

SPECIAL PROVISIONS

ACTON, MASSACHUSETTS 19-21 MAPLE STREET COMMUTER LOT & STOW STREET SHARED USE PATH

SCOPE OF WORK

All work under this Contract shall be done in conformance with the *2025 Standard Specifications for Highways and Bridges*, the *Supplemental Specifications* contained in this book, the *Construction Standard Details* in effect as of June, 2025, the *1990 Standard Drawings for Signs and Supports*, the *2015 Overhead Signal Structure and Foundation Standard Drawings*, the *2009 Manual on Uniform Traffic Control Devices (MUTCD) with Revisions 1, 2, and 3* and the *November 2022 Massachusetts Amendments to the MUTCD*, the *1968 Standard Drawings for Traffic Signals and Highway Lighting*, the latest edition of *The American Standard for Nursery Stock*, the Plans and these Special Provisions.

The work under this Contract consists of consists of the reconstruction of a approximately 52,000 square-foot parking lot and various site improvements, including a new access driveway and utility work. The work includes but is not limited to earth excavation, pipe installation, slope grading, erosion control, dewatering, guardrail, pavement markings, landscaping, and other miscellaneous work as shown on the plans. The work under this Contract also includes the construction of approximately 700 feet of HMA shared use path, with associated slope grading, erosion control, utility work, and other miscellaneous work as shown on the plans.

WORK SCHEDULE

No work that will disrupt travel on the existing roadways (lane closures, lane shifts, trenching, etc.) shall be done from 6:00 AM to 8:00 AM and from 4:00 PM to 6:00 PM, unless approved, in writing, by the Town.

Work on this project is restricted to a normal eight-hour day, five-day week, with the Contractor and all Subcontractors working on the same shift.

No work shall be done on this contract on Saturdays, Sundays or holidays or on the day before or the day after a long weekend which involves a holiday without prior approval by the Town.

PROTECTION OF UNDERGROUND FACILITIES

The Contractor's attention is required to the necessity of making his own investigation in order to assure that no damage to existing structures, drainage lines, traffic signal conduits, irrigation system & fixtures on public and private property, etcetera, will occur.

The Contractor shall notify Massachusetts DIG SAFE and procure a Dig Safe Number for each location prior to disturbing existing ground in any way. Contact the Dig Safe Call Center by dialing 811 or 1-888-344-7233 or online at www.digsafe.com.

DESIGNER/PROJECT MANAGER

DESIGNER

Nitsch Engineering
Matthew Soltys, PE, ENV SP. RSP
(508) 964-3355

PROVISIONS FOR TRAVEL AND PROSECUTION OF WORK

(Supplementing Subsections 7.09, 7.10 and 8.03)

The Contractor shall prepare and submit to the Engineer a Schedule of Operations as provided in Section 8.02. The work schedule shall include a plan of the construction procedures and the safety measures that will be used during the prosecution of work, as set forth in Section 850 of the Standard Specifications. No work shall be started until the Engineer's approval of the schedule is received.

The Contractor shall also be responsible for notifying the Town of Acton, in writing, at least two days in advance of commencement of work. The Contractor shall also coordinate with the Town of Acton as necessary, throughout the duration of the project to ensure that work on this project, is coordinated with other ongoing projects throughout the Town.

SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS

(Supplementing Subsections 850.21 and 850.61)

Safety controls for construction operations shall be done in accordance with the relevant provisions of Section 850 of the Standard Specifications, the latest edition of the Manual on uniform Traffic Control Devices, the Traffic Management Plan, and the following:

The providing of safety controls for construction operations shall be considered incidental to this Contract and the costs for safety controls shall be included in the Unit Bid Price for those Contract items requiring such controls.

Positioning, adjusting and re-positioning of all devices such as traffic cones, high-level warning devices, etc., not otherwise classified and paid for under other items in this Contract, is considered incidental and no separate payment will be made.

All safety signing, temporary pavement markings, reflectorized and lighted drums, and all other safety controls used for construction operations shall conform to the MASH and the MUTCD, Current Edition, for Streets and Highways including all amendments.

TEMPORARY ACCESS TO AREA MERCHANTS AND BUSINESSES

(Supplementing Subsections 8.02 and 8.06)

The work is in a residential section of the Town and access to all residences must be maintained at all times. The Contractor shall provide safe and ready means of ingress and egress to all residences in the project area, both day and night, for the duration of the project.

The Acton Food Pantry is located on site at 19-21 Maple Street. The Contractor shall provide safe and ready means of ingress and egress for Food Pantry visitors and staff during open hours. The Contractor shall coordinate with the Food Pantry throughout construction.

PROPERTY BOUNDS

The Contractor shall exercise due care when working around all property bounds, which are to remain. Should any damage to a bound result from the actions of the Contractor, the bound shall be replaced and/or realigned by the Contractor as required by the Engineer. No additional compensation will be due the Contractor for the materials and labor required for reestablishing the bound in its proper position.

EXISTING TRAFFIC AND ROADWAY SIGNS

As required by the traffic management plans and the Engineer, existing traffic and roadway signs shall remain in place or be temporarily supported until no longer applicable or replaced by permanent signs.

CONCRETE FOUNDATIONS

Concrete foundations of items to be removed, if not interfering with the proposed construction, may be abandoned in place with written approval of the Engineer. Foundations left in place under roadway surface shall be removed to a depth of 3 feet; all other foundations outside of the roadway limits left in place shall be removed to a depth of 6" below the finished grade unless otherwise specified. The top 6" shall be restored to match the existing grade with materials similar in kind to the abutting materials and will be paid for under the appropriate bid items.

ARCHITECTURAL ACCESS BOARD TOLERANCES

The Contractor is hereby notified that they are ultimately responsible for constructing all project elements in strict compliance with the current AAB/ADA rules, regulations and standards.

All construction elements in this project associated with sidewalks, walkways, wheelchair ramps and curb cuts are controlled by 521CMR - Rules and Regulations of the Architectural Access Board (AAB).

The AAB Rules and Regulations specify maximum slopes and minimum dimensions required for construction acceptance. There is no tolerance allowed for slopes greater than the maximum slope nor for dimensions less than the minimum dimensions.

Contractors shall establish grade elevations at all wheel chair ramp locations and shall set transition lengths according to the appropriate table in the Construction Standards (or to the details shown on the plans).

All wheelchair ramp joints and transition sections which define grade changes shall be formed, staked and checked prior to placing cement concrete. All grade changes are to be made at joints.

NEW INTRODUCTIONS OF INVASIVE PLANTS INTO OR AROUND THE SITE

(Supplementing Subsections 7.01(D) Plant Pest Control and 7.13 Protection and Restoration of Property)

The Contractor shall ensure that no invasive plant species, as defined and listed by the Massachusetts Invasive Plant Advisory Group, are introduced or moved around the site by construction activities either by improperly cleaned construction equipment or importation of infected materials such as borrow, compost, nursery stock, seed, or hay bales. Corrective measures, if necessary, shall be made by the Contractor as required by the Engineer. The Contractor shall be solely responsible for all costs associated with ensuring that invasive species are not introduced or moved around the site by construction activities and for all corrective measures required for as long as necessary to eliminate the introduced invasive plant species and prevent re-establishment of same.

SAWCUT

(Supplementing Subsection 482.81)

Sawcuts shall be made at all limits of sidewalk construction, full depth pavement, limits of work, driveway limits, sidewalk limits, curb installation, and as required by the work shown in the Plans and as required by the Engineer. All sawcuts shall be made in accordance with Section 482. Measurement and payment for all sawcuts shall be considered incidental to the work and which price shall be included in the related bid items.

JOINTS

(Supplementing Subsection 460.65)

The application of hot poured rubberized asphalt sealer, where required in accordance with Subsection 460.65 of the Supplemental Specifications, shall be considered incidental to the work included under this Contract.

DISTURBANCE OF AREA OUTSIDE THE LIMIT OF WORK

Any areas occupied, used, accessed, or damaged by the Contractor, outside the limit of grading/work shown on the Plans, shall be repaired by the Contractor at their expense. The Contractor shall repair the disturbed areas with the existing material. These areas include the Contractor's staging area, and equipment access areas. No separate measurement and payment will be made by the Town for the repairs, materials, and work related to restoring these damaged areas.

FINE GRADING AND COMPACTION

(Supplementing Subsection 170.81)

Fine grading and compaction shall only be measured for payment for areas of roadway, sidewalk, wheelchair ramps, driveways, and as required by the Engineer. Fine grading and compaction shall not be measured for payment for areas including but not limited to loam and seed, HMA patching, utility and drainage trenches, for curb installation, and landscaped areas.

DISTRUBANCE OF AREA OUTSIDE THE LIMIT OF WORK

Any areas occupied, used, accessed, or damaged by the Contractor, outside the limit of grading/work shown on the Plans shall be repaired by the Contractor at their expense. The Contractor shall repair the disturbed areas with the existing material. These areas include the Contractor's staging area, and equipment access areas. No separate measurement and payment will be made by the Town for the repair, materials, and work related to restoring these damaged areas.

CONSTRUCTION STAKING

(Supplementing Section 5.07)

The Contractor shall be responsible for providing construction staking for the proposed project in conformance with Section 5.07. The construction staking shall be performed by qualified surveying staff. The Engineer and the Town reserves the right to reject the construction staking and/or staff providing the construction staking if it is not satisfactory. Measurement and payment shall be considered incidental to the applicable contract items and additional measurement and payment will not be made.

The Contractor may request the AutoCAD Drawing files from the Town for the use of construction staking. The Contractor shall request the drawings in writing to the Town.

MATERIAL AND EQUIPMENT STORAGE

The Contractor shall be responsible for securing an offsite storage facility for all equipment and material at no additional cost to the Town.

ENVIRONMENTAL PERMITTING

A Notice of Intent (NOI) has been filed with the Town of Acton Conservation Commission. The Contractor shall meet all conditions laid out by the commission for the project. If field conditions and/or Contractor-proposed erection, demolition, storage, or other procedures not originally allowed by existing environmental permits require work to occur in or otherwise impact water or wetland resource areas, the Contractor is advised that no associated work can occur until all required environmental permits have been either amended or obtained allowing such work

CONSERVATION COMMISSION COORDINATION

The Contractor shall be responsible for meeting with the Town of Acton Conservation Commission prior to the start of any work. The Contractor shall coordinate with the Conservation Commission throughout the duration of the project. The Contractor shall comply with all requirements made by the Conservation Commission during the pre-construction meeting, including but not limited to the installation of Compost Filter Tubes per Item 767.12 and the dewatering set-up.

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION FILE NUMBER SIGN

This project is subject to Massachusetts General Laws, Chapter 131, Section 40 as amended. Signs shall be in accordance with the latest MassDOT Construction Standards. All costs for the manufacture, erection, maintenance, moving, and removal of the signs shall be absorbed by the contractor with no additional compensation other than the contract unit prices.

For this project the Massachusetts Department of Environmental Protection File Number is 085-1398 for Stow Street and 085-1395 for Maple Street.

MBTA RAILROAD COORDINATION / ACCESS TO MBTA PROPERTY

The Site is located adjacent to the Massachusetts Bay Transportation Authority (MBTA) property at the South Acton Commuter Rail Station. Work by the Contractor is restricted to the Zone of Influence of the MBTA's Fitchburg Main Line right-of-way. No crane, manlift, or equipment swings shall be made within 30 feet of the nearest live track or 25 feet of the nearest catenary structure without MBTA authorization, Keolis, AMTRAK, or MBTA flag protection, as applicable, and a Capital Programs Support Field Staff person present. The Zone of Influence MBTA license reference number is 25140.

The Contractor shall submit a plan and detailed specifications (including the materials to be used) and the proposed methods of performing the work, or any part thereof (the "Plan") to the MBTA, Amtrak and other applicable Railroad Companies. The Contractor shall not enter the Premises until the Plan has been approved by the MBTA and the applicable Railroad Company or Railroad Companies. Unless entry is made pursuant to an Access Plan approved by both the MBTA and the applicable Railroad Companies, the Contractor agrees to give, each time it desires entry, at least ten (10) days' prior written notification to the MBTA and the applicable Railroad Companies (except in cases of emergency when notice shall be given to the MBTA and the applicable Railroad Companies as quickly as possible) of its need to access the Premises for all work to be performed under this Zone of Influence License.

A work plan must be submitted with a list of equipment and technical information. Equipment that will occupy the ZOI must be submitted prior to the commencement of construction activities. A review of this equipment list will need to be reviewed and coordinated with MBTA RR Ops and Keolis. A track geotechnical monitoring system during all construction activity must be installed. The Contractor is required to have a safety manager on site, and they must participate in flagging support as needed.

MBTA FLAGGING

The Contractor shall provide a minimum two week notice for flagging support for MBTA bridges and railroads as needed. This applies only to bridges and railroads operated by Keolis Commuter Services (KCS). This two-week notice does not apply to emergency work, only to routine or scheduled work activities. The contact person for advance request for flagging services is Rich Arnold, MBTA Railroad Operations Department, Phone number (617)-222-3635, email address: rarnold@mbta.com.

ITEM 102.511**TREE PROTECTION – ARMORING & PRUNING****EACH**

The work under this item shall be for furnishing and installing temporary tree trunk protection and for minor limb pruning or removal of lower tree limbs to prevent injury to the tree from construction equipment and activities.

Trunk armoring is for instances where construction activity (the use of heavy equipment) comes close enough to potentially damage the tree trunk or limbs. It is to be used where shown on the plans and as directed by the Town.

REFERENCES

If requested, the Contractor shall provide to the Engineer one copy of the latest edition of the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance: Part 1-Pruning and Part 5-Construction Management Standard. Provision of reference shall be incidental to this item.

MATERIALS

Trunk armoring shall be such that it prevents damage to the trunk from construction equipment. Selected material shall be such that installation and removal will not damage the trunk.

Acceptable materials include 2x4 wood cladding with wire or metal strapping, or, for instances when duration of construction activities is less than three months, corrugated plastic pipe mounted with duct tape. Height of cladding shall be from base of tree, from just above the root flare, to the bottom of the first branch, eight feet above the ground, or as required by the Engineer. Armoring of the root flare may be required separately, to ensure no damage to the root flare. All materials and methods shall be approved by the Town Arborist.

Other materials or methods may be acceptable if approved by the Town.

METHODS OF WORK

Prior to construction activities, the Contractor, and the Town Landscape Architect and Arborist, shall review trees noted on the plans to be protected. Final decision as to trees armored and/or pruned shall be per the Town Arborist.

Care shall be taken to avoid damage to the bark during installation and removal of armoring. Trunk armoring shall be replaced and maintained such that it is effective for as long as required and shall be removed immediately upon completion of work activities adjacent to trees.

Pruning of limbs shall conform to the techniques and standards of the most recent ANSI A300 standards.

ITEM 102.511 (Continued)

DAMAGES & PENALTIES

In the event that trees designated for protection under this item are damaged, including root damage from unapproved trespassing onto the root zone, the Contractor shall, at his own expense obtain an Arborist. The Arborist shall be approved by the Town.

If, based on the recommendations of the Contractor's Arborist, the Town's Arborist determines that damages can be remedied by corrective measures, such as repairing trunk or limb injury, soil compaction remediation, pruning, and/or watering, the damage will be repaired as soon as possible within the appropriate season for such work and according to industry standards.

If the Town Arborist determines that damages are irreparable, the Contractor shall pay for the damages in the amount of \$500.00 per diameter inch at breast height (DBH) per tree.

Additionally, if the Town Arborist determines that the damages are such that the tree is sufficiently compromised as to pose a future safety hazard, the tree shall be removed. Tree removal will include cleanup of all wood parts, grinding of the stump to a depth sufficient to plant a replacement tree or plant, removal of all chips from the stump site, and filling the resulting hole with topsoil.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 102.511 will be measured and paid at the contract unit price per each. This will include full compensation for all labor, equipment, materials, and incidentals for the satisfactory completion of the work and the subsequent removal and satisfactory disposal of the protective materials upon completion of the contract.

In the event of tree damage, cost of Arborist services, of remediation measures, and/or tree removal will be borne by the Contractor.

Payment under this item will be scheduled throughout the length of contract:

- 40% of value shall be paid upon installation of trunk armoring and completion of pruning work, if required.
- 60% shall be paid at the end of construction operations that would damage the tree and after protection materials have been removed and properly disposed of by the Contractor. In the event of repairable damages, payment shall be made after the completion of remediation measures.

In the event of irreparable damage due to lack of proper protective measures being take there will be no compensation in addition to the \$500.00 per diameter inch penalty.

ITEM 115.3**DEMOLITION OF EXISTING STRUCTURES****LUMP SUM**

The work under this item shall be performed in accordance with the relevant provisions of Section 112 of the Standard Specifications and the following:

Work to be done under this item includes the dismantling, removal, and disposal of existing concrete slabs and walls and steel canopy structures on the project site. The contractor shall remove the structures to the limits identified in the contract drawings. The existing structure foundations shall be removed in their entirety within the demolition limits, backfilled with compacted gravel, and the holes restored. All items within the structures shall be removed as approved by the Engineer. The contractor shall not compromise any adjoining structures as part of the demolition work. The contractor is responsible for any repairs necessary to existing structures to remain due to the demolition work. No demolition work shall occur withing MBTA property.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Work to be done under this item shall be paid for by the contract lump sum bid cost, which price will be full compensation for demolition, excavation, transportation, disposal, and ground restoration of the structures identified for removal in the contract documents.

ITEM 180.01 ENVIRONMENTAL HEALTH AND SAFETY PROGRAM LUMP SUM

The work shall consist of ensuring the health and safety of the Contractor's employees and subcontracting personnel, the Engineer, their representatives, the environment, and public welfare from any on-site chemical contamination present in air, soil, water and sediment.

