

# *Sears Farm Development*

Swansea,  
Massachusetts

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Prepared for **Town of Swansea**  
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July 2006

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# Due Diligence Report

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## Introduction and Summary of Findings

VHB prepared this report to evaluate the development potential and site development constraints of the 55-acre town-owned Sears Farm site (the Site) in Swansea, Massachusetts to support a retail center, office/business park or other suitable use. As part of its due diligence review, VHB evaluated existing property data, local and state regulations, and conducted a field reconnaissance to identify potential development constraints and existing traffic conditions.

To determine applicable permits and utility requirements, VHB prepared a conceptual site plan that maximized the development program, based on existing, site constraints, dimensional requirements identified in the Swansea Zoning By-law, and best-available plans and documents. Representatives from VHB visited the site and researched available information (municipal and private) in the performance of this assessment.

The following summarizes VHB's findings:

- The 55-acre site is constrained by the presence of wetlands which may affect the suitability, design and permitting, of large scale retail or other commercial developments.
- The Swansea Zoning By-law allows retail, restaurant, office, residential and municipal uses by-right on this property. Cluster residential development is allowed by Special Permit only.
- The project is likely subject to MEPA review, with an estimated review time of nine months

The following issues require additional investigation:

- **Wetlands** – There are several small isolated wetlands, as well as a considerable amount of wetland throughout the site. VHB recommends filing "A Request for Determination of Applicability" with the Swansea Conservation Commission and Massachusetts Department of Environmental Protection to confirm the status of these areas, in accordance with the Massachusetts Wetlands Protection

Act regulations and Swansea Wetlands Protection By-law. VHB estimates a three-month review time for this process.

- **Utilities** – Adequate gas, electric and telephone service exists in the vicinity of the Site and can be extended to the Site, however there may be additional costs to extend those services. The Town of Swansea also has a history of water supply problems. The Town's Water District has proposed several projects to alleviate the water supply problems; however, until these projects are completed there is a yearly limit for new water users. Additional research and coordination is needed to confirm preliminary findings and also to estimate any potential costs. Additional utility research will be required to confirm/augment our preliminary findings.
- **Sewer** – The Town of Swansea does not have a municipal sewer system, therefore this project will require an on-site sewage treatment and disposal system. Additional geotechnical study is required to determine if the on-site soils are suitable to support sewage disposal systems. Discharges in excess of 10,000 gallons per day, as calculated using Mass. Title V Regulations, would require an additional Groundwater Discharge Permit from the Massachusetts Department of Environmental Protection (DEP).
- **Stormwater Management** – The runoff from the Site will likely be discharged to the adjacent Cole River. The Cole River is subject to tidal action, therefore it is not required that post development discharge rates match the pre development discharge rates. All other standards of the Stormwater Management Policy will be required to be met.
- **Phase I Site Assessment** – VHB has performed an Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 of Sears Farm, located on Maps 58 and 63, Lot 2 in Swansea, Massachusetts, the property. Any exceptions to, or deletions from, this practice are described in Section 1 of this Report. This assessment has revealed no recognized environmental conditions in connection with the property except for the following:
  - Release Tracking Number (RTN) 4-14313, issued by MADEP on November 6, 1998 following the discovery of a number of improperly disposed drums on the Sears Farm Site, and a Notice of Responsibility was issued to Roger B. Knowles. Clean Harbors submitted a Class A-2 RAO indicating that compound concentrations have not been reduced to background, but that no Activity and Use Limitation is necessary to maintain a Condition of No Significant Risk. VHB noted that groundwater was not evaluated during the investigation. The nature of the materials in the drums pose the potential for one or more of these material to have impacted Site groundwater, constituting a potential REC.

- The property south of the Site was used as a landfill until the late 1970s. This property is likely upgradient of the Site and based on topographic observation during site reconnaissance, it is plausible that the northern portion of the landfill may directly abut or even overlap the northern Site boundary. The potential for the former landfill to have impacted the northern site boundary and /or groundwater beneath the Site constitutes a REC.
- Two abandoned automobiles appeared to have been burned and were observed on the Site in a wetland area. It is possible that fuel or other fluid or material has been released and may have impacted the immediate area.
- Two other issues that are not necessarily considered RECS, but that should be noted for potential additional investigation include the Site's status as a State solid waste facility and the requirements relative to the alleged animal burial.
- **Building Program** – Based on VHB's retail design experience, VHB prepared a conceptual plan using generic building footprints, which approximate typical retail building programs. The final development plan, including specific tenants, will require modification, based on a field survey to determine the actual property limits and site constraints.

