC to examine effect of non-ventilation related cooling peaks and end uses.

Electrification of Space and Water Heating

Electrification of space and water heating is a key mitigation strategy with significant short- and long-term implications on GHG emissions. Massachusetts grid emissions rates continue to decline with the implementation of clean energy policies that increase renewable electricity sources. The implication is that efficient electric space and water heating with cold climate air source heat pump and VRF equipment has dramatically lower emissions profiles than fossil-fuel based heating options, including best-in-class condensing natural gas equipment.

Currently (2020), efficient electric heating has approximately **45% lower emissions** than 95% efficient condensing natural gas heating and, by 2050, efficient electric heating is expected to have approximately **85% lower emissions**.

Efficient electrification of space and water heating entails use of:

- Cold-climate air source heat pumps and variable refrigerant flow (VRF) for space heating;
- Air source heat pumps for water heating; or
- Ground source heat pumps.

Heat pumps and/or VRFs used for space heating may qualify for incentives, including Alternative Energy Credits (AECs) and MassSave®. Additionally, electrifying space and water heating could eliminate the need for gas service from some or all the project, potentially eliminating costs associated with gas utility distribution.

Ventilation and Energy Recovery

Ventilation should be reduced to as small as possible while still meeting minimum ventilation standards. Ventilation energy recovery should be applied to the maximum extent possible.

Rooftop Solar PV or Solar Thermal

Rooftop PV or solar thermal collectors can provide significant GHG benefits as well as significant financial benefits. We recommend preliminary solar access evaluations be performed for the project.

The warehouse building will offer significant opportunities for rooftop solar. We recommended maximizing solar readiness and committing to solar-readiness above-and-beyond code minimum solar readiness.

Incentives

Buildings which incorporate the above strategies can qualify for significant incentives:

- MassSave® performance-based incentives offer incentives for every kWh or therm saved compared to a program-provided energy model. The above energy efficiency strategies offer opportunities for large kWh and therm savings.

- Alternative Energy Credits (AECs) offer incentives to electrify building space heating.

- Massachusetts SMART program provides significant incentives for solar development on top of federal and state tax incentives. The SMART plan includes pathways which allow solar production to be sold without off-takers. This may be of potential interest to building developers as this allows them to develop rooftop solar without necessarily engaging with building tenants. For this reason, setting aside rooftop solar PV areas helps ensure that building owners' ability to monetize the roof is not impacted.

Recommendations for subsequent Submissions

Recommendations are as follows:

1. The energy modeling baseline should be set at the Stretch Code provisions planned to take effect in August 2020.

2. Separate warehouse modeled performance from potential office performance.

3. Evaluate efficient electrification.

4. Consider examining improving both UA performance and reducing air-infiltration, in tandem, to evaluate effect on non-ventilation related heating and cooling peaks and end use. Consider examining envelope improvement (UA and air infiltration, in tandem) which result in elimination of perimeter thermal systems.

5. Examine strategic improvements to external shading and improved SHGC and evaluate effect on non-ventilation related cooling peaks and end use.

6. When examining envelope improvements:

    a. Above code-threshold envelope is recommended (vertical walls, windows, roofs and exposed floors). Priority should be given to increasing continuous insulation. Distinguish between R value of batt and R value of continuous insulation. Indicate planned wall assembly U value and wall construction type (mass, wood, metal stud, etc.). Confirm that the relationship between R-value and assembly U-factor conform to Appendix A of the Code.

    b. Window to wall ratios should be maintained at or below the values shown in Table G3.1.1-1 of ASHRAE 90.1-2013.

    c. Glass curtain wall/spandrel systems should be avoided.

7. For envelope values:

    a. When using Appendix G, Base Code reference building shall conform to ASHRAE 90.1 2013, Chapter 5 Envelope, Table 5.5-5 values, and fenestration limit per Table G3.1.1-1 and Massachusetts amended C401.2.4.

    b. Mitigated building envelopes shall equal or surpass 2018 IECC Tables C-402.1.3, C402.1.4, and C-402.4