The Contractor shall prepare and implement a site-specific Environmental Health and Safety Plan (EHASP) which has been approved and stamped by a Certified Industrial Hygienist (CIH) and includes the preparer's name and work experience. The EHASP shall include appropriate components required by OSHA Standard 29 CFR 1910.120(b) and the Massachusetts Contingency plan (MCP) 310 CMR 40.0018 and must comply with all applicable state and federal laws, regulations, standards and guidelines, and provide a degree of protection and training appropriate for implementation on the project. The EHASP shall be a dynamic document with provision for change to reflect new information, new practices or procedures, changing site environmental conditions or other situations which may affect site workers and the public.

Health and safety procedures provided by the Contractor shall comply with all the appropriate regulations that address employee working conditions, including but not limited to standards established by OSHA and National Institute for Occupational Safety and Health (NIOSH). Equipment used for the purpose of health and safety shall be approved by and meet pertinent standards and specifications of the appropriate regulatory agencies.

A copy of the most up-to-date version of the EHASP shall be maintained on-site at all times by the Contractor. The on-site copy shall contain the signature of the Engineer and each on-site employee of the Town, Contractor, and Subcontractors involved with on-site activities. The employee's signature on the EHASP shall be deemed prima facie evidence that the employee has read and understands the plan. Updated copies of signature sheets shall be submitted to the Engineer.

The EHASP shall specify a Contractor Site Safety and Health Officer responsible for implementation of the EHASP and to oversee all construction activities, including handling, storage, sampling and transport, which require contact with or exposure to potentially hazardous materials.

The level of protection, required to ensure the health and safety of on-site personnel will be stipulated in the EHASP. The Site Safety and Health Officer shall implement the EHASP based on changing site and weather conditions, type of operation or activity, chemical compounds identified on-site, concentration of the chemicals, air monitoring data, physical state of the hazardous materials, potential duration of exposure to hazardous materials, dexterity required to perform work, decontamination procedures, necessary personnel and type of equipment to be utilized.

ITEM 180.01 (Continued)

During implementation of the EHASP, a daily log shall be kept by the Site Safety and Health Officer and a copy shall be provided weekly to the Engineer. This log shall be used to record a description of the weather conditions, levels of personal protection being employed, screening data and any other information relevant to on-site environmental safety conditions. The Site Safety and Health Officer shall sign and date the daily log.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Preparation and implementation of the Environmental Health and Safety Program, including the monitoring, protection and storage of all contaminated materials, as well as subsequent modifications to the EHASP, will be measured and paid for at the Lump Sum Bid Price.

Payment of 50% of the Environmental Health and Safety Program contract price will be made upon the initial acceptance of the EHASP by the Engineer. Payment of the remaining 50% of the Environmental Health and Safety Program contract price will be made upon completion of the work. The bid price shall include preparation and implementation of the EHASP as well as the cost for its enforcement by the Site Safety and Health Officer along with any necessary revisions and updates. The work of implementing the Environmental Health and Safety Program includes work involving, but not limited to, the monitoring, protection, and storage of all contaminated materials.

ITEM 180.02**PERSONAL PROTECTION LEVEL C UPGRADE****HOURLY**

The work shall consist of providing appropriate personal protective equipment (PPE) for all personnel in an area either containing or suspected of containing a hazardous environment.

Contingencies for upgrading the level of protection for on-site workers will be identified in the EHASP and the Contractor shall have the capability to implement the personal protection upgrade in a timely manner. The protective equipment and its use shall be in compliance with the EHASP and all appropriate regulations and/or standards for employee working conditions.

Personal Protection Level C Upgrade will be measured and paid only upon upgrade to Level C and will be at the contract unit price, per hour, per worker, required in Level C personal protection. No payment will be made to the Contractor to provide Level D PPE.

ITEM 180.03**LICENSED SITE PROFESSIONAL SERVICES****HOOR**

Within limited areas of the project site, soils, sediments and/or groundwater may be contaminated. A Licensed Site Professional (LSP) shall be required to provide the services necessary to comply with the requirements of the MCP. These services may include sampling, analysis and characterization of potentially contaminated media, preparation of Immediate Response Action (IRA) Plans, Utility-Related Abatement Measure (URAM) and Release Abatement Measure (RAM) Plans, Imminent Hazard Evaluations, status reports, transmittal forms, release notification forms, risk assessments, completion statements, and related documents required pursuant to the Massachusetts Contingency Plan (MCP). LSP hours related to the characterization and disposal of contaminated soil and/or sediment are incidental to the disposal items. An estimate of LSP services to be provided shall be submitted to the Engineer for approval before any LSP activity begins.

Based on the preliminary review of the project area potentially impacting release sites are located at the following properties:

- RTN 2-17998, Stow and Maple Streets, Former MBTA Parcel
- RTN 2-0021036, 21 Maple Street, RR Parking Lot

This list is based on the preliminary review during the design phase and is not meant to be all inclusive of potential release sites along the project.

The name and qualifications of the LSP and all environmental technicians to be assigned to the project shall be submitted to the Engineer for approval at least four weeks prior to initial site activities. The LSP shall have a current, valid license issued by the Massachusetts Board of Registration of Hazardous Waste Site Cleanup Professionals. The LSP shall have significant experience in the oversight of MCP activities at active construction sites. Qualification packages for the LSP and each technician shall include a resume, all recent work assignments with responsibilities identified (previous 5 years), and applicable training and certifications. A list of all Notices of Noncompliance, Notice of Audit Findings and Enforcement Orders issued by the DEP shall be submitted for all work assignments listed for the LSP and environmental technicians.

The LSP shall evaluate soil and/or sediment with discoloration, odor, and presence of petroleum liquid or sheening on the groundwater surface, or any abnormal gas or materials in the ground which are known or suspected to be oil or hazardous materials. Excavated soil and sediment which is suspected of petroleum contamination shall be field screened using the jar headspace procedures according to established DEP Guidance. All field screening equipment must be pre-approved by the Engineer. The LSP shall ensure proper on site calibration of all field screening instrumentation.

The Engineer shall be contacted immediately when observations or any field screening results verify contamination requiring further analysis, and/or enhanced management of suspect soil and/or sediment. Any enhanced management of contaminated soil to ensure proper stockpiling and storage is incidental to the LSP Services item. The LSP shall adequately characterize subsurface conditions prior to backfill in areas where contaminated material has been excavated. The Engineer shall approve the locations of the testing sites prior to the sampling.

ITEM 180.03 (Continued)

Contaminated soil, sediment and/or groundwater shall be handled in accordance with all applicable state and federal statutes, regulations and policies. The LSP shall adequately characterize contaminated media for comparison to the requirements of the MCP. The Contractor and the LSP shall be aware of the reporting requirements for releases of oil and/or other hazardous material (OHM) as set forth in federal and state laws and regulations and shall both be held responsible for performing the work in accordance with all applicable Federal and State laws and regulations. The LSP shall maintain written records in a clear and concise format which tracks the excavation, stockpiling, analysis and reuse/disposal of all suspect contaminated soils, sediments and groundwater. These records shall be up-to-date and available to the Engineer on a bi-weekly basis. The LSP shall review and summarize the laboratory data from any analyses performed on contaminated media. A report shall be delivered to the Engineer outlining the material sampling methods, laboratory analysis results and proposed course of action. The laboratory report together with Chain of Custody forms for all analytical results shall be submitted to the Engineer within 14 days after completion of such analyses.

The LSP and Contractor shall be held responsible for the submission of all MCP-related documents to the Engineer at least 14 days in advance of any timeframe specified in the MCP and for the timely submission of data and tracking information as noted within this Item. All documents prepared under this Item must be reviewed and signed by the approved LSP. The Contractor and LSP shall be responsible for all fines, penalties and enforcement requirements imposed by applicable regulatory agencies for failure to meet regulatory and contract timeframes. No compensation will be provided for such fines, penalties and enforcement actions.

The Contractor and the LSP shall be aware of the reporting requirements for releases of oil and/or other hazardous material (OHM) as set forth in federal and state laws and regulations and shall both be held responsible for performing the work in accordance with all applicable Federal and State laws and regulations.

If the Contractor causes a release of OHM, the Contractor shall be responsible for assessing and remediating the release in accordance with all pertinent State and Federal regulations, including securing the services of a LSP, at his own expense.

The LSP shall coordinate all activities through the Engineer. Any notification of release shall be approved by the Department before submittal to the DEP, except if an imminent hazard condition exists as defined in 309 CMR 4.03(4)(b).

ITEM 180.03 (Continued)

LABORATORY TESTING IN SUPPORT OF LSP SERVICES

Laboratory testing provides for analytical testing in support of LSP services related to maintaining MCP compliance, such as delineating the extent and type of contamination present. Sampling and testing for disposal purposes are not included.

In order to maintain compliance with the MCP or other regulatory requirements, the LSP shall request approval from the Engineer to obtain samples from various locations and depths within the project area and to perform laboratory analyses on those samples. The samples shall be delivered to a DEP-certified laboratory using proper chain-of-custody documentation for analyses which, depending upon site conditions and suspected and/or identified contaminants of concern, may include, but are not limited to, metals, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), pesticides, polycyclic aromatic hydrocarbons (PAHs), extractable petroleum hydrocarbons (EPHs) and volatile petroleum hydrocarbons (VPHs). Subsequent testing, depending upon initial results, may be required for Toxicity Characteristic Leaching Procedure (TCLP) analyses (EPA Method 1311) for metals.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

LSP Services for work under this item will be measured per person, per hour of service provided by LSP, Environmental Technicians and other approved personnel. Travel time shall not be included in the billable hours. LSP hours related to soil/sediment disposal (disposal characterization, landfill acceptance, disposal package preparation, etc.) shall be incidental to disposal items.

The quantity and type of laboratory tests must be approved by the Engineer beforehand. The contractor will be reimbursed upon satisfactory written evidence of payment. The contractor may be required to obtain cost estimates from three DEP certified laboratories for the Engineer to choose the service provider. Laboratory testing related to soil/sediment disposal (disposal characterization, landfill acceptance, disposal package preparation, etc.) shall be incidental to disposal items.

LSP Services will be paid at the Contractor bid price for each hour, or fraction thereof, spent to perform the work as described above. The bid price shall be a blended rate that includes the cost of the LSP, environmental technicians and other personnel, the performance of all work tasks and field screening, including required equipment, materials and instrumentation, and production of all documentation described above. All requests for payment must be accompanied by the following information: the names of the personnel associated with the work charged under LSP Services, dates and hours worked, work conducted, including, where appropriate, locations as identified on the construction plans, and a copy of the field diary for the dates submitted.

Laboratory Testing will be reimbursed upon receipt of paid invoices for testing approved by the Engineer.

<u>ITEM 181.11</u>	<u>DISPOSAL OF UNREGULATED SOIL</u>	<u>TON</u>
<u>ITEM 181.12</u>	<u>DISPOSAL OF REGULATED SOIL - IN-STATE FACILITY</u>	<u>TON</u>
<u>ITEM 181.13</u>	<u>DISPOSAL OF REGULATED SOIL - OUT-OF-STATE FACILITY</u>	<u>TON</u>
<u>ITEM 181.14</u>	<u>DISPOSAL OF HAZARDOUS WASTE</u>	<u>TON</u>

The work under these Items shall include the transportation and disposal of contaminated material excavated or excavated and stockpiled. It shall also include the cost of any additional laboratory analyses required by a particular disposal facility beyond the standard disposal test set.

Based on the preliminary review of the project area potentially impacting release sites are located at the following properties:

- RTN 2-17998, Stow and Maple Streets, Former MBTA Parcel
- RTN 2-0021036, 21 Maple Street, RR Parking Lot

This list is based on the preliminary review during the design phase and is not meant to be all inclusive of potential release sites along the project.

Excavation of existing subsurface materials may include the excavation of contaminated soils. The Contractor shall be responsible for the proper coordination of characterization, transport and disposal, recycling or reuse of contaminated soils. Disposal, recycling or reuse will be referred to as “disposal” for the purposes of this specification. However, regardless of the use of the term herein, there will be no compensation under these items for reuse within the project limits. The Contractor will be responsible for coordinating the activities necessary for characterization, transport and disposal of contaminated soils. Such coordination will include the Engineer and his/her designee overseeing management of contaminated materials. Contaminated soils must be disposed of in a manner appropriate for the soil classification as described below and in accordance with the applicable laws of local, state and federal authorities. The Contractor shall be responsible for identifying disposal facility (ies) licensed to accept the class of contaminated soils to be managed and assure that the facility can accept the anticipated volume of soil contemplated by the project.

The Contractor shall be responsible for hiring a Licensed Site Professional (LSP) and all ancillary professional services including laboratories as needed for this work. The Contractor will be responsible for obtaining all permits, approvals, manifests, waste profiles, Bills of Lading, etc. subject to the approval of the Engineer prior to the removal of the contaminated soil from the site. The Contractor and LSP shall prepare and submit to the Engineer for approval all documents required under the Massachusetts Contingency Plan (MCP) and related laws and environmental regulations to conduct characterization, transport, and disposal of contaminated materials.

ITEMS 181.11 through 181.14 (Continued)

CLASSES OF CONTAMINATED SOILS

The Contractor and its LSP shall determine if soil excavated or soil to be excavated is unregulated soil or contaminated soil as defined in this section. Such materials shall be given a designation for purposes of reuse or disposal based on the criteria of the MCP. Soils and sediments which are not suitable for reuse will be given a designation for purposes of off-site disposal based on the characterization data and disposal facility license requirements. The Classes of Contaminated Soils are defined as follows:

UNREGULATED SOIL consists of soil, fill and dredged material with measured levels of oil and hazardous material (OHM) contamination at concentrations below the applicable Reportable Concentrations (RCs) presented in the MCP. Unregulated soil consists of material which may be reused (or otherwise disposed) as fill within the Commonwealth of Massachusetts subject to the non-degradation criteria of the MCP (310 CMR 40.0032(3), in a restricted manner, such that they are sent to a location with equal or higher concentrations of similar contaminants. Disposal areas include licensed disposal facilities, approved industrial settings in areas which will be capped or

covered with pavement or loamed and seeded, and for purposes of this project should be reused as fill within the project site construction corridor whenever possible. The material cannot be placed in residential and/or environmentally sensitive (e.g. wetlands) areas. Under no circumstances shall contaminated soils be placed in an uncontaminated or less contaminated area (including the area above the groundwater table if this area shows no sign of contamination).

The Contractor shall submit to the Town the proposed disposal location for unregulated soils for approval. If such a disposal location is not a licensed disposal facility, the Contractor shall submit to the Engineer analytical data to characterize the disposal area sufficiently to verify that the unregulated material generated within the construction project limits is equal to or less than the contaminant levels at the disposal site and meets the non-degradation requirements of the MCP. In addition, the Contractor shall provide written confirmation from the owner of the proposed disposal location that they have been provided with the analytical data for both the materials to be disposed as well as the disposal site characterization and that s/he agrees to accept this material. A Material Shipping Record or Bill of Lading, as appropriate, shall be used to track the off-site disposal of unregulated soil and a copy, signed by the disposal facility or property owner, shall be provided to the Engineer in order to document legal disposal of the unregulated material.

The cost of on-site disposal of unregulated soil within the project area will be considered incidental to the item of work to which it pertains.

ITEMS 181.11 through 181.14 (Continued)

REGULATED SOIL consists of materials containing measurable levels of OHM that are equal to or exceed the applicable Reportable Concentrations for the site as defined by the MCP, 310 CMR 40.0000. Regulated soil which meets the MCP reuse criteria of the applicable soil/groundwater category for this project area may be reused on site provided that it meets the appropriate geotechnical criteria established by the Engineer. Regulated Soil may be reused (as daily or intermediate cover or pre-cap contouring material) or disposed (as buried waste) at lined landfills within the Commonwealth of Massachusetts or at an unlined landfill that is approved by the Massachusetts Department of Environmental Protection (DEP) for accepting such material, in accordance with DEP Policy #COMM-97-001, or at a similar out-of-state facility. It should be noted that soils which exceed the levels and criteria for disposal at in-state landfills, as outlined in COMM-97-001, may be shipped to an in-state landfill, but require approval from the DEP Division of Solid Waste Management and receiving facility. An additional management alternative for this material is recycling into asphalt. Regulated Soils may also be recycled at a DEP approved recycling facility possessing a Class A recycling permit subject to acceptance by the facility and compliance with DEP Policy #BWSC-94-400. Regulated Soil removed from the site for disposal or treatment must be removed via an LSP approved Bill of Lading, Manifest or applicable material tracking form. This type of facility shall be approved/permitted by the State in which it operates to accept the class of contaminated soil in accordance with all applicable local, state and federal regulations.

HAZARDOUS WASTE consists of materials which must be disposed of at a facility permitted and operated in full compliance with Federal Regulation 40 CFR 260-265, Massachusetts Regulation 310 CMR 30.000, Toxic Substances Control Act (TSCA) regulations, or the equivalent regulations of other states, and all other applicable local, state, and federal regulations. All

excavated materials classified as hazardous waste shall be disposed of at an out-of-state permitted facility. This facility shall be a RCRA hazardous waste or TSCA facility, or RCRA hazardous waste incinerator. This type of facility shall be approved/permitted by the State in which it operates to accept hazardous waste in accordance with all applicable local, state and federal regulations and shall be permitted to accept all contamination which may be present in the soil excavate. The Contractor shall ensure that, when needed, the facility can accept TSCA waste materials i.e. polychlorinated biphenyls (PCBs). Hazardous waste must be removed from the site for disposal or treatment via an LSP approved Manifest.