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## Physical Conditions

VHB assessed the physical limitations of the subject property to support development. These limitations, which are described in detail below, include site location and description, site topography, easements, geotechnical conditions, flood plain/aquifer protection, wetlands, rare and endangered species, and archaeological/historical, and hazardous materials.

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## Site Location and Description

The project site is approximately 55 acres, located north of Interstate Route I-195 and south of Grand Army of the Republic Highway (G.A.R. Highway/Route 6). The site is defined as the Town of Swansea Assessors plat 58, lot 2 and is generally bounded by Coles River to the east, Interstate 195 to the south and west, and commercial properties to the north. The parcel is accessed from Route 6 via an access easement. The site is currently undeveloped and vegetated with early successional pioneer tree species. (See Figure 1).

## Site Topography

VHB obtained topographic information for the site from USGS quadrangle maps and noted several topographic conditions during site visits and while flagging the wetland boundaries. Based on these maps and observations, the overall topography of the site is gently sloping (2-5%), with a high point in the central portion of the site. Most of the site slopes towards Coles River and I-195. There is approximately 30 feet of elevation change within the upland portion of the site.

## Easements

VHB reviewed available plans and maps to determine if there are any easements encumbering development of the site. Based on this review, VHB found that there is one known easement on the subject property. There is an overhead electric transmission line owned by National Grid, and the associated easement located in the eastern portion of the Site. See the Utilities – Electric section for additional information. No other easements are known at this time. Before final design, a full property survey and property research should be conducted to confirm this preliminary finding.

## Geotechnical Conditions

According to the Soil Survey of Bristol County, Massachusetts, southern part (Roffinoli and Fletcher, 1981), the site consists of either Udorthents (unit Ud) or Hinckley (units HgC and HgD) soils.

Areas identified as Udorthents, consist of Udorthents –Smooth or Pits-Udorthents complex, gravelly. This unit consists of mainly nearly level areas formed by excavating or filling for construction projects. The characteristics of the areas of this unit are so variable that onsite investigation is needed to determine the suitability of the areas for any use. An on-site investigation and evaluation of the soils by a certified Soil Evaluator will be required to design an on-site sewage disposal system, in accordance with Massachusetts Title V Regulations.

Areas identified as Hinckley Soils consist of either Hinckley gravelly fine sandy loam 8 to 15 percent slopes or 15 to 25 percent slopes. This unit consists of a deep, moderately steep soil that is on glacial outwash deposits. The soil is described as having poor potential for farming, urban use and sanitary waste disposal facilities because of the steep slopes and very rapidly draining soils. Again further on-site investigation will be required to evaluate the potential for on-site sewage disposal.

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## Flood Plain/Aquifer Protection

According to the latest Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps for the Town of Swansea (Community Panel No. 255221 0007 C dated July 17, 1986), portions of the Site lie within "Zone A11" and "Zone B". Zone A11 is an area that is subject to the 100-year flood, with base elevations determined on the flood map. Zone B is an area between the limits of the 100-year and 500-year flood, or areas of the 100-year flood with average depths less than one (1) foot.

Those portions of the Site that are in Zone A11, are subject to the "Inland Flooding and Flood Plain Overlay District," as defined in the Swansea Zoning By-law. All development, either by right or by special permit, shall be in compliance with M.G.L. 131, Chapter 40; Massachusetts State Building Code, Wetlands Protection Regulation, Inland and Coastal Wetlands Regulations, in addition to the requirements of the underlying zoning district.

VHB has confirmed that the project is not located within the "Aquifer Protection District," as delineated on a map entitled "Aquifer Protection District, Town of Swansea," dated May 18, 1998 and filed with the Office of the Town Clerk of Swansea.

