

## 8.0 CONSTRUCTION PERIOD

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### 8.1 Potential Impacts and Mitigation

The following sections detail the potential construction-related impacts of the project and the measures proposed to prevent such impacts. The mitigation measures proposed are designed to preclude and/or minimize construction-period impacts to both the built and natural environment. The location of the Wayland Town Center project on a pre-developed site removed from existing roadways, residences and business, should further insure that the construction-period impacts are minimal.

#### *8.1.1 Erosion and Sedimentation*

The Wayland Town Center project will comply with all applicable federal, state and local regulations and the conditions of all permits obtained for this project. A Stormwater Pollution Prevention Plan (SWPPP) will be developed in accordance with the NPDES Phase II General Permit and a Notice of Intent for Stormwater Discharges Associated with Construction Activities will be submitted to the US Environmental Protection Agency prior to the start of construction. During construction the contractor will be required to comply with the NPDES General Permit and the SWPPP for the project.

Erosion controls that will be implemented for the project are detailed below.

#### *8.1.1.1 Controls During Construction*

The following stabilization measures will be taken to minimize and prevent on-site erosion and sedimentation of adjacent resource areas during construction:

- ◆ Disturbed areas shall be kept as small as possible.
- ◆ Disturbed areas of the construction site where final grades have been reached, or those areas that will not be re-disturbed for 30 days or more, shall be stabilized by the seventh day after the last disturbance. Stabilization may be accomplished by temporary seeding, permanent seeding, mulching or other equivalent practice.
- ◆ Disturbed areas shall be stabilized by seeding and mulching. All areas where final grading, placing of topsoil and seeding can be accomplished rapidly shall be so treated to establish cover.

Appropriate erosion and sediment control practices must remain in place and be maintained until stabilization of the area affected by the control measure occurs.

The following structural measures will be taken to minimize on-site erosion and sedimentation of adjacent resource areas during construction:

- ◆ Disturbed areas shall be protected from stormwater runoff. Runoff shall be diverted from flowing over disturbed slopes by the use of temporary drainage swales with haybale check dams.
- ◆ Silt fences/haybales or equivalent sediment controls shall be installed along all side slope and down slope boundaries of the construction area.
- ◆ Temporary and permanent sediment traps shall be constructed as part of the drainage system. Sediment traps shall be located at all inlets to the storm drainage system during construction and shall remain in place and be maintained until disturbed areas are stabilized. Permanent sediment traps consisting of 4-foot deep sumps shall be constructed in the catch basins.
- ◆ Sediment shall be retained on-site within the limit of work areas.
- ◆ The bioretention basins shall be used as temporary sedimentation basins during construction and shall be cleaned of sediments after construction.
- ◆ Rip rap splash pads shall be constructed at all drain outlets.

In addition to the previously described controls, construction shall conform to all specifications as designated on the site plan, and in any other documents or permits issued in association with this project. Additional measures will include the following:

- ◆ Anti-tracking pads or other means shall be used to minimize off-site movement of soil with vehicles.
- ◆ Sanitary wastes generated on-site shall be treated and/or disposed of in accordance with applicable state and local requirements.
- ◆ Construction site waste materials shall be properly contained on-site and disposed of at an off-site location in accordance with local and state regulations.

A spill contingency plan will be implemented during construction, including the following provisions:

- ◆ Equipment necessary to quickly attend to inadvertent spills or leaks shall be stored on-site in a secure but accessible location. Such equipment shall include but not be limited to the following: safety goggles, chemically resistant gloves and overshoe boots, water and chemical fire extinguisher, sand and shovels, suitable absorbent materials, storage containers and first aid equipment.
- ◆ Spills or leaks shall be treated properly according to material type, volume of spillage and location of the spill. Mitigation shall include preventing further spillage, containing

the spilled material in the smallest practical area, removing spilled material in a safe and environmentally sound manner, and remediating any damage to the environment.

- ◆ For spills of less than five (5) gallons of material, mitigation shall include source control and containment and clean-up with absorbent materials or other applicable means, unless an imminent hazard or other circumstances dictate that the spill should be treated by a professional emergency response contractor.
- ◆ For spills greater than five (5) gallons of material contact shall be initiated immediately with the MA DEP Hazardous Waste Incident Response Group at (617) 792-7653 and an approved emergency response contractor. Information shall be collected and relayed to the emergency response contractor or coordinator as to the type of material spilled, the location of the spill, the quantity spilled, and the time of the spill. The contractor shall proceed with the prevention of further spillage, containment and/or clean-up.
- ◆ If there is a Reportable Quantity (RQ) release during the construction period, the National Response Center shall be notified immediately at (800) 424-8802. Within 14 days a report shall be submitted to the EPA regional office describing the release, the date and circumstances of the release and the steps taken to prevent another release. This Stormwater Pollution Prevention Plan shall be updated to reflect any such steps or actions taken.