ITEMS 181.11 through 181.14 (Continued)

MONITORING/SAMPLING/TESTING REQUIREMENTS

The Contractor shall be responsible for monitoring, sampling and testing during and following excavation of contaminated soils to determine the specific class of contaminated material. Monitoring, sampling and testing frequency and techniques should be performed in accordance with Item 180.03 – LSP Services. Additional sampling and analysis may be necessary to meet the requirements of the disposal facility license. The cost of such additional sampling and analysis shall be included in the bid cost for the applicable disposal items. The Contractor shall obtain sufficient information to demonstrate that the contaminated soil meets the disposal criteria set by the receiving facility that will accept the material.

No excavated material will be permanently placed on-site or removed for off-site disposal until the results of chemical analyses have been received and the materials have been properly classified. The Contractor shall submit to the Engineer results of field and laboratory chemical analyses tests within seven days after their completion, accompanied by the classification of the material determined by the Contractor, and the intended disposition of the material. The Contractor shall submit to the Engineer for review all plans and documents relevant to LSP services, including but not limited to, all documents that must be submitted to the DEP.

WASTE TRACKING:

Copies of the fully executed Weight Slips/Bills of Lading/ Manifests/Material Shipping Records or other material tracking form received by the Contractor from each disposal facility and for each load disposed of at that facility, shall be submitted to Engineer and the Contractor's LSP within three days of receipt by the Contractor. The Contractor is responsible for preparing and submitting such documents for review and signature by the LSP or other appropriate person with signatory authority, three days in advance of transporting soil off-site. The Contractor shall furnish a form attached to each manifest or other material tracking form for all material removed off-site, certifying that the material was delivered to the site approved for the class of material. If the proposed disposition of the material is for reuse within the project construction corridor, the Contractor shall cooperate with MassDOT to obtain a suitable representative sample(s) of the material to establish its structural characteristics in order to meet the applicable structural requirements as fill for the project.

All material transported off-site shall be loaded by the Contractor into properly licensed and permitted vehicles and transported directly to the selected disposal or recycling facility and be accompanied by the applicable shipping paper. At a minimum, truck bodies must be structurally sound with sealed tail gates, and trucks shall be lined and loads covered with a liner, which shall be placed to form a continuous waterproof tarpaulin to protect the load from wind and rain.

DECONTAMINATION OF EQUIPMENT

Tools and equipment which are to be taken from and reused off site shall be decontaminated in accordance with applicable local, state and federal regulations. This requirement shall include, but not be limited to, all tools, heavy machinery and excavating and hauling equipment used during excavation, stockpiling and handling of contaminated material. Decontamination of equipment is considered incidental to the applicable excavation item.

ITEMS 181.11 through 181.14 (Continued)

REGULATORY REQUIREMENTS

The Contractor shall be responsible for adhering to regulations, specifications and recognized standard practices related to contaminated material handling during excavation and disposal activities. The Town shall not be responsible at any time for the Contractor's violation of pertinent State or Federal regulations or endangerment of laborers and others. The Contractor shall comply with all rules, regulations, laws, permits and ordinances of all authorities having jurisdiction including, but not limited to, Massachusetts DEP, the U.S. Environmental Protection Agency (EPA), Federal Department of Transportation (DOT), Massachusetts Water Resources Authority (MWRA), the Commonwealth of Massachusetts and other applicable local, state and federal agencies governing the disposal of contaminated soils.

All labor, materials, equipment and services necessary to make the work comply with such regulations shall be provided by the Contractor. Whenever there is a conflict or overlap within the regulations, the most stringent provisions shall apply. The Contractor shall reimburse for all costs it incurs, including penalties and/or for fines, as a result of the Contractor's failure to adhere to the regulations, specifications, recognized standard practices, etc., that relate to contaminated material handling, transportation and disposal.

SUBMITTALS

I. Summary of Sampling Results, Classification of Material and Proposed Disposal Option.

The following information, presented in tabular format, must be submitted to the Engineer for review and approval prior to any reuse on-site or disposal off-site. This requirement is on-going throughout the project duration. At least two weeks prior to the start of any excavation activity, the Contractor shall submit a tracking template to be used to present the information as stipulated below. Excavation will not begin until the format is acceptable to the Town.

Characterization Reports will be submitted for all soil, sediment, debris and groundwater characterized through the sampling and analysis program. Each report will include a site plan which identifies the sampling locations represented in the Report. The Construction Plan sheets may be used as a base plan to record this information.

The Sampling Results will be presented in tabular format. Each sample will be identified by appropriate identification matching the sample identification shown on the Chain of Custody Record. The sample must also be identified by location (e.g. grid number or stockpile number). For each sample, the following information must be listed: the classification (unregulated, regulated, etc.), proposed disposal option for the stockpile or unit of material represented, and all analytical results.

Each Characterization Report will include the laboratory analytical report and Chain of Custody Record for the samples included in the Report.

ITEMS 181.11 through 181.14 (Continued)

II. Stockpiling, Transport, and Disposal.

At least two weeks prior to the start of any excavation activity, the Contractor shall submit, in writing, the following for review and shall not begin excavation activity until the entire submittal is acceptable.

Excavation and Stockpiling Protocol:

Provide a written description of the management protocols for performing excavation and stockpiling and/or direct loading for transport, referencing the locations and methods of excavating and stockpiling excavated material.

Disposal and Recycling Facilities:

1. Provide the name, address, applicable licenses and approved waste profile for disposal and/or recycling location(s) where contaminated soil will be disposed. Present information substantiating the suitability of proposed sites to receive classifications of materials intended to be disposed there, including the ability of the facility to accept anticipated volumes of material.
2. Provide a summary of the history of compliance actions for each disposal/recycling facility proposed to be used by the Contractor. The compliance history shall include a comprehensive list of any state or federal citations, notices of non-compliance, consent decrees or violations relative to the management of waste (including remediation waste) at the facility. Material should not be sent to facilities which are actively considered by the DEP, USEPA or other responsible agency to be in violation of federal, state or local hazardous waste or hazardous material regulations. MassDOT reserves the right to reject any facility on the basis of poor compliance history.

Transportation:

The name, address, applicable license and insurance certificates of the licensed hauler(s) and equipment and handling methods to be used in excavation, segregation, transport, disposal or recycling.

III. Material Tracking and Analytical Documentation for Reuse/Disposal.

The following documents are required for all excavation, reuse and disposal operations and shall be in the format described. At least two weeks prior to the start of any excavation or demolition activity, the Contractor shall submit the tracking templates required to present the information as stipulated below. Excavation or demolition will not begin until the format is acceptable to MassDOT.

All soils, sediments and demolition debris must be tracked from the point of excavation to stockpiling to onsite treatment/processing operations to off-site disposal or onsite reuse as applicable.

ITEMS 181.11 through 181.14 (Continued)

Demolition Debris:

Demolition debris must be tracked if the debris is stockpiled at a location other than the point of origin or if treatment or material processing is conducted. Identification of locations will be based on the station-offset of the location. The tracking table will identify date and point of generation, any field screening such as PID or dust monitoring, visual observations/comments, quantity, and stockpile ID/processing operation location. For each unit of material tracked, the table will also track reuse of the material on-site, providing reuse date, location of reuse as defined by start and end station, width of reuse location by offset, the fill elevation range, quantity, and finish grade for said location. For demolition debris, which is not reused on site, the table will also track disposal of the material as defined by disposal date, quantity and disposal facility. The table must provide a reference to any analytical data generated for the material.

Soil/Sediment:

Soil excavation will be identified based on the station-offset of the excavation location limits. The tracking table will identify date and point of generation, any field screening such as PID or dust monitoring, visual observations, quantity, and stockpile number/location. For each unit of material tracked, the table will also track reuse of the material on-site and disposal of the material off-site using the same categories identified for demolition debris above.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Disposal of contaminated soil shall be measured for payment by the Ton of actual and verified weight of contaminated materials removed and disposed of. The quantities will be determined only by weight slips issued by and signed by the disposal facility. The most cost-effective, legal disposal method shall be used. The work of the LSP for disposal under all of these items shall be incidental to the work with no additional compensation.

ITEM 181.11 Measurement for Disposal of Unregulated Soil shall be under the Contract Unit Price by the weight, in tons, of contaminated materials removed from the site and transported to and disposed of at an approved location or licensed facility, and includes any and all costs for approvals, permits, fees and taxes, additional testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEM 181.12 Measurement for Disposal of Regulated Soil – In-State Facility shall be under the Contract Unit Price by the weight in tons of contaminated materials removed from the site and transported to and disposed of at an approved in-state facility, and includes any and all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEMS 181.11 through 181.14 (Continued)

ITEM 181.13 Measurement for Disposal of Regulated Soil - Out-of-State Facility shall be under the Contract Unit Price by the weight in tons of contaminated materials removed from the site and transported to and disposed of at an approved out-of-state facility, and includes any and all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEM 181.14 Measurement for Disposal of Hazardous Waste shall be under the Contract Unit Price by the weight in tons of hazardous waste removed from the site and transported to and disposed of at the licensed hazardous waste facility, and includes any and all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEM 182.1**INSPECTION AND TESTING FOR ASBESTOS****LUMP SUM**

The work shall include the inspecting and testing of all materials suspected of containing asbestos. When any demolition is required to enable the inspection and testing of the suspected material it will be considered incidental to this Item and the Contractor must perform all asbestos handling and testing in accordance with the regulations stated below.

This item is included in the event possible asbestos conduit or pipe is encountered within the project limits.

Dust suppression in the form of light water sprays, foams, dust suppressants and calcium chloride will be implemented as required to control dusting during any disturbance of asbestos suspected material. Alternatively, intrusive activities may be reduced or curtailed under high wind or heavy rain conditions, which in the opinion of the Health and Safety Plan (HASP) may pose a safety hazard to the workers.

The Contractor shall employ the services of a Massachusetts licensed "Asbestos Inspector" to inspect the material to determine whether or not "ITEM 182.2 REMOVAL OF ASBESTOS" is required. Should the asbestos inspector determine laboratory testing is required, a state certified laboratory shall be used to perform all necessary tests.

Regulations

U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA) including but not limited to:

29 CFR 1910 Section 1001 and 29 CFR 1926 Section 58 Occupational exposure to Asbestos, Tremolite, Anthophyllite and Actinolite, Final Rule
29 CFR 1910 Section 134 Respiration Protection
29 CFR 1926 Construction Industry
29 CFR 1910 Section 2 Access to Employee Exposure and Medical Records 29 CFR 1910 Section 1200 Hazard Communication
29 CFR 1910 Section 145 Specifications for Accident Prevention Signs and Tags

U.S. Environmental Protection Agency, (EPA) including but not limited to:

40 CFR 762, CPTS 62044, FRL 2843-9, Federal Register Vol. 50 no.134, July 12, 1985
p.28530 - 28540 Asbestos Abatement Projects Rule 40 CFR 61 Subpart A Regulation for Asbestos
40 CFR 61 Subpart M (Revised Subpart B) National Emission Standard for Asbestos

U.S. Department of Transportation 49 CFR 172 and 173

Massachusetts Department of Labor and Industries Regulations, (DLI) including but not limited to 453 CMR 6.00 Removal, Containment and Encapsulation of Asbestos

ITEM 182.1 (Continued)

Massachusetts Department of Environmental Protection (DEP) including but not limited to (supplementing subsection 7.01):

310 CMR 7.00, Section 7.09 Odor and Dust, Section 7.10 Noise, Section 7.15 Air Pollution Control Regulations

310 CMR 18.00 and 19.00 Solid Waste Regulations Massachusetts Division of Industrial Safety 45 CMR 10.00

Local Requirements including but not limited to those of Health Departments, Fire Departments and Inspection Services Departments

Wherever there is a conflict or overlap of the above references, the most stringent provision shall apply.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Measurement and payment will be at the contract unit price per Lump Sum for ITEM 182.1 INSPECTION AND TESTING FOR ASBESTOS as specified above including all materials, tools, equipment and labor to complete the inspecting and testing of the asbestos suspected material.

All costs in connection with the protection of general public, private property, and all costs associated with the proper inspecting and testing of the material shall be included in the price and no additional compensation will be allowed.

ITEM 182.2

REMOVAL OF ASBESTOS

FOOT

The work shall include the removal and satisfactory disposal of existing asbestos. The Contractor's attention is directed to the fact that existing asbestos shall be inspected and tested prior to removal, to determine if special removal and disposal is required. The Contractor shall follow all the rules and regulations stated in "ITEM 182.1 INSPECTION AND TESTING FOR ASBESTOS". If asbestos is present, the Contractor shall follow all the rules and regulations stated in the section "REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIALS", under this item. The Contractor should notify and coordinate his/her efforts with the proper utility accordingly.

Removal and Disposal of Asbestos Containing Materials

This section specifies the requirements for the handling and removal of asbestos containing material. The Contractor must perform all asbestos handling and removal work in accordance with these specifications and the following additional requirements.

U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA) including but not limited to:

29 CFR 1910 Section 1001 and 29 CFR 1926 Section 58 Occupational exposure to Asbestos, Tremolite, Anthophyllite and Actinolite, Final Rule
29 CFR 1910 Section 134 Respiration Protection
29 CFR 1926 Construction Industry
29 CFR 1910 Section 2 Access to Employee Exposure and Medical Records 29 CFR 1910 Section 1200 Hazard Communication
29 CFR 1910 Section 145 Specifications for Accident Prevention Signs and Tags

U.S. Environmental Protection Agency, (EPA) including but not limited to:

40 CFR 762, CPTS 62044, FRL 2843-9, Federal Register Vol. 50 no.134, July 12, 1985
p.28530 - 28540 Asbestos Abatement Projects Rule 40 CFR 61 Subpart A Regulation for Asbestos
40 CFR 61 Subpart M (Revised Subpart B) National Emission Standard for Asbestos

U.S. Department of Transportation 49 CFR 172 and 173

Massachusetts Department of Labor and Industries Regulations, (DLI) including but not limited to:

453 CMR 6.00 Removal, Containment and Encapsulation of Asbestos

ITEM 182.2 (Continued)

Massachusetts Department of Environmental Protection (DEP) including but not limited to (supplementing subsection 7.01):

310 CMR 7.00, Section 7.09 Odor and Dust, Section 7.10 Noise, Section 7.15 Air Pollution Control Regulations

310 CMR 18.00 and 19.00 Solid Waste Regulations Massachusetts Division of Industrial Safety
45 CMR 10.00

Local Requirements including but not limited to those of Health Departments, Fire Departments and Inspection Services Departments

Wherever there is a conflict or overlap of the above references, the most stringent provision shall apply.

All asbestos material shall be removed and properly disposed of by a contractor or subcontractor with a current Massachusetts Abatement Contractors License issued by the Department of Labor and Industries. Work shall be supervised by a competent person as required by OSHA in 29 CFR 1926 to ensure regulatory compliance. This person must have completed a course at an EPA Training Center or equivalent course in asbestos abatement procedures, have had a minimum of four years on-the-job training and meet any additional requirements set forth in 29 CFR 1926 for a Competent Person. This person must also be certified by the Commonwealth as an Asbestos Abatement Supervisor and Asbestos Abatement Project Designer as required by 453 CMR 6.00.

Asbestos removal work shall be coordinated with all other work under the contract and shall be completed prior to performing any activities which could disturb the asbestos material or produce airborne asbestos fibers.

Dust suppression in the form of light water sprays, foams, dust suppressants and calcium chloride will be implemented as required to control dusting during trenching and excavation. Alternatively, intrusive activities may be reduced or curtailed under high wind or heavy rain conditions, which in the opinion of the HASP may pose a safety hazard to the workers.

Notification and Permits

The Contractor shall prepare a formal pre-notification form at least ten (10) days prior to the start of asbestos removal work. This form must be submitted to the appropriate Regional Office of the Massachusetts Department of Environmental Protection and to the U.S. Environmental Protection Agency Region I Air and Hazardous Material Division. A copy of the submitted forms must be provided to the Engineer and kept at the work site.

Prior to starting any work, the Contractor shall also obtain any required asbestos removal permit(s) from the city/town. A copy of the permit(s) must be provided to the Engineer and posted at the work site.

The Contractor shall also obtain and pay all other applicable asbestos waste transportation and disposal permits, licenses and fees.

ITEM 182.2 (Continued)

Standard Operating Procedures

The standard operating procedure shall ensure the following:

1. Proper site security including posting of warning signs and restricting access to prevent unauthorized entry into the workspaces.
2. Proper protective clothing and respiratory protection prior to entering the workspaces.
3. Safe work practices including provisions for communications; exclusion of eating, drinking, smoking, or use of procedures or equipment that would in any way reduce the effectiveness of respiratory protection or other engineering controls.
4. Proper exit practices from the workspace through the showering and decontamination facilities.
5. Removing asbestos containing material in ways that minimize release of fibers.
6. Packing, labeling, loading, transporting and disposing of contaminated material in a way that minimizes or prevents exposure and contamination.
7. Emergency evacuation of personnel, for medical or safety (fire and smoke) so that exposure will be minimized.
8. Safety from accidents in the workspace, especially from electrical shocks, slippery surfaces and entanglements in loose hoses and equipment.
9. Provisions for effective supervision and OSHA - specified personnel air monitoring for exposure during work.

Required Submittals

The Contractor shall submit to the Engineer the following listed items at least ten (10) calendar days prior to the start of asbestos work. No asbestos removal work activities shall commence until these items are reviewed by the Engineer, unless otherwise waived. Submittals shall be clearly labeled and in sufficient detail to enable the Engineer to form an opinion as to its conformity to the specifications.