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## Wetlands

Inland freshwater wetlands exist throughout the interior of the site. Forested wetlands are the dominant cover type within and adjacent to the site, although shrub and emergent wetlands are found within the electric transmission line right-of-way (ROW). The forested wetlands are generally characterized by a red maple (*Acer rubrum*), black willow (*Salix nigra*) and green ash (*Fraxinus pennsylvanica*) overstory, an understory of Bebb willow (*Salix bebbiana*) and grey birch (*Betula populifolia*) and an herb layer that includes sensitive fern (*Onoclea sensibilis*), cinnamon fern (*Osmunda cinnamomea*) and sphagnum moss (*Sphagnum* sp.). The boundary of these wetlands is very serpentine and is likely the result of past land practices that include farming or gravel excavation. Small intermittent stream channels that appear to be the result of past site farming practices convey stream flow west through the electric transmission ROW and beneath Interstate 195 (I-195) to wetlands west of the highway and south along I-195 to the Cole River.

The mean high water mark associated with the Cole River defines the east boundary of the site. This river has headwaters in Dighton and Rehoboth, and follows a course generally southwestward through central Swansea and into Mount Hope Bay. There is a narrow fringe salt marsh adjacent to the bank of the River that is dominated by saltmeadow cordgrass (*Spartina patens*), seaside goldenrod (*Solidago sempervirens*), poison ivy (*Toxicodendron radicans*) and bayberry (*Myrica* sp.). The marsh substrate

consists of a thin layer of organic muck over a gravel and cobble. The width of the marsh varies from 10 to 60 feet.

Most of the site wetlands would be regulated as Bordering Vegetated Wetlands in accordance with the Massachusetts Wetlands Protection Act and Swansea Wetlands Bylaw regulations. As such, a 100-foot buffer zone would extend outward from the flagged boundary. There are small isolated wetlands along the northwest boundary of the site that appear to be too small to be considered Isolated Land Subject to Flooding in accordance with the Massachusetts Wetlands Protection Act, however, the Swansea Wetlands Bylaw regulates isolated vegetated wetlands of any size. These areas may also qualify as federal wetlands under Section 404 of the Clean Water Act.



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### Rare and Endangered Species

According to the Fall River quadrangle of the Massachusetts Natural Heritage Atlas (July 2003 edition), there are no estimated habitats of rare wildlife or certified vernal pools that have been identified on the site. A request from the Massachusetts Natural Heritage and Endangered Species Program (MNHESP) for any information on the presence of any known state-listed threatened or endangered species, habitats or other resources of concern within the project area is currently pending.



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### Archaeological/Historical

A request for information from the Massachusetts Historical Commission regarding the presence of any state-listed historical buildings or known archaeological areas of concern within the project area is currently pending.



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### Hazardous Materials

VHB has performed an Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527 of Sears Farm, located on Maps 58 and 63, Lot 2 in Swansea, Massachusetts, the property. Any exceptions to, or deletions from, this practice are described in Section 1 of this Report. This assessment has revealed no recognized environmental conditions in connection with the property except for the following:

- Release Tracking Number (RTN) 4-14313, issued by MADEP on November 6, 1998 following the discovery of a number of improperly disposed drums on the Sears Farm Site, and a Notice of Responsibility was issued to Roger B. Knowles. Clean Harbors submitted a Class A-2 RAO indicating that compound concentrations have not been reduced to background, but that no Activity and

Use Limitation is necessary to maintain a Condition of No Significant Risk. VHB noted that groundwater was not evaluated during the investigation. The nature of the materials in the drums pose the potential for one or more of these material to have impacted Site groundwater, constituting a potential REC.

- The property south of the Site was used as a landfill until the late 1970s. This property is likely upgradient of the Site and based on topographic observation during site reconnaissance, it is plausible that the northern portion of the landfill may directly abut or even overlap the northern Site boundary. The potential for the former landfill to have impacted the northern site boundary and /or groundwater beneath the Site constitutes a REC.
- Two abandoned automobiles appeared to have been burned and were observed on the Site in a wetland area. It is possible that fuel or other fluid or material has been released and may have impacted the immediate area.
- Two other issues that are not necessarily considered RECS, but that should be noted for potential additional investigation include the Site's status as a State solid waste facility and the requirements relative to the alleged animal burial.