8. Report the following for each building:

Vertical Envelope	**Appendix G Reference Building (ASHRAE 90.1 2013, Table 5.5-5 and Appendix G fenestration limits)**		**Mitigated Building Minimum Requirement (2018 IECC Tables C-402.1.3, 402.1.4, 402.4)**		**Mitigated Building**	
	Percent of Vertical Area	**U value**	**Percent of Vertical Area**	**U value**	**Percent Vertical Area**	**U Value**
Framed, insulated Wall	%	value	%	value	%	value
Opaque glass, curtain wall, shadowbox, spandrel	%	value	%	value	%	value
Vision glass	%	value	%	value	%	value
	100%	***Aggregate U***	***100%***	***Aggregate U***	***100%***	***Aggregate U***
		Aggregate R		***Aggregate R***		***Aggregate R***

9. Aggregate U is calculated as: ($U_1\%_1 + U_2\%_2 + U_3\%_3$) where U is the respective thermal transmittance values and $\%_1$ is the percent area of framed insulated wall; $\%_2$ is the percent area of opaque glass, curtain, or shadowbox; and $\%_3$ is the percent area of vision glass. Only areas adjacent to conditioned space are counted, areas adjacent to unconditioned spaces (e.g. parking garages, mechanical penthouses) are not counted. Aggregate R is the inverse of aggregate U.

10. Evaluate solar PV for all buildings.

    a. Map out maximum area available for solar thermal or PV to scale;

    b. Coordinate solar potential with skylights.

11. Submit project modeling files to the DOER on a flash drive.

12. Compare model results total and individual end uses with representative, prototype buildings developed by Pacific Northwest National Labs/Department of Energy found at the link below. Provide a summary explaining potential differences.

    https://www.energycodes.gov/sites/default/files/documents/BECP_901_2013_Progress_Indicator_0_0.pdf

    http://www.energycodes.gov/sites/default/files/documents/2013EndUseTables.zip

    https://www.energycodes.gov/commercial-energy-cost-savings-analysis

13. Include a table similar to the example below. For "code value" ensure that the value incorporates any improved efficiency per requirements of Section C406.1 of the Massachusetts' amendments.

Measure/Area	**Base Code**	**Proposed**	**% Change**	**Comment**
AC Efficiency (EER)				
Bldg 1	*code value*	*design value*	%	
Bldg 2	*code value*	*design value*	%	
ERV Effectiveness (%)				
Bldg 1	*code value*	*design value*	%	
Bldg 2	*code value*	*design value*	%	
Boiler (% efficiency)				
Bldg 1	*code value*	*design value*	%	
Bldg 2	*code value*	*design value*	%	
LPD (Watts/sq ft)				
Bldg 1	*code value*	*design value*	%	
Bldg 2	*code value*	*design value*	%	
(continue to include service water, equipment, etc)				

Sincerely,

Paul F. Ormond, P.E.
Energy Efficiency Engineer
Massachusetts Department of Energy Resources

Brendan Place
Clean Energy Engineer
Massachusetts Department of Energy Resources

The COMMONWEALTH OF MASSACHUSETTS
BOARD OF UNDERWATER ARCHAEOLOGICAL RESOURCES
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
251 Causeway Street, Suite 800, Boston, MA 02114-2136
Tel. (617) 626-1014 Fax (617) 626-1240
www.mass.gov/orgs/board-of-underwater-archaeological-resources

June 16, 2020

Kathleen A. Theoharides, Secretary
Executive Office of Energy and Environmental Affairs
Attention: Alex Strysky, MEPA Unit
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: 241 Sturbridge Road (EOEA #16211), Charlton, MA

Dear Secretary Theoharides,

The staff of the Massachusetts Board of Underwater Archaeological Resources has reviewed the above-referenced proposed project as detailed in the *Environmental Monitor* of 20 May 2020 and offers the following comments.

The Board has conducted a preliminary review of its files, the MHC's MACRIS archaeological site inventory geospatial database, historic maps, aerial imagery, and secondary literature sources to identify known and potential submerged cultural resources in the proposed project area. No record of any underwater archaeological resources was found. Based on the results of this review, the Board expects that this project is unlikely to impact submerged cultural resources.

However, in the event that heretofore-unknown submerged cultural resources are encountered during the course of the project, the Board expects that the project's sponsor will take steps to limit adverse effects and notify the Board and the Massachusetts Historical Commission, as well as other appropriate agencies, immediately, in accordance with the Board's *Policy Guidance for the Discovery of Unanticipated Archaeological Resources*.