1. Name, experience and DLI certification of proposed Supervisors and Foreman responsible for asbestos work.
2. Summary of workforce by disciplines and a notarized statement documenting that all proposed workers, by name, have received all required medical exams and have been properly trained and certified for asbestos removal work, respirator use and appropriate Massachusetts DLI, EPA and OSHA standards.
3. Notarized statement that workers are physically fit and able to wear and use the type of respiratory protection proposed for the project. Notarized certification signed by an officer of the abatement contracting firm that exposure measurements, medical surveillance and worker training records are being kept in conformance with 29 CFR 1926

ITEM 182.2 (Continued)

4. Written plan of action and standard operating procedures to include location and layout of decontamination areas; sequencing of asbestos work; detailed schedule of work activities by date and interface with other project activities which affect work performance; methods used to assure safety and security; worker protection and exposure monitoring; contingency and emergency evacuation procedures; detailed description of methods to be employed to control pollution; waste handling procedures.
5. Written respiratory protection program specifying level of protection intended for each operation required by the project and details of daily inspection and maintenance elements.
6. Copies of the U.S. EPA, State and local asbestos removal pre-notification forms. If applicable, lists and copies of all permits, licenses, or manifests which will be applied for and used.
7. Name, location and applicable approval certificates for primary and secondary landfill for disposal of asbestos-containing or asbestos contaminated waste. Name, address and license number(s) of hauler permitted to transport waste. (Submit copies of completed manifests upon disposal).

The Contractor must provide copies of daily inspection and record logs upon request of the Engineer, at any time during project. This information will include but is not limited to work area entry data, respirator inspections and maintenance, HEPA-exhaust inspections and maintenance and other work applicable activities or reports of accidents or unusual events.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

ITEM 182.2 will be measured by the FOOT for the complete removal and disposal of the asbestos containing material.

Payment will be at the contract unit price per FOOT for ITEM 182.2 REMOVAL OF ASBESTOS, as specified above including all materials, tools, equipment and labor necessary to complete the work specified above.

All costs in connection with the protection of the general public, private property and all costs associated with the proper disposal of the material removed shall be included in the price and no additional compensation will be allowed.

ITEM 183.1

**TREATMENT OF
CONTAMINATED GROUNDWATER**

GALLON

This Item addresses the treatment and disposal of contaminated groundwater encountered during excavation operations. The work generally consists of furnishing the materials, equipment, labor, services, testing/sampling, waste characterization, transportation, disposal, permits and agreements necessary to perform the work required for the collection, treatment and disposal of contaminated groundwater.

The Contractor is advised that contaminated groundwater may be encountered during dewatering activities. The levels and nature of contamination may vary depending on location and/or depth. No data has been provided in this specification indicating the types of contaminants that may be found in groundwater encountered during this work. It will be the responsibility of the Contractor to ensure that water removed during dewatering operations is treated and disposed of in accordance with all applicable laws and regulations and in accordance with this specification.

The Contractor shall monitor the quantity of groundwater collected for treatment using an in-line totalizer flowmeter or an alternate method approved by MassDOT. The Contractor shall, at all times, minimize the quantity of groundwater removed from the excavations. All groundwater determined to be contaminated will be managed in accordance with all applicable local, state and federal regulations.

It is not the intent herein for the Department to design for or specify to the Contractor which particular treatment is to be used, if necessary. Rather, it is the Department's intent to provide guidance to the Contractor for informational and bidding purposes only. It is, therefore, the Contractor's responsibility to use a treatment method to allow him/her to meet any and all laws, regulations, policies, guidelines and permit requirements. Treatment of contaminated groundwater for dewatering operations is generally performed using a mobile treatment trailer equipped with one or more granular-activated carbon (GAC) canisters, although other techniques are also used.

It is likely that treatment of the contaminated groundwater using granular-activated carbon will be required to complete the work under this Contract. The Methods described under Item 183.1 provides for the identification, testing, management and treatment or disposal of contaminated groundwater and shall be implemented, at a minimum and as necessary by the Contractor via Methods under Item 183.1.

The overall handling and management of contaminated groundwater is regulated under the provisions of 310 CMR 40.0000, 314 CMR 3.00 and 5.00, NPDES and other applicable laws. The unpermitted discharge of contaminated dewatering effluent into the environment (storm drain, surface water body, onto the ground) is a violation of federal and state laws and regulations. Should dewatering of contaminated groundwater be necessary, approvals must be sought from the appropriate federal, state, or local regulatory jurisdiction. The USEPA will not specify a treatment system or method, but normally requires that the treated discharge meet Massachusetts Drinking Water Standards.

ITEM 183.1 (Continued)

The discharge standards are normally met by treating the dewatered groundwater through granular-activated carbon canisters, or similar techniques. Longer term discharges to surface waters or storm drains, and any discharges to the ground, require approval and/or issuance of a permit from the DEP Division of Water Pollution Control. The Contractor shall be responsible for applying for, paying all fees for and obtaining all permits required for treatment and/or disposal of contaminated groundwater. Additional requirements may be mandated by local/regional sewer authorities for discharge to sanitary sewer or Publicly Owner Treatment Works (POTW). Copies of permit applications and correspondence from federal and state agencies and sewer authorities shall be supplied to the Engineer prior to dewatering activities.

EPA regulations published in the Federal Register on September 9, 2005 (70 FR 53663) require a National Pollutant Discharge Elimination System (NPDES) Remediation & Miscellaneous Contaminated Sites General Permit (RGP) for all contaminated construction site dewatering activities in Massachusetts (MAG910000) that will involve the discharge of water to classes of receiving waters designated in the Massachusetts Water Quality Standards (314 CMR 4.00). The application requires that operators of proposed new discharges seeking coverage under this general permit submit a Notice of Intent (NOI) to EPA New England post-marked at least 14 days prior to commencement of discharge. The Contractor is solely responsible for applying for and obtaining coverage under the NPDES Remediation General Permit from EPA and, if applicable, DEP, including the costs associated with sampling and analysis of groundwater and any application fees. The Contractor is required to submit a completed copy of the NOI to the Engineer and the Director of Environmental Programs, Construction Division, 10 Park Plaza, Boston, prior to commencement of discharge.

Upon permanent cessation of the discharges authorized by the RGP, the Contractor shall be responsible for submitting a Notice of Termination (NOT) to EPA New England within 30 days of the permanent cessation. The Contractor is required to submit to MassDOT a completed copy of the NOT within 14 days of the permanent cessation of the discharges authorized by the RGP. All costs and fees associated with the submission of the NOT will be the responsibility of the Contractor.

The Contractor shall be responsible for adhering to regulations, specifications, and recognized standard practices related to contaminated groundwater handling during dewatering activities. MassDOT shall not be responsible at any time for the Contractor's violation of pertinent local, state or federal regulations or endangerment of laborers and others. The Contractor shall comply with all rules regulations, laws, permits and ordinances of all authorities having jurisdiction including, but not limited to, Massachusetts Department of Environmental Protection (DEP), the U.S. Environmental Protection Agency (EPA), Federal Department of Transportation (DOT), Massachusetts Water Resources Authority (MWRA), the Commonwealth of Massachusetts and other applicable local, state and federal agencies governing this work.

ITEM 183.1 (Continued)

The Contractor shall be responsible for determining compliance with the requirements of any permit and for any sampling, testing, and disposal required in connection with said permits. MassDOT and the City/Town reserve the right to collect additional samples of dewatered groundwater to determine the Contractor's compliance with the Permit's requirements. All laboratory testing is to be performed by a DEP certified laboratory for all parameters being tested. Copies of all field and laboratory testing results, reports, etc. required by the permits must be supplied to the Engineer. MassDOT, DEP, and the permit-granting agency, where applicable, reserve the right to collect additional samples of discharged groundwater to verify compliance with permit requirements.

For the purpose of these specifications and to establish a basis for the bid, it is anticipated that granular-activated carbon will be the treatment medium for dewatered contaminated groundwater. The bidder shall factor into the payment item all costs associated with the testing and analyses that may be required by the permitting agency. In addition, any laboratory testing of groundwater is to be performed by a DEP certified laboratory for the parameters being tested. Copies of all field and laboratory testing results will be supplied to the Engineer. Bid price shall also include full compensation for labor, materials, maintenance, mobilization, rental and other related costs. Item 183.2 will be used for disposal of used granular-activated carbon canisters.

Submittals

Prior to initiating work, the Contractor shall submit an excavation dewatering plan to the MassDOT that includes a detailed description of the approach to dewatering, a description of methodology for sealing the excavation to minimize infiltration of groundwater, if deemed applicable to the work, anticipated treatment, discharge points, sampling frequency, required permits, transporters and waste facilities complete with license numbers, permit numbers, contact person, and address and telephone number that the Contractor plans to utilize for waste disposal. The plan shall be submitted for the record.

The Contractor shall submit to MassDOT for review, the proposed methods for dewatering and groundwater treatment and disposal for the various portions of the work to be done. The review shall be for methods only. The Contractor shall remain responsible for the maintenance, performance, structural integrity and safety of the systems installed for this work as well as regulatory compliance of the applicable local, state and federal discharge standards. The contractor shall provide all groundwater sampling and analyses, results and reports required by all applicable local, state and federal agencies. The Contractor shall submit to MassDOT for review all plans and documents that must be submitted to the EPA and DEP, including NOI, NOT, treatment system analytical reports and correspondence. Copies of all permits and approvals and lab analyses and test results associated with groundwater treatment and disposal must be submitted to MassDOT within 3 days of receipt by the Contractor.

ITEM 183.1 (Continued)

Establishment of Treatment Procedure

Since concentrations of contaminants in groundwater cannot be easily assessed in the field, all groundwater extracted from the ground will be considered contaminated and will be initially pumped and stored into open settling tank(s) or a fractionation tank until it can be sampled and analyzed, unless otherwise directed by MassDOT. The Contractor will perform initial sampling and analyses of the groundwater to determine the need for a permit to dispose of contaminated groundwater. Based on the results of the initial sample analysis, which must be provided to the Engineer within twenty-four (24) hours of the time the samples are received by the laboratory, the Contractor will determine the necessity for treatment(s) and disposal procedures. Sampling must also be performed to meet applicable discharge criteria as set by the appropriate regulatory agencies for the permit obtained for disposal. All discharges must meet regulatory standards set forth in the permits required for discharge. For the purposes of the bidding process, it is anticipated that the treatment system will consist of sedimentation tanks, an oil water separator and liquid-phase granular activated carbon as the primary on-site treatment medium for dewatered contaminated groundwater. MassDOT may require additional treatment processes if such is determined necessary during the groundwater testing procedure. The Contractor shall integrate the additional treatment process into the treatment system, if necessary.

The Contractor shall provide all labor, equipment and appurtenances required to treat the groundwater, subject to the approval of MassDOT. Groundwater stored and tested but not requiring treatment or off-site disposal shall be discharged to a location subject to the approval of MassDOT without payment to the Contractor.

Treatment Units

The Contractor shall furnish all labor and materials and shall install and operate temporary groundwater treatment and disposal system(s) as necessary to treat contaminated groundwater pumped from excavations during construction activities under the Contract. Such systems shall be capable of treating groundwater to meet applicable discharge criteria as set by the appropriate regulatory agencies.

The Contractor or their Environmental Consultant shall operate, maintain and modify the selected treatment system, and conduct the necessary monitoring and reporting of influent, midpoint and effluent results, as required by the discharge permit for the disposal option selected.

ITEM 183.1 (Continued)

Method of Measurement

Provide a treatment system that meets permit discharge requirements, mobilize it to the site, provide copies of laboratory analytical data indicating that the system is performing appropriately to meet permit requirements, and demobilize it from the site. This includes management and disposal of wastes generated during treatment prior to discharging such as activated carbon, etc. Work under Item 183.1 is based upon the number of gallons disposed or contaminated groundwater pumped through the granular-activated carbon (Item 183.2) as the medium for the treatment of contaminated groundwater that is found in pipe trenches, manhole excavations, catch basin excavations, which need to be dewatered.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Payment shall be made at the unit price bid per gallon of groundwater pumped, stored, treated as needed and tested as required by discharge permits and regulatory requirements, which price shall be full compensation for all necessary labor and materials, mobilization, maintenance, demobilization of the appropriate unit(s), freight, rental costs, field and laboratory testing costs and permits. Costs associated with the disposal of granular-activated carbon shall be covered under Item 183.2.

<u>ITEM 201.</u>	<u>CATCH BASIN</u>	<u>EACH</u>
<u>ITEM 202.</u>	<u>MANHOLE</u>	<u>EACH</u>
<u>ITEM 202.1</u>	<u>OUTLET CONTROL STRUCTURE</u>	<u>EACH</u>

The work under these items shall conform to the relevant provisions of Subsection 201 of the Standard Specifications and the following.

All drainage castings in new pavement areas shall be installed at base or binder course grade, as directed by the Engineer, and reset to proposed finish surface grade prior to placement of the pavement surface course.

Excavation and backfill shall be included in the cost of the structure.

The top conical sections of manholes and catch basins may need to be replaced with flat top or offset sections as determined by actual field conditions. No additional cost for the use of flat top drainage structures will be accepted.

All frames shall be set in a concrete collar conforming to Standard Detail 202.9.0 prior to placement of top course. All frames shall be set on a minimum of two courses of mortared brick as specified in the Standard Specifications. Cost of such work shall be included in the cost of the structure or item of which it forms a part.

Where new catch basins or manholes are shown on the drawings to be constructed over existing pipes, the work shall also include the connecting of the pipe to the structures and the necessary cutting and removal of the existing pipe within the structures. The existing pipe shall be neatly cut to provide a smooth uniform face flush with the inside wall surface of the structure and totally removed or neatly cut longitudinally and partially removed to retain the lower half of the existing pipe barrel to form the required (manhole) shaped invert.

All proposed catch basins shall be constructed with a minimum 4-foot sump.

Catch Basins:

Catch basins shall have an inside diameter of 4 feet. Catch basins shall have a minimum sump of 4 feet measured from the bottom of invert.

Manholes:

Manholes shall have an inside diameter of 4 feet. Manholes shall be constructed with a minimum concrete compressive strength of 4,000 PSI.

Outlet Control Structures:

Outlet control structures shall have an inside diameter of 4 feet. Outlet control structures shall be constructed with a minimum concrete compressive strength of 4,000 PSI and a ¼" galvanized steel weir plate. Steel shall conform to relevant provisions of section M8 of the Standard Specifications

ITEMS 201 to 202.1 (Continued)

No separate payment will be made for the cost of connecting new pipes into existing structures, or necessary alterations of existing structure, but all costs in connection therewith shall be included in the unit prices bid for the various pipe items.

All existing pipes to be abandoned shall be plugged with brick masonry in conformance with the Standard Specifications, Section 201.62. The cost will be considered incidental to Contract bid Item that requires masonry plug work.

METHOD OF MEASUREMENT

Items 201, 202, 202.1 will be measured for payment by the EACH complete and in place structure as a single unit regardless of depth.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Items 201, 202, 202.1 will be paid for at the respective Contract unit prices per EACH, complete and in place, which prices shall include all labor, materials, and equipment required to complete the work, as shown on the drawings.

Crushed stone if needed to create a suitable foundation, will be measured for payment under Item 156. Crushed Stone.

Catch Basin frame and grate, manhole frame and cover will be paid under Items 221, 221.1, and 222.1.

No separate payment will be made for sawcutting pavement, but all costs in connection therewith shall be included in the Contract unit price bid.

<u>ITEM 202.2</u>	<u>MODULAR PRETREATMENT CHAMBER</u>	<u>EACH</u>
<u>ITEM 202.3</u>	<u>SUBSURFACE DETENTION SYSTEM (LINED)</u>	<u>LUMP SUM</u>
<u>ITEM 202.5</u>	<u>CONCRTE DRY FILTER BOX – RAIN GUARDIAN</u>	<u>EACH</u>

GENERAL

The work under these items shall conform to the relevant provisions of Section 200 of the Standard Specifications and the following.

Work under these items includes labor, materials, and equipment necessary to construct the storm drainage system complete, including connections to existing structures and testing, as indicated on the Drawings and as specified.

SUBMITTALS

Submit the following for review and approval by the Engineer.

- Product Data: Submit manufacturer's technical product data and installation instructions for storm drain system materials and products.
- Submit descriptive literature for piping, fittings, couplings, and appurtenances showing pipe dimensions, pipe and joint materials and dimensions, and other details for each class or type of pipe or product to be furnished for this contract. All pipe furnished under the contract shall be manufactured in accordance with these Specifications.
- Submit shop drawings for structure frames, grates, and covers.
- Filter fabric: Submit the manufacturer's information.
- For water quality structures and stormwater quality filter treatment structures submit shop drawings for the structure and performance. Shop drawings shall detail the structures precast concrete components, inserts, and castings. Where an external bypass is required, the manufacturer shall provide calculations and designs for all structures, piping and any other required material applicable to the proper functioning of the system, stamped by a Professional Engineer.
- The Contractor shall submit buoyancy calculations for storm drainage structures assuming groundwater is one (1) foot below finish grade. If buoyancy is an issue the structure(s) shall be modified to prevent uplift. All buoyancy calculations and precast concrete structure designs shall be prepared and sealed by a professional Civil Engineer licensed in the state of Massachusetts.
- Prior to the acceptance of the storm drainage system, the Contractor shall submit to the Engineer, for review and approval, As-Built Drawings that indicate the true measurement and location, horizontal and vertical, of all new construction. As-Built drawings shall be stamped and signed by a Massachusetts Licensed Land Surveyor or Licensed Professional Engineer. The as-built plans shall also be submitted electronically as an AutoCAD drawing file (release 2010 or higher).
- Prior to acceptance of the storm drainage system, the Contractor shall submit the results of the pipe deflection measurements and the video inspection reports.

ITEMS 202.2 to 202.5 (Continued)

REFERENCE STANDARDS

The following standards are applicable to the work of this Section to the extent referenced herein:

ASTM: American Society for Testing and Materials.