#### *8.1.1.2 Controls After Construction*

The following measures will be taken to minimize the impact of stormwater on downstream resources after construction:

- ◆ A checklist of all maintenance items shall be developed and used for each stormwater treatment component. Each time an inspection is completed or a maintenance procedure is performed, it shall be documented on the checklist. The checklist shall be kept on the project site.
- ◆ Parking lot and driveway areas shall be swept to remove sediments before they can enter the catch basins, twice annually, in the early spring and late fall, and on an as needed basis at other times.
- ◆ The deep sump catch basins, including the oil/grease traps, shall be inspected monthly and cleaned at least four times per year so as to prevent blockage and to remove accumulated sediments. All sediment and hydrocarbons shall be properly handled and disposed in accordance with local, state, and federal guidelines and regulations.
- ◆ The Vortechs Treatment Unit shall be inspected and cleaned in accordance with manufacturer's recommendations. The by-pass manholes shall be inspected and cleaned of any sediment or debris during the routine catch basin inspections discussed above.

- ◆ The compactor and loading areas shall be routinely inspected for spillage and clean as necessary.
- ◆ Landscape areas and edges of paved areas shall be routinely inspected for any signs of erosion or damaged curbing. Any necessary curb replacement, earth repair, reseeding or mulching shall be restored upon identification.
- ◆ Litter shall be routinely picked-up and removed from the parking areas and perimeter landscape areas. Leaves or trash shall be removed from catch basin grates when observed.
- ◆ No sodium based de-icing compounds shall be used on any areas of the project.
- ◆ No herbicides or pesticides shall be used on the site and the use of fertilizers is to be kept to a minimum. Fertilizers shall not be used closer than 50 feet from any bordering vegetated wetland, stream, bank, or other resource area, or from significant wildlife habitat.

In order to meet the above provisions during construction, the following maintenance measures will be undertaken:

- ◆ The contractor or designated site monitor shall have on the premises at all times an extra stockpile of new/unused haybales in a quantity of approximately 10% of the number of haybales required with stakes and 200 LF of silt fence for the purpose of making immediate repairs in erosion/sedimentation barriers as needed.
- ◆ Siltation barriers and other erosion and sediment control practices shall not be removed and shall be maintained until final stabilization (at least 70% vegetative cover or equivalent) of all up-gradient areas has occurred.

The General Permit Conditions require routine inspections of the site and careful documentation of events and conditions. The following inspection activities will be completed by a qualified, designated site monitor:

- ◆ Erosion control, sedimentation prevention and stormwater management measures shall be inspected at least once every two weeks throughout the construction period.
- ◆ All controls, outfalls and potential problem areas shall also be inspected within 24 hours of any storm exceeding 0.5 inches of precipitation.
- ◆ A log of inspection results shall be maintained on-site.
- ◆ All needed repairs or modifications shall be reported to the contractors to permit the timely implementation of required actions. Necessary repairs or modifications shall be implemented within seven (7) days of the inspection.

- ◆ The Stormwater Pollution Prevention Plan shall be modified within seven (7) calendar days to reflect any modifications to the pollution prevention measures required as a result of an inspection.
- ◆ Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sedimentation control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are assessable, they shall be inspected to ascertain whether control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking.
- ◆ A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the stormwater pollution prevention plan, and actions taken shall be made and retained as part of the stormwater pollution prevention plan for at least three years after the date of inspection. The report shall be signed by the permittee.
- ◆ Inspection and weekly reporting shall continue until final site stabilization (70% vegetative cover, or equivalent physical stabilization) is achieved.
- ◆ Final stabilized areas shall be inspected at least once every month for a minimum of three months.