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## Zoning and Permitting

VHB reviewed the Swansea Zoning By-law, with amendments through May 18, 1998, to determine the allowable uses, zoning restrictions and requirements, potential variances, and the permits required to develop this Site. The following is a summary of the zoning and permitting issues that relate to development of the site.



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### Local

Based on the Swansea Zoning By-Law, the site is located in the Limited Commercial & Manufacturing District.

The Zoning Officer for the Town of Swansea stated that the site plan should meet the standards set forth in the Business B District. Retail shopping centers, office buildings, restaurants, single family residences and other municipal or recreational uses are permitted as a matter of right in the Limited Commercial and Manufacturing District. Cluster Residential Development requires a Special Permit from the Zoning Board of Appeals.

Table 1 contains a summary of the information shown in the Site Zoning Review Form in Appendix B.

**Table 1 Site Zoning Chart – Business B District**

Zoning Regulation	Required
Min. Frontage	150 FT
Min. Front Yard	40 FT
Min. Side Yard	20 FT
Min. Rear Yard	30 FT
Min. Lot Size	20,000 SF
Max. Building Coverage	35%
Parking Spaces	All uses – 1 space per employee Retail – 1 space per 200 SF GFA Office – 1 space per 300 SF GFA or one per employee Residential – 2 spaces per dwelling unit Restaurant – 1 space per 3 seats
Parking Space Size (Auto)	10 FT x 20 FT
Landscaping	Minimum 20-foot landscape areas shall be provided along street lot lines. Parking units shall not include more than 25 adjacent spaces.  Area equivalent to 20% of paved areas shall be provided for landscaped parking unit dividers, landscape islands, pedestrian walkways, and perimeter landscaping. This area not to include wetlands. Pedestrian walkways may not exceed 50% of this required landscape area. Landscaping shall be arranged so that a landscaped area shall be within 125 feet from any point on the lot.

**Site Plan Review**

Before applying for a building permit, Site Plan Approval is required for all developments that contain five or more parking spaces. The requirements for Site Plan Review include plans, prepared by a registered architect, engineer, or surveyor, at an appropriate scale, with application to the Planning Board. Based on the current regulations, the Planning Board must render its decision on the application within 21 days of receipt of said application.

Site plans shall include the following:

- Locus plan
- Location of structures within 100 feet of the property lines
- Existing and proposed buildings, showing setbacks from the property lines
- Building elevations
- Existing and proposed contour elevations in two-foot increments
- Parking areas, driveways, and facilities for pedestrian movement
- Drainage system, including storm drains, culverts, and related installations, such as catch basins, gutters and manholes

- Utilities and lighting
- Proposed screening, surface treatments, exterior storage, lighting and landscaping, including fencing, walls, planting areas, and signs
- Loading and unloading facilities
- Provisions for refuse removal
- Existing and proposed traffic volumes from the site and effect on the local road network
- Existing and proposed easements
- Existing and proposed waterways
- Location of approved percolation test and reserve area
- Other information as may be necessary to determine compliance with the provisions of the zoning by-law

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### Swansea Wetlands Protection By-law

Any work proposed within the 100-foot buffer zone to local-regulated vegetated wetlands would be subject to the Swansea Wetlands Protection By-law. The Swansea Conservation Commission will accept applications and plans submitted for work subject to the jurisdiction of the Massachusetts Wetlands Protection Act (M.G.L. c.131, sec. 40) as the application under the Swansea Wetlands Protection By-law.

The Swansea Conservation Commission would hold a public hearing on the application within 21 days of receipt of said application. The Commission may continue the public hearing for one month and thereafter, only by consent of the applicant. The Commission shall render its decision on the application within 21 days from closure of the public hearing. Based on this review schedule, VHB estimates the approval period to be between four and 6 months.




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### State

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#### Massachusetts Environmental Policy Act (MEPA)

The Executive Office of Environmental Affairs (EOEA) administers the Massachusetts Environmental Policy Act (MEPA - M.G.L. c. 30, §§61-62H) and its implementing regulations (301 CMR 11.00). The purpose of MEPA is to disclose all environmental impacts of certain projects and to propose feasible mitigation measures for such impacts before any state agency actions are taken or permits issued.