ANSI: American National Standards Institute.

AASHTO: American Association of State Highway and Transportation Officials.

Reference is made herein to the Commonwealth of Massachusetts, Department of Transportation (MassDOT), Formerly Massachusetts Highway Department (MHD) Standard Specifications for Highways and Bridges, latest edition, hereinafter referred to as the "Standard Specifications". All references to method of measurement, basis of payment, and payment items in the "Standard Specifications" are hereby deleted. References made to particular sections or paragraphs in the "Standard Specifications" shall include all related articles mentioned therein.

MassDOT Construction Standards, latest Edition with amendments, hereinafter referred to as the "Construction Standards."

EXAMINATION OF SITE AND DOCUMENTS

It is hereby understood that the Contractor has carefully examined the site and all conditions affecting work under this Section. No claim for additional costs will be allowed because of a lack of knowledge of existing conditions as indicated in the Contract Documents, or obvious from observation of the site.

Plans, surveys, measurements, and dimensions under which the work is to be performed are believed to be correct, but the Contractor shall have examined them for himself during the bidding period and formed his own conclusions as to the full requirements of the work involved.

QUALITY ASSURANCE

Environmental Compliance: Comply with applicable portions of local environmental agency regulations pertaining to storm drain systems.

Utility Compliance: Comply with the Town of Acton regulations, standards, and guidelines pertaining to storm drainage system installation and inspections.

Plumbing Code Compliance: Comply with applicable portions of Massachusetts Plumbing Code and National Standard Plumbing Code, latest editions, pertaining to selection and installation of storm drain system's materials and products.

Manufacturer's Qualifications: Firms regularly engaged in manufacturing of storm drain system's products of types, materials, and sizes required, whose products have been in satisfactory use in similar service for not less than five years.

Installer's Qualifications: Firms with at least three years of successful installation experience on projects with storm drain work similar to that required for the project.

ITEMS 202.2 to 202.5 (Continued)

PROJECT CONDITIONS

Site Information: Perform site inspection and survey, research utility records, and verify existing utility locations and elevations. Verify that storm drainage system structures and piping may be installed in compliance with Contract Drawings and referenced standards.

Interruption of Existing Storm Drainage System: Do not interrupt service to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary service according to the requirements indicated:

Contractor shall notify the Engineer no fewer than two days in advance of proposed interruption of service. Do not proceed with interruption of service without the Engineer's written permission.

SEQUENCING AND SCHEDULING

Coordinate with other utility work.

The Contractor is responsible for developing a sequence of work to maintain existing services in operation until the new services are operational.

The Contractor is responsible for coordinating and scheduling the inspection of the work by the jurisdictional authority. All permits and inspection costs and fees shall be included in the bid prices and no additional costs will be paid to the Contractor.

MODULAR PRETREATMENT CHAMBER

The Modular Pretreatment Chambers shall be constructed of steel reinforced concrete. Concrete shall have a minimum compressive strength of 4500 Psi at 28 days. All precast concrete components shall be designed and manufactured to a minimum live load of AASHTO HS-20 truck loading. Precast concrete components shall meet the requirements of ASTM C478.

Fiberglass: The fiberglass portion of the pretreatment chamber shall be constructed in accordance with ASTM D409. The fiberglass lid shall support vehicle traffic up to 14,160 LBs.

The structure shall be able to be installed to the invert elevations of the drainage system as detailed on the Contract Drawings.

Inspection: All precast concrete sections shall be inspected to ensure that dimensions, appearance, and quality of the product meet the requirements of ASTM C478.

Install modular pretreatment chambers per manufacturer specifications.

CONCRETE DRY FILTER BOX

Top grate mechanically separates larger debris pieces (e.g. leaf litter and garbage) from stormwater runoff, thereby increasing storage space for sediment and finer debris within the unit. In addition, the top grate of the box must minimally support pedestrian foot traffic loads due to frequent positioning in the road right-of-way.

ITEMS 202.2 to 202.5 (Continued)

Impermeable side walls which, when connected to a water permeable filter sidewall, create a debris and sediment trap. Chamber therefore allows heavier solids to settle and collect in an easy to clean location. The side walls also contain flow, thereby preventing inlet erosion.

Water permeable filter sidewall: The water permeable filter sidewall is independently connected to the impermeable side walls. The permeable filter allows for the box to dry out between runoff events, easing maintenance by preventing the need to remove sediment/debris in a slurry state. It also prevents anoxic conditions and habitat for mosquito reproduction.

Impermeable debris walls capture floatables when BMP is filled to capacity (e.g. leaf litter and seeds) and prevent transfer of floatables between the inlet and BMP.

The concrete dry filter box must provide for high volume overflow during large storm events such that water within the structure does not overtop the sidewalls, which would reduce the box's ability to retain floatables and maintain a stable inlet. The overflow points also ensure stormwater will not bypass the BMP until it reaches capacity.

The box should include a splash pad downstream of the principal (permeable filter wall) and emergency overflow (concrete weir) points to reduce scouring below the box (i.e. within the aggregate base and BMP soil). All components must be easy to clean without specialized equipment.

The Concrete Dry Filter Box shall be constructed of steel reinforced concrete. Concrete shall have a minimum compressive strength of 4500 Psi at 28 days. All precast concrete components shall be designed and manufactured to a minimum live load of AASHTO HS-20 truck loading. Precast concrete components shall meet the requirements of ASTM C478. A concrete dry filter box should rest on a level, solid base to prevent settling. A well-draining aggregate base material (minimum 6" thickness) should be compacted to 95% percent standard proctor. The aggregate base should have a surface area equal to or larger than the concrete dry filter box base. The aggregate base location and distance behind the curb depends on site considerations but considerations should include bioretention basin side slopes and inlet slope to promote water flow into the unit. The filter box must include a 4" base to provide a firm foundation for the chamber structure and to supply a splash pad for water entering the unit.

Excavation at the unit installation location should ensure sufficient depth for the 6" aggregate base, concrete dry filter box base, and ponding depth of the bioretention practice. For example, if the ponding depth of the basin is designed to be 1' and the concrete dry filter box base is 4", then soil should be excavated to 1'-10" (1' ponding depth, 6" aggregate base, 4" filter box base).

Stormwater is most commonly directed into the box via a curb-cut or concrete inlet. Said inlet should be framed from the back of the curb to the unit inlet prior to pouring. Top elevations of the framing should match the top of the curb on the street side and the top of the filter box on the bioretention side. Expansion joint material should be used between the concrete curb and concrete dry filter box.

Side curbs of the poured inlet must have an insurmountable profile to prevent water flow from overtopping the downstream side of the inlet.

ITEMS 202.2 to 202.5 (Continued)

The slope of the inlet from the gutter to the filter box must be large enough to promote the inflow of water to the filter box.

Fiberglass: The fiberglass portion of the dry filter box shall support a concentrated load up to 1,760 LBs.

The structure shall be able to be installed to the invert elevations of the drainage system as detailed on the Contract Drawings.

Inspection: All precast concrete sections shall be inspected to ensure that dimensions, appearance, and quality of the product meet the requirements of ASTM C478.

Install dry filter boxes per manufacturer specifications.

CORRUGATED POLYETHYLENE PIPE

General: Provide pipes of the following materials of class indicated. Provide pipe fittings and accessories of same materials and class as pipes with joining method, as indicated. The piping shall be manufactured by an established manufacturer of good reputation in the industry and in a permanent plant adapted to meet all the design requirements of the pipe.

Corrugated polyethylene pipe shall have an interior surface that is smooth and even, free from roughness, projections, indentations, offsets, or irregularities of any kind.

Pipe shall conform to AASHTO M252, Type S for 4- through 10-inch diameter pipes.

Pipe shall conform to AASHTO M294, Type S or ASTM F2306 for 12- through 60-inch diameter pipes.

Fittings shall conform to AASHTO M252, AASHTO M294 or ASTM F2306. Bell and spigot connections shall utilize a spun-on or welded bell and valley or saddle gasket meeting the watertight joint performance requirements of AASHTO M252, AASHTO M294 or ASTM F2306.

Pipe and fittings shall be high-density polyethylene meeting the requirements of ASTM D3350.

Pipe units shall have a minimum laying length of 20-feet except as otherwise indicated or allowed by the Engineer. Pipe shall be installed with a minimum 12-inch cover for AASHTO H-20 loading.

JOINTS ON CORRUGATED POLYETHYLENE PIPE

The pipe and fitting joints shall be bell-and spigot with watertight gaskets in accordance with the requirements of ASTM D3212.

Gaskets shall meet the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant available from the manufacturer shall be used on the gasket and bell during assembly.

Pipe entrances at catch basins shall be made with a mortar made with Type II cement. Mortar mixture shall follow instructions provided by cement manufacturer. Pipe connections at drain manholes and water quality structures shall be made with integral flexible rubber sleeves and Corrugated Pipe Adapters designed for use with the pipe and sleeves.

ITEMS 202.2 to 202.5 (Continued)

SUBSURFACE INFILTRATION CHAMBERS

Subsurface detention chambers shall be HDPE chamber system as manufactured by StormTech, Cultec, or similar. The chambers will be handled, stored, and installed according to manufacturer's specifications and details. The chambers will be placed on a drainage course bed with a minimum of depth of six inches. The chambers shall not be placed with backfill depths greater than 96" to surface as per manufacturer's details.

The nominal storage volume of stormwater chambers shall be 74.9 cubic feet per chamber, including the volume of drainage course bedding.

The galley shall have both of its ends open to allow for unimpeded hydraulic flows and for visual inspection and maintenance of the row's entire length. The galley shall have a circular, indented, flat surface on the top for an inspection port or clean-out.

The galley shall be analyzed and designed using AASHTO methods for thermoplastic culverts contained in the LRFD Bridge Design Specifications, 2nd Edition, including Interim Specifications through 2001. Design live load shall be the AASHTO HS20 vehicle. Design shall consider earth and live loads as appropriate for the specified depth of fill.

The end cap shall be designed to fit into any corrugation of a galley, which allows capping a galley that has its length trimmed and segmenting rows into storage basins of various lengths.

The end cap shall have saw guides to allow easy cutting for various diameters of pipe that may be used to inlet the system. The end cap shall have excess structural adequacies to allow cutting an orifice of the required size at any invert elevation.

The primary face of an end cap shall be curved outward to resist horizontal loads generated near the edges of beds.

Install chambers, bedding, and inspection ports per manufacturer specifications.

FILTER FABRIC

Filter Fabric used as a drainage medium shall be a needle-punched, non-woven geotextile made from polypropylene or polyethylene filaments or yarns.

Filter fabric shall be inert to organic chemicals commonly encountered in the soil.

Filter fabric shall be meet AASHTO M288 Survivability Class 2 Standards.

The edges of filter fabric shall overlap a minimum of one foot.

Filter fabric shall be in compliance with the following properties, measured as per the referenced test methods:

ITEMS 202.2 to 202.5 (Continued)

PROPERTY	Required Value	TEST METHOD
Grab Tensile Strength	160 lbs. (min.)	ASTM D 4632
Elongation @ Failure	50% (min.)	ASTM D 4632
Trapezoidal Tear Strength	60 lbs. (min.)	ASTM D 4533
CBR Puncture Strength	410 lbs. (min.)	ASTM D 6241
Permittivity	1.5 sec ⁻¹ (min.)	ASTM D 4491
Water Flow Rate	110 gal./min./SF (min.)	ASTM D 4491
Apparent Opening Size	#70 Standard US Sieve	ASTM D 4751
U.V. Radiation Stability	70% (min.)	ASTM D 4355

CRUSHED STONE

Crushed stone shall consist of durable crushed rock or durable crushed gravel stone, free from ice and snow, sand, clay, loam, or other deleterious or organic material. The crushed stone shall be uniformly blended and shall conform to the following requirements.

Percent Passing by Weight		
Sieve Size	3/4-inch Stone	1/2-inch Stone
1-inch	100	---
3/4-inch	90-100	---
5/8-inch	---	100
1/2-inch	10-50	85-100
3/8-inch	0-20	15-45
No. 4	0-5	0-15
No. 8	---	0-5

DRAIN COUPLINGS

Drain Couplings shall be pressure rated at least equal to that of the pipe. The coupling sleeve, shall be 1/4-inch minimum thickness elastomeric polyvinylchloride with a minimum tensile strength of 1500 psi. The sleeve shall fit snugly onto the pipe to be joined and be resistant to common chemicals present in storm water. Adjustable pipe clamps shall consist of a slotted band that mate with the worm gear screw and a screw housing all manufactured of stainless steel, and suitable for underground service.

INSTALLATION

General: General Locations and Arrangements: Contract Drawings indicate the general location and arrangement of the underground storm drainage system piping. Location and arrangement of piping layout take into account many design considerations. Install the piping as indicated, to the extent practical. Any modifications to the layout of the storm drainage system shall be submitted to the Engineer for review and approval at least five days prior to the start of the affected work.

ITEMS 202.2 to 202.5 (Continued)

Install piping beginning at low point of systems, true to grades and alignment indicated with unbroken continuity of invert. Place bell ends of piping facing upstream. Install gaskets, seals, sleeves, and couplings in accordance with manufacturer's recommendations, accepted practices, and utility owner's requirements. Maintain swab or drag in line and pull past each joint as it is completed.

All pipe shall be laid in the dry. Adequate measures shall be taken to prevent floatation of pipe in the trench.

Whenever encountered within the trench, existing abandoned water, sewer, and/or drain lines shall be removed within the trench limits, unless otherwise noted. The remaining portion of the abandoned lines shall be plugged at all open ends.

When bell and spigot pipes are used, bell holes shall be dug in the bedding to accommodate the bells. They shall be deep enough to ensure that the bell does not bear on the bottom of the hole but shall be excessively wide in the longitudinal direction of the installation.

Use manholes for changes in direction, except where a fitting is indicated. Use fittings for branch connections, except where direct tap into an existing storm drain is indicated.

Use proper size increasers, reducers, and couplings, where different size or material of pipes and fittings are connected. Reduction of the size of piping in the direction of flow is prohibited without the written approval of the Engineer.

Install piping pitched down in direction of flow as indicated on the Contract Drawings.

Extend storm drainage system piping to connect to building drain services, of sizes and in locations indicated on the Contract Drawings.

Install piping in accordance with governing authorities having jurisdiction, except where more stringent requirements are indicated.

Acceptance of Pipe: Acceptance will be on the basis of tests specified herein before. The quality of all materials used in the pipe, the process of manufacture, and the finished pipe shall be subject to review by the Engineer. Inspection may be made at the place of manufacture, or on the work site after delivery or at both places and the pipe shall be subject to rejection at any time on account of failure to meet any of the specification requirements, even though sample pipe units may have been accepted as satisfactory at the place of manufacture. All pipe which is rejected shall be immediately removed from the project site by the Contractor.

Pipe Storage: Pipe sections shall not be stored on areas over the newly laid pipe or other pipelines which might be damaged by the superimposed load, and storage sections shall be restricted to approved areas.

Handling Pipe: Each pipe unit shall be handled into its position in the trench only in such manner and by such means, as the Engineer accepts as satisfactory. The Contractor will be required to furnish suitable devices to permit satisfactory support of all parts of the pipe unit when it is lifted.

Laying Pipe: Except where a concrete cradle or envelope is required, the pipe shall be laid in a crushed stone cradle. In trenches, no blocking or supporting of the piping by concrete, stones,

ITEMS 202.2 to 202.5 (Continued)

bricks, wooden wedges, or method other than bedding the pipe on crushed stone will be permitted. Each length of pipe shall be shoved home against the pipe previously laid and held securely in position. Joints shall not be "pulled" or "cramped" without approval of the Engineer.

Jointing Pipe: After the pipe are aligned in the trench and are ready to be jointed, all joint surfaces shall be cleaned.

Alignment and Placement: All pipe shall be laid with extreme care as to grade and alignment. Each pipe shall be so laid as to form a close joint with the next adjoining pipe and bring the inverts continuously to the required grade.

Stakeout of drain work and setting of line and grade is the responsibility of the Contractor.

Cleaning: Care shall be taken to prevent earth, water, and other materials from entering the pipeline. As soon as possible after the pipe and manholes are completed, the Contractor shall clean out the pipeline and manholes being careful to prevent soil, water and debris from entering any existing drainage system.

Place plugs in end of uncompleted conduit at end of day or whenever work stops.

Flush lines between manholes to remove collected debris.

Review of Completed Storm Drain System: The completed drain system shall be visually inspected by the Owner's Representative. If the visual observation of the completed drain or any part thereof shows any pipe, manhole, or joint to be of defective work or material, the defect shall be replaced or repaired as directed by the Engineer or the Owner's Representative. The Contractor shall coordinate and provide site access for inspection.

FIELD TESTING OF CORRUGATED POLYETHYLENE PIPING

The pipe shall be cleaned and visually inspected for offsets and obstructions prior to testing.

The total length of each pipe installed on the project shall be tested or inspected for deflection. Conveyance pipes connecting at both ends to concrete drainage structures (catch basins, manholes, outlet control structures, water quality structures, etc.) shall be mandrel tested. Deflection of pipes used for stormwater detention/retention/infiltration systems, and pipes connecting to wye connections, building connections, trench drains, and other connections that do not allow mandrel testing shall be verified by visual inspection by the Owner's Representative during installation.

Mandrel tests shall be performed by the Contractor and observed by the Owner's Representative not sooner than 20 days after completion of installation and compaction of backfill. Testing for pipes greater than 24-inch in diameter shall be tested prior to the installation of drainage structure cone and frame.

Installed pipe shall be tested to ensure that the maximum deflection of the pipe does not exceed 7.5 percent of its base inside diameter. The base inside diameter is defined as the specified nominal diameter minus the allowable inside diameter tolerance of 1.5% but not more than 1/2 inch.