The Board appreciates the opportunity to provide these comments as part of the MEPA review process. Should you have any questions regarding this letter, please do not hesitate to contact me at (617) 626-1014, or by email at david.s.robinson@mass.gov.

Sincerely,

David S. Robinson
Director

/dsr
Cc: Brona Simon, MHC

From:	Arthur Allen
To:	Strysky, Alexander (EEA)
Cc:	Conway.Rose
Subject:	EEA No. 16211, 241 Sturbridge Rd., Charlton
Date:	Tuesday, June 2, 2020 5:03:36 PM

Hello:

As the consultant for the Charlton Conservation Commission I am taking this opportunity to send you my comments, for the record as follows:

1. The wetland resource area boundaries for this project have not been confirmed by the Conservation Commission. It is my understanding that they will request formal confirmation of wetland boundaries as part of the required Notice of Intent process. It is also my understanding that there may be a request for a preliminary site walk to review the wetland boundaries prior to filing the Notice of Intent.

2. The project proposes 106 linear feet of temporary and permanent stream Bank stabilization. This triggers the wildlife habitat evaluation requirements in the Wetlands Protection Act Regulations.

3. Due to the extent of proposed earthen slopes, within Buffer Zones that slope to wetlands; I recommend that a robust project phasing plan be submitted that includes temporary erosion and siltation controls as well as rapid stabilization of disturbed areas. Any proposed vegetative stabilization of slopes should incorporate native plant species that are pollinator friendly.

Thank you,

Arthur Allen, Vice President
EcoTec, Inc.
508-752-9666, ext. 24
https://www.ecotecinc.us

Town of Charlton
Water and Sewer Commission
37 Main Street
Charlton, MA 01507

Phone: (508) 248-4953
Fax: (508) 248-0917

June 5, 2020

Secretary Kathleen A. Theoharides
Massachusetts Executive Office of Environmental Affairs
Attn: MEPA Office
100 Cambridge St., Suite 900
Boston, MA 02114

Re: 241 Sturbridge Road, Charlton, MA Warehouse

Dear Secretary Theoharides,

I am writing this letter on behalf of the Charlton Water and Sewer Commission (CWSC) regarding the proposed warehouse at 241 Sturbridge Road in Charlton, MA. At this time the applicant has provided preliminary plans of the project to staff for comments only. There have not been any formal requests to the CWSC by the applicant to extend the existing water or sewer infrastructure in that area and no approvals have been given by the CWSC for any such extensions.

The CWSC will consider any such requests when the applicant makes such submittals.

Sincerely,

Peter Boria
Water/Sewer Superintendent
Town of Charlton
37 Main Street
Charlton, MA 01507

Town of Sturbridge

Jean M. Bubon, AICP Town Planner
Email: jbubon@sturbridge.gov

301 Main Street, Sturbridge, MA 01566
508-347-2508

June 11, 2020

Mr. Alex Strysky
MEPA Office
100 Cambridge Street
Boston, MA 02114

Re: EEA No. 16211 – 241 Sturbridge Road, Charlton

Dear Mr. Strysky:

The Town of Sturbridge Planning Department has reviewed the ENF submitted by Charlton Developer, LLC for a proposed 1,408,840 square foot warehouse and related site improvements on the property located at 241 Sturbridge Road, Charlton and offers the following comment for your consideration:

1. The Town of Sturbridge Planning Department is significantly concerned about the increase in heavy truck and automobile congestion that the proposed development may produce for the Town of Sturbridge sections of Route 20 and the impact that may have on both the signalized and un-signalized intersections along the corridor. During the virtual site visit, it was noted that the project is projected to generate 2, 258 vehicle trips per day and that 60% of the traffic, both trucks and employees will be coming from and going to the area west of the site. Most notably to gain access to I90 and I84 in the Town of Sturbridge. It has been noted that the signalized intersections at Podunk Pike (Route 49) and the Center at Hobbs Brook driveway were studies as part of the report submitted, however, the un-signalized intersection was not reviewed.