The proposed project will likely be subject to MEPA review. Because a specific program of development has not been identified, the exact scope or required MEPA filing can not be determined at this time. Possible MEPA thresholds that may be exceeded as part of this project include; over 5 new acres of impervious surface,

direct alteration of 25 or more acres of land, 1,000 new vehicle trips and creation of 150 new parking spaces. The project will also require a Mass Highway Permit, which also triggers a MEPA threshold.

Depending on the size and use of the proposed project, the MEPA filings required would either be an Environmental Notification Form (ENF) for exceeding minimal thresholds, or a mandatory Environmental Impact Report (EIR), preceded by an Environmental Notification Form (ENF) for certain greater thresholds.

Basically, a three-step MEPA review process begins with the filing of an ENF that describes the project and outlines the general areas of potential environmental impacts. The availability of the ENF for public review is then published in The Environmental Monitor, a bi-monthly publication by EOEa, the date of which commences a 20-day public review period of the ENF. Within ten days of the close of the ENF review period, the Secretary of Environmental Affairs issues a certificate on the ENF that will scope the project for the preparation of an EIR.

The proponent must then prepare and submit a Draft EIR that analyses all areas of potential environmental impacts as outlined in the scope of study in the ENF certificate (e.g., traffic, air quality, wetlands, stormwater management, wastewater, etc.). After publication in The Environmental Monitor, a 30-day public review period then ensues. Within seven days of the close of the Draft EIR review period, the Secretary of Environmental Affairs then issues a certificate on the document stating whether or not it adequately and properly complies with MEPA. If the Draft EIR is deemed adequate, a Final EIR is prepared and submitted by the proponent. The public comment period and secretarial certificate timelines for the Final EIR are identical to those for the review of the Draft EIR. However, in addition, the notice of availability of the Final EIR in The Environmental Monitor commences a 60-day period in which the Secretary's determination on the Final EIR can be challenged.

If the Final EIR complies with MEPA, all state permitting agencies involved with the project must make certain respective findings under the provisions of M.G.L. c., §61 before such actions are taken or permits issued. These so-called "Section 61 Findings" must state that all feasible means and measures to mitigate the environmental impacts of the proposed project will be undertaken. For MassHighway in particular, the issuance of the Section 61 Finding is a direct end product of the MEPA review process. This document will typically describe the details of the project (land use, size, location, proponent, etc.), summarize the technical traffic impacts at study area intersections, and identify the responsible parties for implementing the necessary mitigation measures. Once issued, the MassHighway Section 61 Finding will become a referenced and physical part of the access permit that will be issued by the MassHighway District 5 Office.

Under the current MEPA regulations, proponents may choose to prepare an Expanded ENF that includes detailed technical analyses of potential areas of environmental impact in an effort to primarily (a) support an assertion by the

proponent that no EIR should be required of a project that is not categorically included, or (b) support a request for a Single EIR. This latter option, if requested by the proponent and accepted by the Secretary, will allow the EIR review process to be cut in half (by nearly 60-90 days, depending on the preparation time of the appropriate plans, analyses, and documentation).

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## Massachusetts Highway Department (MassHighway)

Under M.G.L. c. 81, §21 (the so-called Curb Cut Statute), MassHighway is granted the authority to issue permits for access to MassHighway-controlled roadways. The development of this project will likely require improvements to Sears Road and any work performed within the State Right of Way at Sears Road and Route 6 would require an access permit.

These permits are to be issued in accordance with the process described in the “Standard Operating Procedure (SOP) for Review of State Highway Access Permits.” Basically, the SOP outlines a 30-day process for the MassHighway District Offices to issue an access permit. The first 20 days are allotted for the respective District Highway Director (DHD) to determine the “completeness” of the application. Required elements of an application include evidence of compliance with Dig Safe, evidence of compliance with MEPA (including a Section 61 Finding, if necessary), evidence of compliance with the Massachusetts Historical Commission regulations (if applicable), and engineering plans “...acceptable to the DHD...” After the application is deemed complete, the DHD has 10 days to issue or deny the permit.