A mandrel shall be pulled through the pipe by hand to ensure that maximum allowable deflections have not been exceeded. The mandrel diameter shall be verified and approved by the Owner's Representative prior to use. Use of an unapproved mandrel will invalidate the test. If the mandrel fails to pass through the pipe, the pipe will be deemed to be over-deflected.

ITEMS 202.2 to 202.5 (Continued)

The mandrel shall be a rigid device, with an odd number of legs (9 legs minimum) having an effective length not less than its nominal diameter. The mandrel shall be fabricated of steel with pulling rings at each end.

The minimum diameters at any point along the full length are as follows:

Nominal Size	Minimum Diameter	Mandrel
6"	5.3"	
8"	7.0"	
10"	8.8"	
12"	10.6"	
15"	13.2"	
18"	15.8"	
24"	21.1"	
30"	26.4"	
36"	31.7"	
42"	37.0"	
48"	42.2"	
54"	47.5"	
60"	52.8"	

FIELD QUALITY CONTROL

Testing: Perform testing of completed piping in accordance with local authorities having jurisdiction.

Video Inspections: Seven days after the completion of the backfilling of each section of new pipe, as defined as a length of pipe between two manholes, the Contractor will provide a televised inspection of the pipe to be submitted to the Designer. The Owner's Representative shall be present during the recording. The recording shall be in DVD color format with audio and will show a clear picture of the inside of the new pipe. If the Designer determines that the DVD is unacceptable for review the contractor shall re-televisize the line until an acceptable DVD has been submitted. In the event that the pipe is not acceptable for any reason relating to the proper construction of the pipe according to these specifications, the Contractor will be responsible to re-excavate and repair the defects to the satisfaction of the Designer at no additional cost.

Cleaning: Clear interior of piping and structures of dirt and other superfluous material as work progresses. Maintain swab or drag in piping and pull past each joint as it is completed.

In large, accessible piping, brushes and brooms may be used for cleaning.

Place watertight plugs in ends of uncompleted pipe at end of day or whenever work stops. If water is in the trench when work is resumed, the plug shall not be removed until the trench has been dewatered and all danger of water entering the pipe eliminated.

Flush piping between manholes to remove collected debris.

ITEMS 202.2 to 202.5 (Continued)

Interior Inspection: If deemed necessary by the Owner's Representative, inspect piping to determine whether line displacement or other damage has occurred.

Make inspections after pipe between manholes has been installed and approximately 2 feet of backfill is in place, and again at completion of project.

If inspection indicates poor alignment, debris, displaced pipe, infiltration or other defects, the Contractor shall correct such defects and reinspect.

Prior to acceptance of the storm drainage system, the Contractor shall submit the following to the Architect and to the local authority:

System As-Built Plan stamped by a Professional Land Surveyor or Engineer Registered in the Commonwealth of Massachusetts.

Video inspection DVDs and report: The report shall document the observations of the video inspections.

Deflection test report: The report shall fully describe the test procedures and list the test results. The report shall be signed by the Contractor's superintendent.

FINAL INSPECTION

Final inspection and acceptance of the storm drainage system shall be made by the Owner's Representative and the utility owner having jurisdiction of the particular system.

Prior to placing the systems in service, all components shall be inspected, with the Owner's Representative present, to ensure that no debris or other contaminants are present. If necessary, the Contractor shall clean the structures and flush piping.

The Contractor is responsible for coordinating and scheduling the inspection of the work by local jurisdictional authorities. No additional payment will be made for inspections and permits required in the performance of the work.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Items 202.2 Modular Pretreatment Chamber and 202.5 Concrete Dry Filter Box-Rain Guardian will be measured as complete units, complete in place. Item 202.3 Subsurface Detention System (Lined) will be measured as a complete unit, complete in place.

Items 202.2 Modular Pretreatment Chamber and 202.5 Concrete Dry Filter Box-Rain Guardian will be paid for at the contract unit price per each which shall include all labor, materials, equipment, and incidental costs required to complete the work. The installation shall include all excavation, filter, frame and covers, setting, and backfill and compaction for a complete installation.

Item 202.3 Subsurface Detention System (Lined) will be paid for at the contract unit price for the lump sum. The contract lump sum price bid for this item shall be full compensation for all labor, materials, and equipment necessary for or incidental to the installation of the infiltration basin system and all related items functioning in the manner herein specified and as shown on the Contract Documents.

ITEMS 202.2 to 202.5 (Continued)

No separate payment shall be made for stormwater chambers, excavation, backfill, temporary support of excavation, control of groundwater, crushed stone, inspection ports, end caps, HDPE pipe, geotextile fabric, flamp, or backfill material, all costs shall be considered incidental to Item 202.3 and included herein.

The cost of maintenance of the proposed detention system until final acceptance shall be deemed to be included and no additional payments shall be made.

ITEM 202.4

GRASS PAVE

SQUARE FOOT

The work under this item shall conform to the relevant provisions of Section 700 of the Standard Specifications and the following:

GENERAL

DESCRIPTION OF WORK

Work under this item includes labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following.

1. Grass porous paver system.
2. Reinforced Loam and Seed

REFERENCES

Work under this item shall conform to the following design standards: ASTM F 1951-08 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment, ASTM D 638-10 Standard Test Method for Tensile Properties of Plastics, ASTM C 33 Standard Specification for Concrete Aggregates, and AASHTO M6 Standard Specification for Fine Aggregate for Hydraulic Cement Concrete

SYSTEM DESCRIPTION

GRASS PAVEMENT SYSTEM

The Grasspave2, or equal, porous pavement system provides vehicular and pedestrian load support for grass areas, while protecting grass roots from harmful effects of traffic.
Major Components of the Complete System

1. Grasspave2, or equal, units, assembled in rolls.
2. Engineered sand and gravel base course.
3. Hydrogrow soil amendment and fertilizer, supplied with Grasspave2, or equal.
4. Sand fill or USGA greens mix.
5. Selected grass from seed, hydroseeding/hydro-mulching, or sod.
6. Selected topsoil (only for seeded installation).
7. Mulch (needed only for seeded or hydroseeded installations).

The Grasspave2, or equal, grass paving units, sand, and base course work together to support imposed loading. The Grasspave2, or equal, grass paving units, Hydrogrow, and sand fill contribute to vegetation support.

ITEM 202.4 (Continued)

REINFORCED LOAM AND SEED

Reinforced soil shall be equivalent to loam blended with FiberSoils ‘TurfGrids’ as manufactured by Read Custom Soils, 158 Tihonet Rd, Wareham, MA 02571, or approved equal.

Shop drawings to be submitted for review and approval with mix design prepared by manufacturer.

Quantity shall be as indicated on the drawings and approved shop drawings.

System to include ‘Sportflow’ by Read Custom Soils or approved natural drainage layer by landscape architect.

Loam shall adhere to requirements in related specification section 32 92 19 Loam and Seed.

SUBMITTALS

Contractor shall submit under conditions of this special provision.

Shop Drawings: Submit design detail showing proper cross-section.

Samples: Submit manufacturer's sample of Grasspave2, or equal, 10” x 10” section of material.

Installation Instructions: Manufacturer’s printed installation instructions. Include methods for maintaining installed products.

Certificates:

1. Manufacturer signed certificate stating the product is made in the USA.
2. Submit Material Certificates for base course and sand (or USGA mix) fill materials
3. Product certificates signed by the manufacturer certifying material compliance of polyethylene used to make Grasspave2, or equal, units.
4. ISO Certificate certifying manufacturer’s quality management system is currently registered to ISO 9001:2008 quality standards.

ITEM 202.4 (Continued)

Substitutions: No material will be considered as an equivalent to the Grasspave2, or equal, unit specified herein unless it meets all areas of this specification without exception. Manufacturers seeking to supply what they represent as equivalent material must submit records, data, independent test results, samples, certifications, and documentation deemed necessary by the Specifier to prove equivalency.

Manufacturer's Material Certification: Product manufacturers shall provide certification of compliance with all applicable testing procedures and related specifications upon written request. Request for certification shall be submitted by the purchasing agency no later than the date of order placement.

Product manufacturers shall also have a minimum of 30 years' experience producing products for porous pavement systems.

Manufacturer Quality Certification: ISO Certification certifying manufacturer's quality management system for its Grasspave2, or equal, system is currently registered to ISO 9001:2008 quality standards. Any alternate materials submitted shall provide a certification that their porous pavement system manufacturing process is part of an ISO program and a certification will be required specifically stating that their testing facility is certified and in accordance with ISO.

DELIVERY, STORAGE, AND HANDLING

Store products in manufacturer's unopened packaging until ready for installation.

Protect Grasspave2, or equal, units/rolls from damage during delivery and store rolls upright, under tarp, to protect from sunlight, when time for delivery to installation exceeds one week.

Store Hydrogrow in a dark and dry location.

Handling: Protect materials during handling and installation to prevent damage.

MAINTENANCE SERVICE

Installer and/or landscape contractor shall be responsible for maintenance of grass plants – water/irrigation, fertilizing, mowing – for one growing season. DO NOT AERATE Grass pavement areas. See Grasspave2 Maintenance Guide from Invisible Structures, or equal.

System to be maintained by owner, after one growing season.

ITEM 202.4 (Continued)

PROJECT CONDITIONS

Maintain environmental conditions within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits. Do not begin installation of porous pavements until all hard surface paving adjacent to porous pavement areas, including concrete walks and asphalt paving, is completed. Install turf when ambient air temperatures is at least 55 degrees F (13 degrees C). In cold weather, do not use frozen materials or materials mixed or coated with ice or frost, and do not build on frozen base or wet, saturated or muddy subgrade. Protect partially completed paving against damage from other construction traffic when work is in progress. Adequately water sod or grass seed to assure germination of seed and growth of root system. Grass coverage on the sand-filled Grasspave2, or equal, rings must be completed within one week: See Part 3 Execution.

DO NOT DRIVE, PARK ON, or use Grass pavement system for two or three mowing cycles until grass root system has matured (about 6 to 8 weeks for seeded areas). Any barricades constructed must still be accessible by emergency and fire equipment during and after installation.

LIMITED WARRANTY

Invisible Structures, Inc. (ISI) warrants to its purchasers that all products furnished by ISI will be free from defects in material and/or workmanship. This warranty shall be extended for a period of five (5) years following the date of shipment by ISI. Providing a written claim is presented to ISI within the warranty period and after inspection by ISI showing the materials have failed under this warranty, all defective materials shall be refurbished under this warranty, at no charge, excluding re-installation costs. This in lieu of all other warranties expressed or implied and is the sole warranty extended by ISI. The Town's liability under this warranty is limited to the refurbishing of materials and does not include any responsibility for incidental, consequential, or other damages of any nature.

MANUFACTURERS

Acceptable Manufacturer: Invisible Structures, Inc., which is located at: 1600 Jackson St. Suite 310 ; Golden, CO 80401; Toll Free Tel: 800-233-1510; Tel: 303-233-8383; Email: [request info \(sales@invisiblestructures.com\)](mailto:sales@invisiblestructures.com); Web: www.invisiblestructures.com.

Substitutions: approved equal.

GRASSPAVE2, OR EQUAL,

Composition:

1. Manufactured in the USA.
2. High density polyethylene (HDPE): 100 percent recycled materials.
3. Color: black
4. Color Uniformity: Uniform color throughout all units rolls.
5. Carbon Black for ultraviolet light stabilization.
6. Hydrogrow soil amendment and fertilizer, provided by manufacturer with Grasspave2, or equal,.

ITEM 202.4 (Continued)

Performance Properties:

1. Maximum Loading Capability: 15,940 psi (2.29 million psf, 109,906 kPa) when filled with sand.
2. Wheelchair Access testing for ADA Compliance: Passing ASTM F 1951-08.
3. Wheelchair Access testing for ADA Compliance: Passing Rotational Penetrometer testing.
4. Tensile strength, pull-apart testing: 458 lbf/in from ASTM D638 Modified.
5. System Permeability (Grass pavement, sand, base course): 2.63 to 38.55 inches of water per hour.
6. Effective Imperviousness (E.I.): 10%.

Dimensions (individual units are assembled and distributed into rolls):

1. Roll area: From 108 sq ft (10 sq m) to 538 sq ft (50 sq m), in 108 sq ft (10 sq m) increments
2. Roll Widths: From 3.3 ft (1 m) to 8.2 ft (2.5 m), in 1.6 ft (0.5 m) increments.
3. Roll Lengths: From 32.8 ft (10m) to 65.6 ft (20 m), in 3.3 ft (1 m) increments.
4. Roll Weights: From 41 lbs (19kg) to 205 lbs (93kg), in 41 lbs (19 kg) increments.
5. Unit Nominal Width by Length: 20 inches by 20 inches (0.5 m by 0.5 m) or 40 inches by 40 inches (1 m by 1 m).
6. Nominal Depth: 1 inch (2.5 cm) – for rolls and individual units.
7. Unit Weight: 18 oz (510 g) or 5 lbs. (2.27 kg).
8. Volume Solid: 8 percent.

SYSTEM MATERIALS

Base Course: Sandy gravel material from local sources commonly used for road base construction (recycled materials such as crushed concrete or crushed asphalt are NOT acceptable).

1. Conforming to the following sieve analysis and requirements:
 - a. 100 percent passing sieve size 1 inch (25 mm).
 - b. 90-100 percent passing sieve size 3/4 inch (19 mm).
 - c. 70-80 percent passing sieve size 3/8 inch (9 mm).
 - d. 55-70 percent passing sieve size #4.
 - e. 45-55 percent passing sieve size #10.
 - f. 25-35 percent passing sieve size #40.
 - g. 3-8 percent passing sieve size #200.
2. Provide a base course material nearly neutral in pH (range from 6.5 to 7.2) to provide adequate root zone development for turf.
3. Material may be either "pit run" or "crusher run." Avoid using clay based crusher run/pit run. Crusher run material will generally require coarse, well-draining sand conforming to AASHTO M6 or ASTM C 33 to be added to mixture (20 to 30 percent by volume) to ensure long-term porosity.
4. Alternative materials such as crushed shell, limerock, or crushed lava may be used for base course use, provided they are mixed with sharp sand (20 to 30 percent) to ensure long-term porosity, and are brought to proper compaction. Without added sand, crushed shell and limerock set up like concrete and become impervious.

ITEM 202.4 (Continued)

5. Alternative size and/or composition of base course materials should be submitted to Invisible Structures, Inc. (Manufacturer) for approval.

Sand Fill for Rings and Spaces Between Rings: Clean sharp sand (washed concrete sand). Choose one of the following:

1. Coarse, well-draining sand, such as washed concrete sand conforming to AASHTO M6 or ASTM C-33.
2. United States Golf Association (USGA) greens, section - sand mix “The Root Zone Mixture.”

Turf Conditioner:

1. Hydrogrow a proprietary soil amendment manufactured by Invisible Structures, Inc. and provided with Grasspave2, or equal,.

REINFORCED LOAM AND SEED

Reinforced soil shall be equivalent to loam blended with FiberSoils ‘TurfGrids’ as manufactured by Read Custom Soils, 158 Tihonet Rd, Wareham, MA 02571, or approved equal.

System to include ‘Sportflow’ by Read Custom Soils or approved natural drainage layer by landscape architect.

Loam shall adhere to requirements in MassDOT Standard Specifications.

INSPECTION

Examine subgrade and base course installed conditions. Do not start porous paving installation until unsatisfactory conditions are corrected. Check for improperly compacted trenches, debris, and improper gradients.

For fire lane installations: prior to installing base course for turf paving, Contractor shall obtain approval of local fire authorities of sub-base.

Start of installation constitutes acceptance of existing conditions and responsibility for satisfactory performance. If existing conditions are found unsatisfactory, contact Architect for resolution.

PREPARATION

General: Ensure that subbase materials are structurally adequate to receive designed base course, wearing course, and designed loads. Generally, excavation into undisturbed normal strength soils will require no additional modification. Fill soils and otherwise structurally weak soils may require modifications, such as geotextiles, geogrids, and/or compaction (not to exceed 90%). Ensure that grading and soil porosity of the subbase will provide adequate subsurface drainage.

ITEM 202.4 (Continued)

Subgrade Preparation:

1. Verify subgrade in accordance with porous paving system manufacturer's instructions.
2. Proper subgrade preparation will enable the Grasspave2, or equal, rolls/units to connect properly and remain level and stationary after installation.
3. Excavate area allowing for unit thickness, the engineered base depth (where required), and 0.5 inch (1.25 cm) for depth of sod root zone or topsoil germination area (when applicable).
4. Provide adequate drainage from excavated area if area has potential to collect water, when working with in-place soils that have poor permeability.
5. Ensure in-place soil is relatively dry and free from standing water.
6. Uniformly grade base.
7. Level and clear base of large objects, such as rocks and pieces of wood.

Base Preparation:

1. Install Base as specified in Earth Moving specification. Verify engineered base (if required) is installed in accordance with porous paving system manufacturer's instructions.
2. Coordinate base installation and preparation with subdrains as specified in Stormwater Utilities specification.
3. If required, place a geotextile separation layer between the natural ground and the 'engineered base'.
4. If required, install the specified sub-drain and outlet according to construction drawings.
5. Coordinate base installation and preparation with irrigation and drip irrigation lines specified in Irrigation specification.
6. Place engineered base in lifts not to exceed 6 inches (150 mm), compacting each lift separately to 95 percent Modified Proctor.
7. Leave 1 inch (2.5 cm) of depth below final grade for porous paver unit and sand fill and 0.5 inch (1.25 cm) for depth of sod root zone or topsoil germination area (when applicable).