   Additionally, since the date of this Study (April 2020), the Town of Sturbridge is currently in the process of reviewing a project for New England Cold – this will be an approximately 82,500 square foot cold storage food distribution facility located at the project site situated at Sturbridge Technology Park (6 Picker Road). Traffic studies are currently underway for this facility which is expected to generate approximately 130 truck trips per day and 40 vehicle trips per day, all of which must also use this un-signalized intersection.
   We would like to request that this intersection be included in the analysis. Further we would like to request that if warranted specific mitigation be included for this intersection such as the addition of a turning lane or other appropriate measures.

2. The information provided at the Virtual site visit also noted that the intersection of Route 20 and Route 49 would result in a degradation in LOS over no-build conditions for Route 20 westbound through movements from LOS B to LOS C and for Route 49 left-turn movements from LOS C to LOS D and vehicle queues were shown to increase by up to two vehicles with the addition of the project related traffic.

   We would like to request that this intersection be further evaluated to see if mitigation may be appropriate such as timing of signals, etc.

3. A Road Safety Audit was conducted by McMahon Transportation Engineers and Planners in January 2015 for MassDOT. The audit identified a number of improvements that were needed within the corridor during this formal safety evaluation of the Roadway. Several of the recommendations have been implemented by MassDOT, however, many have not been moved forward. This study reviewed the intersections at Route 20 at Hobbs Brook Plaza, Route 20 at Fiske Hill Road/Picker Road and Route 20 at Route 49, to name several in the study area of this proposed project. A range of items including were noted as needing improvement corridor wide and at specific intersections studied including those associated with: vehicle speeds, traffic volumes and unfamiliarity with the corridor, inattention and distracted driving, access management and roadway geometry, pavement conditions and markings, no pedestrian and bicycle enhancements.

   We would like to ask that the impacts of this proposed warehouse be further evaluated and that the measures noted in the Road Safety Audit be considered. We are concerned that the additional traffic proposed on this corridor will exacerbate the need for these improvements to be completed.

Thank you for the opportunity to comment. If you require anything additional, please let me know.
Sincerely,

Jean M. Bubon

Jean M. Bubon, AICP
Town Planner

cc: Jeff Bridges, Town Administrator
Charles Blanchard, Planning Board Chair
Planning Board
Board of Selectmen

June 15, 2020

Secretary Kathleen A. Theoharides
Massachusetts EOEA
100 Cambridge St.
Boston, MA 02114

Attention: MEPA unit, Alex Strysky

Re: EEA# 16211, 241 Sturbridge St., Charlton, MA

Dear Secretary Theoharides,

I am a resident of Charlton, Mass., and am in support of the anticipated warehouse that is in consideration for development at 241 Sturbridge Rd. The location of 241 Sturbridge Rd. is perfect for this warehouse, as it located far enough from the town's center and residential neighborhoods. Although it should not affect these locations, it will benefit the residents of Charlton by creating a number of jobs and help increase tax revenue (which is much needed in our small town).

I have full confidence in the developers who plan on building the warehouse, as they are familiarized with Charlton's development plan and will build a fairly large facility in accordance with all the town's bylaws. I am well-acquainted with other properties that they have developed over the years and know that any changes made to 241 Sturbridge Rd. will help enhance the property value in the surrounding area while still protecting a majority of the land.

Please take all of these points into consideration while reviewing this project, as it truly will benefit the residents of Charlton, Mass.

Sincerely,

Elisabeth Gilbride

Elisabeth Gilbride

June 4, 2020

Secretary Kathleen A. Theoharides
Massachusetts EOEA
100 Cambridge Street
Boston MA 02114

Attention: MEPA unit, Alex Strysky

Re: EEA# 16211, 241 Sturbridge Street Charlton MA

Dear Secretary Theoharides,

As a resident of the town of Charlton I would like to offer my opinions with regard to the anticipated warehouse terminal facility presently being considered for development at the 241 Sturbridge Road site. I believe it is under a MEPA review by your office. From all that I can see the project has more positives than negatives for the town, and I think it should be approved.

Over the years Charlton has done a lot of thinking about our future, trying to balance the need for economic activity to generate jobs and tax revenues, while maintaining the small town feel that most of us would like to preserve. The Charlton Community Development Plan which was written in 2004 does a pretty good job of laying out a growth path that should benefit most townspeople.

The property along Route 20, also known as Sturbridge Street, was designated as an area for future development because it has minimal impact on major residential neighborhoods, and the town center. It also is a large undeveloped area with easy access to the Rte 84 and Rte 90 intersection, making it attractive for certain industrial uses.