It is important to note that this 30-day timeline has no statutory or regulatory weight. That is, M.G.L. c. 81, §21 prescribes no procedures for issuing access permits, nor is there language that requires MassHighway to adopt regulations in the CMR format for the issuance of such permits. Rather, the SOP is considered a set of guidelines for the review of access permits applications. Therefore, this 30-day timeline can be extended by the DHD in any number of ways - either by the tacit acceptance of the applicant, or simply by withholding a determination that the engineering plans are “acceptable.” This often happens when there is a backlog of pending access permit applications at the District Office, when the application entails review of improvements at several off-site intersections, or when the application requires Boston (Headquarters) Office review and approval (such as the installation of or modification to a traffic signal).

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## Massachusetts Department of Environmental Protection (DEP)

### Title 5

The regulatory consideration affecting wastewater disposal on the site is the State Sanitary Code, 310 CMR 15.000, commonly referred to as Title 5. These regulations limit the maximum wastewater disposal per lot allowed by right to 10,000 gallons per day. A discharge of greater than 10,000 gallons per day per lot would require a groundwater discharge permit. This permit is issued by the state Department of Environmental Protection (DEP) and requires soil testing and an analytical study, known as a geo-hydrologic study.

### Air Quality Study

The Massachusetts Department of Environmental Protection (DEP) administers regulations related to the state and federal clean air acts and amendments. Under these regulations, a proponent of a project requiring a state permit that generates 3,000 or more new motor vehicle trips per day must provide an assessment of the indirect source air quality impacts that may be caused by project-related motor vehicle emissions. Typically, the assessment involves preparing a mesoscale air quality analysis that measures, based on DEP- and federal EPA-approved models, the projected increase in certain air emissions that may be attributed to project-generated motor vehicle traffic. The assessment includes a presentation of measures to minimize air emissions to the greatest practical degree, typically relying on implementation of a transportation demand management (TDM) program for the project.

### Massachusetts Wetlands Protection Act

Any work proposed within the 100-foot buffer zone to state-regulated bordering vegetated wetland and/or bank would be subject to the Massachusetts Wetlands Protection Act (M.G.L. c.131, sec. 40). A Request for Determination of Applicability or Notice of Intent would be filed with the Swansea Conservation Commission and Department of Environmental Protection for review and approval. Any stormwater discharges within the 100-foot buffer zone would also be subject to the review and approval.

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## Federal

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### U.S. Army Corps of Engineers (ACOE)

Any activity that places fill within federal jurisdictional wetlands with cumulative direct and indirect impacts exceeding five-thousand square-feet is subject to review by the Army Corps of Engineers under Section 404 of the Clean Water Act. Based on the conceptual plan prepared by VHB, no filling of federal jurisdictional wetlands is anticipated. Final design efforts should seek to minimize wetland fills to stay under the threshold.

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### National Pollution Discharge Elimination System (NPDES)

The Project will likely disturb more than one (1) acre of soil; therefore, a Notice of Intent under the National Pollution Discharge Elimination System (NPDES) will be required.

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## Site Access and Traffic

As requested, VHB conducted a preliminary assessment to identify traffic and access issues associated with the proposed development. VHB's overall assessment is as follows:

- Access to the existing Sears Farm site is provided from Route 6 via a gravel access road. The road is about 2,000 feet west of the traffic signal at Swansea Mall Drive (Route 118) and is primarily used by larger trucks hauling gravel or sand from the activities in the rear of the site (toward I-195). This is the only site access presently available. A proposed layout plan dated October 25, 1991 prepared by Bristol County Engineering indicates a proposed variable width roadway from Route 6 to the Sears Farm site generally centered on the existing footprint of the existing gravel road. The proposed plan would require approximately 129,530 square feet of taking from adjacent land owners. However, recent discussions with the Town of Swansea and abutting landowners appears favorable to the establishment of the roadway layout.
- Trip generation depends on the proposed program of development and will need to be determined. In conjunction with the likely required MassHighway Access Permit, a minimum of an Environmental Notification Form will need to be prepared under the Massachusetts Environmental Policy Act (MEPA).

- SRPEDD completed a study in 1998 to add traffic signals at the Route 6 and I-195 ramps. The study recommended as an interim improvement the addition of traffic signals at ramp termini. The long range plan would be to add new ramp from WB I-195 coming directly into intersection with Rte 118 to eliminate the left turns from Route 6; it also included widening of the Rte 6 Bridge over I-195. No schedule was mentioned for this project.
- The Traffic Impact Study (probably as part of an EIR) which would likely need to include the potential impact to traffic at the Route 118 (signalized) intersection and the I-195/Route 6 intersections. Mitigation of the traffic impacts could include the cost of coordinating traffic signal operations with the site drive (new) signal and existing Route 118 intersection signal; and potentially the additional and or coordination of the new signals at the Route 6/I-195 ramps. These issues would require more detailed discussions with MHD during the study before any definitive conclusions could be made.