ON-SITE MANUFACTURER'S FIELD REPRESENTATIVE

A qualified Manufacturer's field representative shall be available for a pre-construction meeting via phone or in person and will provide installation videos, design details, installation instructions, and the technical specifications. The time for on-site observation shall be indicated in the Contract Documents and included in the base bid price.

HYDROGROW INSTALLATION

Spread all Hydrogrow mix provided (spreader rate = 4.53 kg per 100 m² (10 lbs per 1076 ft²) evenly over the surface of the base course with a hand-held, or wheeled, rotary spreader. The Hydrogrow mix should be placed immediately before installing the Grasspave2, or equal.

ITEM 202.4 (Continued)

GRASS PAVEMENT INSTALLATION

Install the Grasspave2, or equal, units by placing units with rings facing up, and using snap-fit connectors, pegs and holes, provided to maintain proper spacing and interlock the units. Units can be easily shaped with pruning shears or knife. Units placed on curves, slopes, and high traffic areas shall be anchored to the base course, using 40d common nails with fender washer, as required to secure units in place. Tops of rings shall be between 0.25" to 0.5" below the surface of adjacent hard-surface pavements.

Install sand in rings as they are laid in sections by "back-dumping" directly from a dump truck, or from buckets mounted on tractors, which then exit the site by driving over rings already filled with sand. The sand is then spread laterally from the pile using flat bottomed shovels and/or wide "asphalt rakes" to fill the rings. A stiff bristled broom should be used for final "finishing" of the sand. The sand must be "compacted" by using water from hose, irrigation heads, or rainfall, with the finish grade no less than the top of rings and no more than 0.25" above top of rings.

INSTALLATION OF GRASS

Grass coverage on the sand-filled rings must be completed within one week. Sand must be re-installed and leveled and Grasspave2, or equal, checked for integrity if rings become exposed due to wind, rain, traffic, or other factors.

Hydroseeding/hydro-mulching - A combination of water, seed and fertilizer are homogeneously mixed in a purpose-built, truck-mounted tank. The seed mixture is sprayed onto the site at rates shown on plans and per hydroseeding manufacturer's recommendations. Coverage must be uniform and complete. Following germination of the seed, areas lacking germination larger than 8" x 8" must be reseeded immediately. Seeded areas must be fertilized and kept moist during development of the turf plants.

DO NOT DRIVE ON SYSTEM: Hydroseeded/hydro-mulch areas must be protected from any traffic, other than emergency vehicles, for a period of 6 to 8 weeks, or until the root system has penetrated and established well below the Grasspave2, or equal, units. Adequately water sod or grass seed to assure germination of seed and growth of root system.

PROTECTION

Seeded areas must be protected from any traffic, other than emergency vehicles, for a period of 4 to 8 weeks, or until the grass is mature to handle traffic.

ITEM 202.4 (Continued)

FIELD QUALITY CONTROL

Remove and replace segments of Grasspave2, or equal, units where three or more adjacent rings are broken or damaged, reinstalling as specified, so no evidence of replacement is apparent.

Perform cleaning during the installation of work and upon completion of the work. Remove all excess materials, debris, and equipment from site. Repair any damage to adjacent materials and surfaces resulting from installation of this work.

MAINTENANCE

Maintain grass in accordance with manufacturer's instructions and as specified in Section 700 of the MassDOT Standard Specifications.

Lawn Care: Normal turf care procedures should be followed, including de-thatching.

DO NOT AERATE. Aerator will damage the Grass pavement units. Aeration is not necessary in a sand root zone. When snow removal is required, keep a metal edged plow blade a minimum of ¾ inch (17 mm) above the surface during plowing operations to avoid causing damage to the Grass pavement units, or use a plow blade with a flexible rubber edge, or use a plow blade with skids on the lower outside corners set so the plow blade does not come in contact with the units.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Grass pave will be measured for payment by the cubic foot, complete in place.

Grass pave will be paid for at the Contract unit price per square foot, which price shall include all labor, materials, equipment and incidental costs required to complete the work. No separate payment will be made for sand, gravel, geotextile fabric, loam, and seed.

<u>ITEM 507.</u>	<u>TRAVERSABLE GRANITE CURB - TYPE</u>	<u>FOOT</u>
	<u>T100 - STRAIGHT</u>	
<u>ITEM 507.1</u>	<u>TRAVERSABLE GRANITE CURB - TYPE</u>	<u>FOOT</u>
	<u>T100 - CURVED</u>	

The work to be done under these items shall conform to the relevant provisions of Section 500 of the Standard Specifications and the following:

DESCRIPTION

The work under this item shall include the furnishing and installation of traversable granite curbing between as indicated on the contract drawings. The proposed granite curb shall conform to the dimensions as shown on the Plans.

MATERIALS

The granite curbing shall be in conformance with section M9.04 and the details on the contract drawings.

CONSTRUCTION METHODS

The granite curbing shall be installed in conformance with Section 501 and the details within the construction plans.

The curb shall be installed in lengths not greater than 6 feet. The Contractor shall provide curved curb where required, as shown on the plans.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 507. and Item 507.1 will be measured per linear foot installed.

Item 507. and Item 507.1 Traversable Granite Curbing will be paid by the linear foot of curb installed, which price shall include all labor, material, sawcutting, excavation, gravel, cement concrete, equipment and incidental costs required to complete the work.

<u>ITEM 657.</u>	<u>TEMPORARY FENCE</u>	<u>FOOT</u>
<u>ITEM 657.5</u>	<u>TEMPORARY FENCE REMOVE AND RESET</u>	<u>FOOT</u>

The work under these items shall conform to the relevant provisions of Sections 644, 665 of the Standard Specifications and the following:

DESCRIPTION

The work under these Items consist of furnishing, installing, removing, resetting, and final removal from the project site of temporary fence and gates to separate construction activities from public access as shown on the plans or as required by the Engineer. The Contractor shall install and maintain temporary construction fences around the work areas as required by the Engineer.

The height of the temporary fence shall be approved by the Engineer.

PRODUCTS

Unless otherwise indicated, type of temporary chain link fencing shall be Contractor's option. Following types are acceptable:

1. New materials or previously used salvaged chain link fencing in good condition – subject to inspection/approval by the Engineer.
2. Posts: Galvanized steel pipe of diameter to provide rigidity. Post shall be suitable for setting in concrete footings, driving into ground, anchoring with base plates, or inserting in precast concrete blocks.
3. Fabric: Woven galvanized steel wire mesh. Provide in continuous lengths to be wire tied to fence posts or prefabricated into modular pipe-framed fence panels.

Gates

Provide personnel and vehicle gates as required for functional access to site.

1. Fabricate of same material as used for fencing
2. Vehicle gates:
 - a. Minimum width: 20 feet to allow access for emergency vehicles.
 - b. Capable of manual operation by one person.

Gates shall be fabricated using welded construction or heavy pressed steel or malleable corner fitting securely riveted. Gates shall be properly braced and diagonally trussed to eliminate any possible sagging. Hinges shall be of sufficient strength and design to permit easy and trouble free operation. All single swing gates shall be equipped with two H.O. hinges and one yoke latch per gate. All double swing gates shall be equipped with a positive type latching device with padlock fitting.

ITEMS 657. and 657.5 (Continued)

Installation of temporary fencing shall not deter or hinder access to existing or proposed fire hydrants. Maintain 3 feet diameter clear space around fire hydrants. Where fire hydrant is blocked by fencing, provide access gate.

The contractor shall maintain temporary fence in good condition all the time. If damaged, shall be immediately repaired.

The fence shall not be removed without prior approval of the Engineer.

The Contractor shall backfill and compact holes. Holes in pavement shall be surfaced to match existing paving. The contractor shall repair all damages caused by installation of temporary fencing.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 657. and Item 657.5 will be measured for payment by the Foot of temporary fence, including gates. Temporary fence will be measured along the top edge of the fence element from center to center of end posts, including gates. No measurements will be made for removing, relocating and resetting any temporary fence moved solely for the convenience of the contractor.

Item 657. and Item 657.5 will be paid for at the respective Contract unit prices per Foot, which price shall include all labor, materials, equipment, and all incidental costs required to complete the work. No separate payment will be made for all posts including end, corner, and intermediate brace posts, all gates and gate posts, removing and resetting of temporary fence for the convenience of the Contractor, the replacement and/or restoration of fence damaged due to construction accidents, vandalism and/or any other manner, final removal, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 697.1

SILT SACK

EACH

The work under this item shall conform to the relevant provisions of Section 670 of the Standard Specifications and the following:

GENERAL

The work under this item includes the furnishing, installation, maintenance and removal of a reusable fabric sack to be installed in drainage structures for the protection of wetlands and other resource areas and the prevention of silt and sediment from the construction site from entering the storm water collection system. Devices shall be ACF Environmental (800)-448-3636; Reed & Graham, Inc. Geosynthetics (888)-381-0800; The BMP Store (800)-644-9223; or approved equal.

CONSTRUCTION

Silt sacks shall be installed in retained existing and proposed catch basins and drop inlets within the project limits and as required by the Engineer.

The silt sack shall be as manufactured to fit the opening of the drainage structure under regular flow conditions and shall be mounted under the grate. The insert shall be secured from the surface such that the grate can be removed without the insert discharging into the structure. The filter material shall be installed and maintained in accordance with the manufacturer's written literature and as directed by the Engineer.

Silt sacks shall remain in place until the placement of the pavement overlay or top course and the graded areas have become permanently stabilized by vegetative growth. All materials used for the filter fabric will become the property of the Contractor and shall be removed from the site.

The Contractor shall inspect the condition of silt sacks after each rainstorm and during major rain events. Silt sacks shall be cleaned periodically as directed by the manufacturer to remove and disposed of accumulated debris as required. Silt sacks, which become damaged during construction operations, shall be repaired or replaced immediately at no additional cost to the Department.

When emptying the silt sack, the contractor shall take all due care to prevent sediment from entering the structure. Any silt or other debris found in the drainage system at the end of construction shall be removed at the Contractors expense. The silt and sediment from the silt sack shall be legally disposed of offsite. Under no condition shall silt and sediment from the insert be deposited on site and used in construction.

All curb openings shall be blocked to prevent stormwater from bypassing the device.

ITEM 697.1 (Continued)

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Silt sacks will be measured for payment by the each, complete in place.

Silt sacks will be paid for at the Contract unit price per each, which price shall include all labor, materials, equipment and incidental costs required to complete the work. No separate payment will be made for removal and disposal of the sediment from the insert, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 698.4 **GEOTEXTILE FABRIC FOR PERMANENT** **SQUARE YARD**
EROSION CONTROL

GENERAL

The work to be done under this item shall include furnishing and placing of geotextile fabric for permanent erosion control at proposed Rip Rap area as shown on the Plans or as directed by the Engineer.

MATERIALS

Geotextile Fabric for Permanent Erosion Control shall conform to Subsection M9.50.0 of the MassDOT Standard Specifications and AASHTO M 288.

SUBMITTALS

Contractor shall submit a certificate stating the manufacturer, product name, style number, chemical composition of the filaments and other pertinent information to fully describe the geotextile fabric. Contractor shall also submit test results to show that the geotextile meets the requirements of Material Subsection M9.50.0 and of the MassDOT Standard Specifications and AASHTO M 288.

CONSTRUCTION METHODS

Geotextile for Permanent Erosion Control shall be installed according to the manufacturer's instructions and in reasonably close conformity with the location, lines and grades indicated on the Plans. Any section of fabric that is damaged shall be repaired in accordance with the manufacturer's requirements and AASHTO M 288 and to the satisfaction of the Engineer or it shall be replaced at no cost to the Town.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Geotextile Fabric for Permanent Erosion Control shall be measured for payment by the number of square yards actually installed at the locations shown on the Plans, in accordance with these specifications, or as directed by the Engineer. Overlapping for seams and joints shall be measured as one layer of fabric. Any embedment or wrapping at the toe or top of the slope shall be measured for payment. Geotextile fabric used for the surface detention system shall be paid under item 202.3

The accepted quantities of Geotextile Fabric Permanent Erosion Control shall be paid for at the contract bid price per square yard of fabric as listed in the proposal. The price so shall constitute full compensation for furnishing and installing geotextile fabric, all miscellaneous associated assembly material, and all other labor, equipment, material, and incidentals necessary to complete the work as specified and as directed by the Engineer.

ITEM 755.35

INLAND WETLAND REPLICATION AREA

LUMP SUM

The work under this item shall conform to the relevant provisions of Sections 120, 770, 771 of the Standard Specifications and the following:

Work under this item shall include furnishing material and the construction and maintenance of inland wetland replication areas as shown on the drawings and as required by the Engineer. Inland Wetland Replication Area shall hereafter be referred to as Replication Area. All work shall be in coordination with an approved Wetland Specialist as specified under that item.

Wetland Restoration work shall be as specified and compensated under that item. Construction of tidal wetlands shall be as specified under the appropriate item for tidal wetland mitigation.

The Replication Area shall be constructed prior to wetland impacts unless otherwise approved by the Engineer, specified herein, or specified in permit conditions and approvals. Construction schedule shall be appropriate to planting and seeding season (see below). Changes to this schedule will require written approval from the Engineer.

DESCRIPTION OF WORK

Construction of the Replication Area shall be completed as shown on the drawings at the following location(s):

Area/s A at Station: **205+75** Area = **486** sf.

Replication Area shall be constructed to meet the requirements of all associated permits and certifications, including relevant performance standards of the Massachusetts Wetlands Protection Act (MGL C. 131, s40), Section 401 Water Quality Certification, and Section 404, U.S. Army Corps of Engineers Permit.

The Contractor is responsible for protection and preservation of natural areas adjacent to the Replication Area both within and outside the project limits and for the duration of the Contract; including but not limited to damage to soils or vegetation due to erosion, sedimentation, compaction, trampling, vehicles, storage of materials, or other negligence shall be repaired to the satisfaction of the Engineer and at the Contractor's expense.

The Wetland Specialist overseeing the Wetland Replication construction work shall not be from the same company as that which is performing planting, seeding, or participating in any aspect of the Wetland Replication construction.

SUBMITTALS - DOCUMENTS

Request for Conditional Acceptance: As specified below, a letter requesting Conditional Acceptance of the work and the site conditions shall be submitted to the Engineer.

Request for Certificate of Compliance (Partial or Full): As specified below, shall be submitted to the Engineer for distribution to appropriate regulatory agencies.

ITEM 755.35 (Continued)

Request for Final Acceptance: As specified below, a letter requesting Final Acceptance of the work and the site conditions shall be submitted to the Engineer.

Monitoring Reports: Reports shall be submitted to the Engineer as specified below. Reports shall be compensated under Item 755.75 and 755.76.

SUBMITTALS - MATERIAL

Soil and Amendments

No soil, compost, or other soil amendment imported to the work site shall contain seeds, roots, stems, or other viable parts of invasive plants or other noxious plants.

At least sixty (60) days prior to installation and prior to ordering, the Contractor shall submit for approval sources of soil, compost, and amendments. Submittal shall include the supplier and location of the source. Off-site sources shall be identified and available for inspection by the Wetland Specialist prior to transport of material to the site to verify that they are likely to be free of invasive plant species, including all viable plant parts.

Samples of tested and approved wetland soil and soil amendments for soil texture, organic carbon content or other routine soil analysis parameters (e.g., pH, Cation Exchange Capacity, Percent Base Saturation) and Soil Organic Matter Analysis will be required if requested by the Engineer. The grab samples shall be collected by the Contractor or Wetland Specialist from multiple representative locations in the wetland topsoil mix following the “Umass Soil and Plant Tissue Testing Laboratory Sampling and Collection Protocols” (or equivalent certification paperwork provided by the soil supplier). The lab analysis shall be provided to the Engineer along with written certification from the Contractor or Wetland Specialist that the wetland topsoil was collected per the referenced protocol and meets the desired specification. The analysis and written certification of same shall be provided to the Engineer prior to placing the wetland topsoil in the Replication Area.

Seed Mix

Certificate of Materials from the supplier shall be submitted 30 days prior to seeding and must be approved prior to ordering materials. Seed species listed on the certificate shall include ecotype region (i.e., *Asclepias incarnata*, PA Ecotype).

Seed tag from the bag of seed used shall be submitted to the Engineer at the time of seeding. Seed tag shall include ecotype region and species, guaranteed percentages of purity, weed content and germination of the seed, and the net weight. Seed tag shall match the Certificate of Materials, include the name of the supplier, and date material was sent.

Bill of lading or notarized Certificate of Compliance from the Supplier serving as proof of purchase shall be submitted if requested by the Engineer. Document shall include date of sale, quantity, lot number, and address of Supplier. This shall match the seed tag. Notary shall not work for either the contractor or seed supplier.

ITEM 755.35 (Continued)

Plant Certification

Plant Certification shall be per the applicable requirements of Subsection 771, PLANTING TREES, SHRUBS AND GROUND COVER, of the Standard Specifications. The nursery source shall certify the provenance or origin of all plants.

Other Material: Submittals shall be per the respective item.

MATERIALS

Sediment Control Barrier and Erosion Prevention Measures

Sediment control barriers shall be per Item 767.121.

Erosion prevention measures for disturbed areas adjacent to the Replication Area shall include but not necessarily be limited to compost blankets, jute mesh, seeding, and/or combinations thereof as approved by the Engineer.

Sediment controls and erosion prevention devices and measures shall be compensated under the respective items.

Wetland Soil

Soil appropriate for the Replication Area may be either hydric soil excavated from the impacted wetland, a manufactured mix of compost and on-site borrow, or a combination thereof, as approved by the Engineer.

Hydric soil from the impacted wetland area may be spread on the surface of the constructed Replication Area as an inoculant or can be placed in a bulk fashion in a roughly 1:1 ratio of area and depth. Soil shall be handled such that the original soil structure is preserved and shall not be compacted, screened, or otherwise processed.