The developers who want to build the warehouse project on the land have gone about things the right way. From the start they have made themselves familiar with Charlton's Development Plan and have met with various boards and town officials. The plan they have drafted is a wise one, as it is able to allow them to build a significant size facility with over 200 bays, and about 500 permanent employees, and they are doing so while protecting 65% of the land in its present state. They are also proposing to make improvements to the McKinstry Street Brook culvert and improve Route 20 in front of the property with turn lanes and needed widening of the road.

By all accounts, there does not seem to be any environmental impact to water resources, riverways, or other protected vegetation, and there will a large buffer surrounding the built-out portion of the property. My understanding is that the proposed building may require a height variance but given how it is shielded in the interior of the parcel, I can't see this being a big problem.

Oftentimes when a town makes big plans for the future you have little idea whether they actually come to pass. In this instance it looks like we have a great opportunity to create hundreds of needed jobs, increase tax revenue by a million or so dollars, and do so while implementing our development plan with minimal impact or downside.

I hope in your review of this project you will consider these points and act favorably on the proposal. Thank you for your time.

With sincere appreciation,

Michael C. Jacobs

3 A. Vinton Road

Charlton, MA 01507

Robert F. Lemansky
157 Sunset Drive
Charlton, Massachusetts 01507

June 16, 2020

Secretary Kathleen A. Theoharides
Massachusetts Executive Office of Environmental Affairs
Attn: MEPA Office
100 Cambridge St., Suite 900
Boston, MA 02114

Re: 241 Sturbridge Road, Charlton, MA Warehouse

Dear Secretary Theoharides,

I am writing this letter on behalf of myself, Robert F. Lemansky of 157 Sunset Drive Charlton, Massachusetts 01507, regarding the proposed warehouse at 241 Sturbridge Road Charlton. I have been a Charlton resident for 44 years and have been in business in the Town of Charlton for 47 years. The issue I have with this project is the lack of sufficient roadway to fully service the proposed 1,400,000 sq. ft. facility that has been proposed. Charlton's Route 20 is described as a four (4) lane U.S. highway which is inaccurate. The Traffic Study within the ENF does not give sufficient discussion on this short coming. Within the Traffic Study is the fact that within a certain location East of the proposed project Rte. 20 is only ONE LANE East and ONE LANE West, thus creating a "bottle neck". This four to two lane area starts in Charlton City just heading West on Rte. 20 just before the Rte. 169 intersection and continues for approximately 3,000 feet. It is because of this four to two lane situation, that causes traffic stopping during the holiday weeks of Thanksgiving, Christmas, and Easter. During this time traffic coming from the Sturbridge direction heading East, drivers go to the App on their phone and discover if they take Rte. 49 to Brookfield Road into Charlton City at the Rte. 20/31 intersection they can avoid this "bottle neck", and it works except for the fact that for local residents coming South on Rte. 31 cannot enter on to Rte. 31 because the traffic queue is backed all the way up from the Rte. 20/31 intersection. Also at this time the traffic on Rte. 20 is virtually stop and go.

It needs to be noted that there have been improvements made to Rte. 20 over the years. The mentioned East of the proposed project is where the problems lie, narrow lanes, 11 feet or less, no breakdown lanes, and the reduction in lanes from four to two.

Please remember, within the traffic study, when the stated trips of 2,200 + trip per day are not with a 16 foot, 3,500 pound passenger vehicle but rather a 80 foot, 80,000 lbs. tractor trailer truck that has a longer acceleration time and a longer stopping time. This creates longer waiting times of stop and go of these vehicle types. Also within the Study it is stated both intersections of Rte. 169 and Rte. 31 have *above* average accidents.

For this project to be considered, a reconstruction of the entire Rte. 20 East of the Project, all the way to Auburn Rte. 12 & 20 would be necessary. This reconstruction would include four (4) 12

foot travel lanes with mandatory breakdown lanes. The alternative to Rte. 20 reconstruction would require that all tractor trailer traffic must ENTER AND EXIT the project from the West, thus no increased truck traffic through Charlton.

Thank you for your time in this matter.