The attached memorandum summarizes the overall findings of our traffic assessment.

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## Utilities

A preliminary review of utility services has been conducted to determine future availability to the Site. The following is a summary of each of the typical utility services.

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## Water

According to the Swansea Water District there is an 8" water main that reduces to a 6" water main at about the location of Sears Road. The Swansea Water District has no current plans to upgrade the water main system in the vicinity of the Site. Recent water pressure tests indicate good water pressure in the vicinity of the Site, and should be sufficient to support new development. However, it should be noted that Fire Pumps, to boost pressure, are not allowed in the Town.

The Water District Superintendent has stated that the Town of Swansea suffers from chronic water supply shortages. The Town depends solely on groundwater for its water source, and currently has utilized all available sources. A new treatment plant, recently approved, fully funded and soon to be constructed will treat the groundwater and improve overall quality, but will not increase the quantity of water supply. The Swansea Water District is also proposing to build a Desalinization Plant to solve the ongoing water supply problem. Currently, this proposed Desalinization plant has achieved MEPA approval (EOEA# 13183) and has secured all necessary funding. This project is undergoing final design and continued permitting (NPDES

and Chapter 91 permits). Construction has not begun and a tentative completion date for the Desalinization Plant is not known at this time.

Until water supply shortage issue has been remedied, the Swansea Water District has issued a yearly cap on new water connections. This limit is 20,000 Gallons per day of new water use.



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## Sewer

Municipal sewer service is not available in the Town of Swansea. The neighboring Town of Somerset does not allow any connections from Swansea, nor does it accept septage from any other town. An on-site, sewage disposal system, designed in accordance with the Massachusetts Title V Regulations, will be required to service this development.

Although a specific program of development has not been identified for the Site, if the total sewer flow exceeds 10,000 gallons per day, then a Groundwater Discharge Permit from the Massachusetts Department of Environmental Protection (DEP) will be required. DEP mandates that a geohydrologic study be performed in addition to percolation testing.



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## Gas

New England Gas Company provides gas service in Route 6. An existing gas line in Route 6 is available to service the site, but a gas line does not exist in Sears Road. There are no known capacity or pressure issues in the area. NE Gas stated that the costs associated with a gas line extension from the property to the Site would be the responsibility of the owner/developer.



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## Electric

National Grid provides electric service via overhead cable on Route 6 and on Sears Road. A spokesperson for the company stated that they could provide adequate service for any new development of this Site. There is also an existing National Grid Transmission line and easement that crosses the property. According to the spokesperson for national Grid, any proposed work within the easement would have to be approved by National Grid. Landscaping, roadways and parking would likely be allowed, whereas new structures and any grade changes would not be allowed. National Grid also stated that costs associated with modifying the Transmission line or the support towers would be the responsibility of the developer/land owner.



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### Telephone/Fiber Optic

Verizon provides overhead, telephone service and underground, fiber optic service in Route 6. This service can be made available to the proposed development.



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### Cable Television

Comcast provides underground, cable television (as well as telephone and high speed internet) service in the vicinity of the Site. This service can be made available to the proposed development.



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### Storm Drainage

VHB reviewed the aerial photographic plans, USGS mapping, and the Soil Survey for this area to assess existing, on-site drainage conditions. These documents indicate that, under existing conditions, it is likely that most stormwater runoff flows either to the existing wetland resource areas or directly to the Cole River. The Cole River adjacent to the Site is subject to tidal action therefore stormwater discharge does not need to meet pre-development discharge rates, however all other standards of the Stormwater Management Policy must be met.



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# Appendix A - Site Plans and Maps

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# Appendix B - Site Zoning Review Form

DRAFT



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# Appendix C - Traffic Memorandum

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# Appendix D – Letters to Massachusetts Historical Commission and Natural Heritage and Endangered Species Program

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