### ***8.1.2 Noise and Vibration***

Every reasonable effort will be made to minimize the noise and vibration generated by construction activities. Mitigation measures will include the following:

- ◆ Using mufflers on construction equipment and maintaining intake and exhaust systems.
- ◆ Muffling enclosures on continuously running equipment, such as air compressors and welding generators.
- ◆ Replacing specific construction operations and techniques with less noisy and less vibratory ones where feasible (e.g., mixing concrete off-site instead of on-site).
- ◆ Scheduling equipment operations to keep average noise and vibration levels low, to synchronize noisiest and most vibratory operations with times of highest ambient noise levels, and to maintain relatively uniform noise levels.
- ◆ Turning off idling equipment.
- ◆ Locating noisy and vibratory equipment as far as possible from sensitive areas.

### **8.1.3 Dust**

During the construction period, temporary effects on ambient air quality adjacent to the construction site may occur. Impacts associated with construction activities will generate fugitive dust, which may result in localized increases in particulate levels.

Principal on-site sources of particulates include cleared areas, exposed storage piles, and unpaved areas. For each source type, fugitive emissions will depend on such factors as the properties of emitting surfaces (e.g., soil silt content, moisture content, and volume of spoils), meteorological variables and the construction practices employed. The site grading process or stockpiles of exposed earth are potential dust emitters during mechanical disturbance and transfer operations, as well as during high winds.

The construction contract will provide for a number of strictly enforced measures to be used by contractors to reduce potential emissions and minimize impacts. These measures include:

- ◆ Providing street cleaning during the active excavation process;
- ◆ Using wetting agents on areas of exposed soil on a scheduled basis;
- ◆ Using covered trucks;
- ◆ Minimizing spoils on the construction site;
- ◆ Monitoring of construction practices to ensure that unnecessary transfers and mechanical disturbances of loose materials are minimized;
- ◆ Minimizing storage of debris on-site; and
- ◆ Conducting periodic street cleaning to minimize dust accumulations.

The project contractors will adhere to Massachusetts General Law Ch. 90, Section 16A and 3.10 CMR 7.11, which prohibits the idling of engines of stopped vehicles in excess of five minutes. Note that cement trucks are excluded from this requirement while mixing and pouring cement. All other construction vehicles associated with the project will comply.

### **8.1.4 Traffic**

The construction period will generate truck traffic and construction employee traffic. The construction of the project will involve the use of designated routes, defined in coordination with Town of Wayland staff, prior to the start of construction. The project Proponent will require all contractors to access the site from Route 20. The use of local residential streets will be prohibited. The contractor will establish site trailers and staging areas to minimize impacts on traffic. Trucks will be required to wait in on-site staging areas and will be prohibited from waiting on Route 20.

The project Proponent is also committed to working with Town of Wayland and MassHighway officials to help ensure appropriate maintenance and protection measures are in place during the project's construction. Appropriate traffic maintenance plans will be developed during the off-site improvement design phase.

The off-site construction of the associated transportation improvements and utility relocations will be performed during off-peak travel periods. It is anticipated that traffic patterns would be maintained on any affected roadways at all times and that there would not be a need for a full road closure or detours during the construction period.

## **8.2 Demolition**

Prior to demolition of the existing buildings, the Proponent will put in place a health and safety program. This program will consist of installed protection materials and operational means and methods. The Proponent will seek to minimize the disturbance to neighbors caused by demolition or other site activities.

To the extent feasible, demolition materials, including unpainted and uncoated brick and concrete, will be reused on-site. These materials will be separated during the demolition process and crushed on-site for reuse as paving sub-base material. Demolition debris will be reused in accordance with DEP's guidelines regarding the recycling of asphalt, brick and concrete materials to the maximum extent feasible. The remaining demolition materials will be trucked to an appropriately licensed disposal facility.

## **8.3 Clean Construction Equipment Initiative/ Diesel Retrofit Program**

The DEP Diesel Retrofit Program, formerly called the Clear Air Construction Initiative of the Clean Construction Equipment Initiative, originated as an air quality mitigation measure for the Central Artery/Tunnel Project. The program encourages users of diesel construction equipment to install exhaust emission controls such as oxidation catalysts or particulate filters on their diesel engines.

While DEP requires participation in the Diesel Retrofit Program by municipalities applying for funding under the State Revolving Fund for water and wastewater projects, there is no requirement for participation by other project proponents.

The Proponent acknowledges the importance of emission control and will seek bids from companies that have made voluntary compliance with the Clean Construction Equipment Initiative / Diesel Retrofit Program a priority. Proper emission controls, use of clean fuels, control of truck and equipment idling times and conducting operations without affect to neighbors' clean air are all important priorities to the Proponent.

## 9.0 Sustainable Design

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