Robert F. Lemansky

cc:
State Senator Anne Gobi
State Representative Mr. Paul Frost
State Representative Mr. Peter Durant

June 4, 2020

Secretary Kathleen A. Theoharides
Massachusetts EOEA
Attention: MEPA
100 Cambridge Street
Boston MA 02114

Re: 241 Sturbridge Road, EEA #16211

Dear Secretary Theoharides,

I write in support of the proposed warehouse project to be built at 241 Sturbridge Road in Charlton MA, which is currently before the MEPA for review.

The development of the 241 Sturbridge Road property as proposed is a uniquely appropriate use for this parcel, given its location, its minimal impact on the environment, its consistency with the town's adopted planning goals, and because of its potential positive impact on the local and regional economy.

The warehouse project as proposed by Charlton Developer LLC is a well-considered use plan that will only impact about 80 acres of a total 194+ acre parcel located along Route 20. The warehouse structures when built will provide 500 newly created jobs, and the activity will mostly impact the roughly 2.3 mile stretch of Route 20 from the property to the intersections with Federal Highways 84 and 90. For a transportation based project such as this, the location could not be better located to minimize the impact on the local community.

It is also worth noting that this project does not propose to have any significant disturbance of wetlands, water resources, or other environmentally sensitive areas. It was with great foresight that the residents of Charlton planned for the eventual disposition of this property with just such a use, one that provides numerous jobs and significant tax revenue (approximately one million dollars) without major impact to the surrounding neighborhood.

I respectfully ask that in your review of this application, you consider these factors, and approve this worthy and welcome proposal.

Thank you for your consideration of my thoughts on this matter.

Sincerely,

4 Jun 2020

Michael J. Savage
5 Manor Forest Circle
Charlton, MA 01507

WORCESTER REGIONAL
CHAMBER OF COMMERCE
RECRUIT | RETAIN | INCUBATE

June 11, 2020

Secretary Kathleen A. Theoharides
Massachusetts EOEA
Attention: MEPA unit, Alex Strysky
100 Cambridge Street
Boston MA 02114

Re: EEA# 16211, 241 Sturbridge Street Charlton MA

Dear Secretary Theoharides,

As an advocate for the positive economic development of the Greater Worcester area, I write in support of the Charlton Developer LLC proposed warehouse facility to be built on Route 20 at 241 Sturbridge Street in Charlton.

Given the transportation hub created by the intersection of US Routes 84 and 90 in south central Worcester County, commercial and industrial activity that support the transportation of goods is key to the future of economic growth to the region. This state-of-the-art warehouse facility at 241 Sturbridge Road, Charlton, will maximize the capitalization of this property's proximity to the 84/90 highway intersection. Further the 1.4 million square feet of 50-ft high bay warehousing, with 207 loading bays and 4 drive in door entrances, will provide the Greater Worcester Area with critical transportation infrastructure to serve innumerable businesses throughout central Massachusetts.

The Central Mass Regional Planning Council has identified just such a use as key to ongoing economic growth in the region that builds on our existing strengths. The Greater Worcester Area Council Economic Development Strategy, adopted in 2012, specifically calls for the capitalization of this transportation crossroads asset. In addition, the Town of Charlton Commercial Development Plan (2004) identifies the stretch of Route 20 where this property is located as a "commercial and industrial corridor", specifically identifying warehouses as an appropriate end use for the land.

All told the studies prepared to support this proposal estimate that the project will generate 250 construction jobs, 500 permanent jobs at the warehouse facility, and over $1 million in new local tax revenue. For this much economic activity to be generate at a project that only impacts 80 acres of a 194.7-acre overall parcel is a terrific boon to the area, especially in this time of great economic uncertainty. That the project will also provide for needed widening of Route 20 in that area, as well as improvements to the McKinstry Brook culvert is just an additional reason to support this significant addition to the regional transportation supply chain infrastructure.

311 Main Street, Suite 200 • Worcester, Massachusetts 01608
T 508.753.2924 | E info@worcesterchamber.org | W www.worcesterchamber.org

The Worcester Regional Chamber of Commerce has a strong relationship with the leadership of the Charlton Developer, LLC and has worked with them on several projects in Worcester and the region. In this regard they have built a positive relationship with area business and municipal leaders.

For these reasons, I respectfully ask that you conduct the MEPA review of the Charlton Developer warehouse project and give it all appropriate consideration.

Yours truly,

Timothy P. Murray
President & CEO