Hydric soil from the impacted wetland that is infested with invasive plant species identified on the Massachusetts Invasive Plant Advisory Group (MIPAG) shall not be used in the Replication Area unless approved by the Wetland Specialist and Engineer. To the extent possible, infested soil shall be disposed of within the project limits in an upland area outside of regulated areas and as approved by the Invasive Plant Management Strategy item (if in the contract) or by the Engineer.

A manufactured mix suitable for wetlands shall consist of on-site borrow from the proposed Replication Area (if approved by the Wetland Specialist and Engineer) thoroughly mixed with compost to achieve a target organic carbon content of 10-12% (up to 21% percent organic matter) by dry weight. The organic material used for mixing shall be well or partially decomposed. Clean leaf compost is the preferred soil amendment to achieve these standards though other materials may be used if approved by the Wetland Specialist and Engineer. Note that “clean” refers both to a negligible amount (<1%) of physical contaminants such as plastic and to the lack of chemical contaminants that might pose a hazard to plants or animals. Off-site borrow may be used for mixing if approved in advance by the Engineer.

ITEM 755.35 (Continued)

No soil or soil amendment shall be brought on site without approval of the material source by the Wetland Specialist and the Engineer. Soils used in the replacement area shall be free of rocks greater than 4 inches in diameter.

Plants

Plant material shall conform to the applicable requirements of Section 771, PLANTING TREES, SHRUBS AND GROUNDCOVER, of the latest edition of the Standard Specifications and as amended below.

Plants shall be native species, not cultivars. To the extent possible, plants shall originate from the applicable EPA Level III Ecoregion.

Plant species and sizes to be included in the Replication Area shall be as specified on the plans.

Requests for substitutions shall be submitted in writing to the Engineer for review by the Wetland Specialist, MassDOT Landscape Architect, and, if required, the relevant regulatory agency at least thirty (30) days prior to planting. All proposed substitutes shall be in conformance with the requirements herein and suitable for the site conditions.

Transplanting and plant material collected from the wild is prohibited unless approved in writing by the Engineer. Plants shall be selected from certified nurseries that have been inspected by state and/or federal agencies.

Seed Mix

Seeding shall conform to the Standard Specifications Section M6, ROADSIDE DEVELOPMENT MATERIALS.

Seed mix is 765.555 – Part Shade Mix. Apply this mix at 20 lbs PLS/acre

Fertilizers shall not be used.

Water

The Contractor shall provide water and all equipment required at no extra cost. Water shall be suitable for irrigation and free from ingredients harmful to plants and wildlife. Water from the adjacent water bodies or waterways shall not be utilized. It is the Contractor's responsibility to correct injury or damage due to the lack of water, too much water, or use of contaminated water.

Mulch/Compost Blanket for Seeding

Hydromulch shall be per the manufacturer's recommendations and shall be wood fiber or straw mulch only. Mulch shall be incidental to seeding.

ITEM 755.35 (Continued)

Compost Blanket may be used in lieu of mulch for seeding. Compost Blanket shall meet the material and submittal requirements of that Item and shall be applied as specified below. Compost Blanket shall be compensated under that item.

CONSTRUCTION METHODS & SEQUENCE

SITE PROTECTION MEASURES

Minimizing Damage

The Contractor shall plan and execute operations in a manner minimizing the amount of excavated and exposed fill or other foreign materials that could be washed or otherwise carried into Replication Area and nearby resource areas.

Construction of and access to the Replication Area shall minimize damage to existing vegetation and soils as specified herein. Damage to soils or vegetation shall be repaired to the satisfaction of the Engineer and at the Contractor's expense. If required for soil remediation, tilling and the addition of compost shall be at the Contractor's expense.

Wetland topsoil shall be deposited and graded in the Replication Area in a manner that minimizes travel and subsequent compaction of the subgrade (including any specified pit and mound topography) to the extent practicable, including use of track mounted excavators as appropriate. Should soils be compacted, they shall be loosened by a method such as disking, spring-tooth harrowing and/or rototilling. The Contractor shall use boards, timber or composite mats, or other approved materials as necessary, to protect existing and/or new wetlands from compaction due to heavy foot traffic or if equipment is required to travel over wetland soil. All labor and materials required for protection and preservation of site shall be incidental to this item.

Stockpiling of Soil

Stockpiling of soil, including hydric soil for replication, shall be at least 100 feet from the edge of the bordering and isolated vegetated wetlands and inland banks, unless approved otherwise by the Engineer. Stockpiled soils shall be securely stabilized and contained. Any areas of exposed soil or stockpiles within and adjacent to the Replication Area that will remain inactive for more than 7 calendar days shall be sown with a mix of rapid germinating annual grasses (e.g., annual rye) covered with a layer of straw mulch applied at a rate of 90 pounds per 1,000 square feet. As necessary, the mulch shall be anchored with a tacking coat (non-tar) applied by a hydro seeder or other method recommended by the Wetland Specialist in consultation with the Engineer. In the event that there is excess borrow, it shall be disposed of under Excavation, Item 120.1.

ITEM 755.35 (Continued)

Sediment Barriers

Placement: Sediment barriers shall be installed along the downslope perimeter of the Replication Area beginning and ending in the surrounding upland so that no excavated material or disturbed soil can enter adjacent wetlands or waters. Where construction work is immediately upgradient of the wetland, barriers shall be located so as to protect the Replication Area until slopes are stabilized. Sediment barriers shall be in place and approved by the Engineer prior to excavation work. No work shall take place outside the barriers.

Maintenance: The Contractor shall ensure that all sediment barriers function as intended and at all times per the specifications of those respective items.

Existing Trees to Remain

Tree protection shall be per the relevant specifications and as shown on the plans or as required by the Engineer. To protect root systems of existing trees to remain, the limits of the Replication Area may be adjusted, but, the total area of replication required by the permits shall not be reduced. Access route may be adjusted as required.

Trees to be retained as snags (upright dead or dying trees left for wildlife habitat) within or adjacent to the Replication Area shall be as shown on the plans or as directed by the Wetland Specialist or Landscape Architect during the initial site walk. Trees to remain as snags shall be clearly marked prior to clearing. Trees that pose a potential fall hazard (i.e., are near a roadway) should have limbs and trunk cut such that the tree does not pose a fall hazard.

Coarse woody debris in the form of cut trees, stumps, logs, and brush shall be incorporated as shown on the plans or as directed by the Wetland Specialist or Landscape Architect. On site material shall be selected and marked by the Wetland Specialist, retained on the project site, and placed as specified below under Placement of Coarse Woody Debris.

All trees, stumps, or brush not specified to remain shall be removed and shall not be stockpiled in the wetland resource areas while awaiting disposal.

Work shall be coordinated with Clearing or Tree Removal Item and compensated under that Item.

PRE-WETLAND CONSTRUCTION SITE WALK

Delineating the Replication Area and Access Route. The Contractor shall stake out the Replication Area boundaries and the intended access route and set grade stakes for approval by the Wetland Specialist and Engineer. Following staking and demarcation of areas, the Engineer and Wetland Specialist shall approve or modify as necessary the limits of work, the access route, final location and configuration of replication, grade stake elevations, proposed location of sediment barriers, and review proposed construction methods.

ITEM 755.35 (Continued)

As part of the delineation and approval process, the Wetland Specialist shall mark trees to be converted to snags, select course woody debris to be retained for re-use, and select rocks or other elements to be used for habitat features.

Invasive Plants: As part of the initial site walk, the wetland to be impacted and the proposed replication site shall be inspected for the presence of invasive plants. If invasive plants are found they shall be addressed as described herein under Invasive Plants.

SOIL WORK

Final grades in the Replication Area shall meet the target elevations as shown on the Plans or as adjusted by the Wetland Specialist to achieve the desired hydrology and micro-habitat. If adjustments are required, a Request for Information (RFI) shall be submitted to the Engineer for approval. Adjustments shall be documented and included in the As-Built plans (if required) and/or other applicable required documents.

Excavation & Grading

When required by permits, the Wetland Specialist shall notify MADEP and the ACOE (as applicable) at least 72 hours prior to excavation.

Soil in the proposed wetland areas that must be removed for grades to conform to the proposed elevations shall be stripped and disposed of, or, if suitable for reuse, be stockpiled in an approved location. Stockpiled soils shall be kept wet and not allowed to dry out. Procedures for maintaining appropriate moisture levels shall be documented by the Wetland Specialist and provided to the Engineer and the Contractor.

Replication area shall be excavated as shown on the drawings. Where replication area is adjacent to existing reference wetland, finish grade of replication shall generally match existing grades and micro-topography, notwithstanding any deviations that are necessary to achieve the desired hydrology and habitat in the Replication Area.

Prior to placement of backfill, scarify subgrade to a depth of 4 to 6 inches.

Placement of Wetland Soil

Following excavation, scarification, and grading of sub-grade, and after the sub-grade elevations are approved by the Wetland Specialist, suitable soil previously removed or an evenly mixed organic/mineral soil created on-site shall be spread to the design depth and thickness over the proposed wetland areas as shown on the plans and as directed by the Wetland Specialist.

Vehicles used to transport soil from offsite shall be washed or cleaned with air pressure to prevent exotic or invasive seeds or root fragments from contaminating the Replication Area.

ITEM 755.35 (Continued)

Final Grading

The finished grade of the Replication Area shall be at an elevation that will provide an unrestricted hydrologic connection between the Replication Area and adjacent resource areas. The hydrologic connection should be in keeping with restoring the intended function of the replacement wetland relative to the impacted reference wetland. The Contractor shall verify that this elevation is not at a level that could negatively alter the hydrology of an adjacent wetland. Microtopography in the form of hummocks, pits and mounds shall be as shown on the plans or as adjusted by the Wetland Specialist. Final elevations and grading of wetland soil shall be approved by the Wetland Specialist and the Engineer.

To avoid compaction once soil has been placed, no heavy equipment shall travel across placed soil and no work shall occur in wet or moist soil. Soil that is compacted due to construction activities shall be replaced with soil as specified herein and at the Contractor's expense.

RESTORING VEGETATION

Placement of Coarse Woody Material

If specified within this Contract or if directed by the Wetland Specialist or Landscape Architect during the initial site walk, woody debris shall be placed in the Replication Area and/or adjacent upland buffer. Material shall be placed as shown on the plans or as directed following placement of wetland soil and prior to application of compost and/or seed. Woody material shall cover a minimum of 5-20 percent of the Replication Area, depending on whether it is a meadow or woodland wetland and how much wood is available from construction clearing. Where trees are cut for construction purposes, logs of a minimum length of 8 feet must comprise a minimum of 50% of the woody material left on site. Brush shall be included along with logs and stumps as directed. Woody material shall be placed in a deliberate and naturalistic manner.

Planting

Following placement of wetland soil and approval of final grade and conditions, Replication Area shall be planted. Planting shall conform to SECTION 771 PLANTING TREES, SHRUBS AND GROUNDCOVER of the Division I Standard Specifications and as amended below.

Planting Season shall be May 15-June 15 and September 1-November 1 unless otherwise specified in applicable permit conditions.

Prior to planting, the Wetland Specialist shall approve the condition of the plant material and the method of installation and shall oversee the planting work. Replication Area shall be planted in the dry. Plants shall be placed according to the planting details and within the range of target elevations and at the spacing shown on the Plans or, if spacing is not indicated on the Plans, at the direction of the Wetland Specialist. Unless otherwise noted on the Plans, final plant locations shall be determined on site and located with regard to expected hydrology, plant growth characteristics, habitat desired, and water protection.

ITEM 755.35 (Continued)

Plant material shall be installed as soon as possible after delivery. Plants stored on-site prior to installation shall be stored in the shade and watered twice daily up until time of installation. Plants showing signs of stress or compromised health may be rejected by the Engineer or Wetland Specialist and shall be replaced at the Contractor's expense.

Plant material shall be furnished and installed as indicated including all labor, materials, plants, equipment, incidentals, re-setting of plants (frost heaves, etc), irrigation, re-planting and clean up. If previously approved species are not available at the time of planting, the Wetland Specialist may propose substitutions relative to species, size, and quantities for review and approval by the Conservation Commission. Upon approval by the Conservation Commission, substitutions shall be approved by the regulating authority, if and as necessary. Provisions shall be made for a growth warranty of at least two (2) calendar years from the date of Conditional Acceptance as described below or as required by permits.

Seeding

Following placement of wetland soil and planting (if included), the Replication Area shall be seeded using one of the following methods:

- Broadcast by hand or with a hand-held spreader followed by application of straw mulch. If necessary, seed shall be lightly raked to insure good seed-to-soil contact.
- Hydro-seeded with hydro mulch per the Standard Specifications and per the manufacturer's directions.
- Hand broadcast seed with Compost Blanket pneumatically applied at the same time to ensure light cover of soil topdressing over seed.

If spring conditions are drier than usual, supplemental watering may be required. If sowing during the summer months, supplemental watering will likely be required until germination.

If required, seeding limits for different seed mixes shall be determined by the Wetland Specialist.

PLANT ESTABLISHMENT AND INVASIVE MANAGEMENT

Plants shall be watered as necessary to maintain healthy establishment. Plants that fail by September 1 after spring planting or by May 15 after fall planting shall be replaced within the immediate or next planting period and at the Contractor's expense.

Seeding that fails to established according to the conditions of acceptance below shall be over-seeded as required by the Engineer. Washouts and channels shall be repaired and stabilized prior to overseeding. Excessive weed growth shall be pulled out by the roots or, with approval from the Engineer, cut prior to over-seeding. Soil repair and weed control are incidental to this item.

Invasive Plants: Corrective measures shall be taken to remove or treat invasive plant species in the Replication Areas. Invasive plants shall include those listed as invasive by Massachusetts Invasive Plant Advisory Group (MIPAG) and the US Army Corp of Engineer's New England District's Compensatory Mitigation Guidance

ITEM 755.35 (Continued)

The strategy for chemical and/or manual removal shall be as directed by the Wetland Specialist, shall continue for the duration of the monitoring period, and shall be incidental to this item.

CONDITIONAL ACCEPTANCE OF WORK

Conditional Acceptance shall indicate approval of the wetland construction work and agreement that work has been done according to plan or modified as approved.

Upon completion of construction, the Contractor shall submit a Request for Conditional Acceptance that includes a brief narrative from the Wetland Specialist demonstrating that the wetland replication construction work was done according to plans (or how modified) and meets required permit conditions. The narrative shall include, photo-documentation of pre-construction conditions as well as soil work, planting, and seeding. Seed tags shall be submitted as part of the Request for Conditional Acceptance.

Upon receipt of a Request for Conditional Acceptance, the Engineer, the Wetland Specialist, and regulatory representative (if required) shall assess the Replication Area and surrounding areas. At a minimum, the following conditions shall be included in the narrative and reviewed as part of the on-site assessment of whether:

- The final finished target elevations have been met and maintained relative to the approved plans and reference wetland. Areas that are too high or too low should be identified along with suggested corrective measures.
- Hydrology meets performance standards.
- Specified seed mix has been seeded. If inspected 30 or more days after seeding, seeded species in the wetland and adjacent upland shall show signs of good germination and healthy growth.
- Planted woody and herbaceous species meet specifications and are establishing well.
- Soils are stabilized and there is no sediment in the wetland and no channeling of slopes.
- There are no invasive plants visible in the replication area.

Upon approval that the work meets the above conditions, the Conservation Commission will issue a letter of Conditional Acceptance. If the Wetland Replication work is not approved, the Conservation Commission will issue a rejection letter requiring corrective actions. The Wetland Specialist shall recommend corrective actions. Work not approved shall be addressed by the Contractor at no extra cost.

Wetland Specialist shall be compensated under Item 755.75.

Erosion of adjacent slopes or the flow of sediments into the wetland between Conditional and Final Acceptance shall be immediately addressed by the Contractor.

REQUEST FOR CERTIFICATE OF COMPLIANCE

If required, a request for a Certificate of Compliance (Partial or Full) pursuant to the Massachusetts Wetlands Protection Act regulations shall be prepared and submitted to the Conservation Commission within 30 days following Conditional Acceptance.

ITEM 755.35 (Continued)

The Request for Certificate of Compliance shall include the following:

- A brief narrative of the work on company letterhead signed by the Wetland Specialist. Narrative shall be prepared as a MS Word document and shall include substantive explanation that demonstrates compliance with EACH relevant permit condition. Narrative shall note variations from the originally permitted design.
- As-built Drawings signed by the Contractor's PE registered in the Commonwealth of Massachusetts. As-built drawings shall show hydrologic conditions, status of plantings and seeding, and shall include a narrative and minimum of 4 photographs documenting site conditions. Plans should note variations from the originally permitted design.

When required, drawings shall meet the Army Corp of Engineer's New England District's Compensatory Replication Guidance, including: scale in the range of 1"=20' to 1" = 100', contours at 1' intervals, spot elevations for intermediate elevations, and polygons outlining each Replication Area, and, as applicable, plant community types. The As-built Drawings shall be provided to the Engineer electronically in Portable Document Format (PDF). If requested by the Engineer, the Drawings shall be provided in printed paper format (11" x 17" sheets, unless otherwise directed). Drawings must be scalable.

- Other documents as required.

FINAL ACCEPTANCE OF WORK

Following one full growing season, the Contractor shall submit a Request for Final Acceptance. Submittal shall include a brief narrative of conditions. Upon receiving the Request, the Engineer, Contractor, Wetland Specialist and regulatory representative (if required) shall assess the Replication Area. Final Acceptance will initiate the start of the Wetland Monitoring Period.

The following conditions shall be inspected and approved for acceptance and payment.

- Hydrology is functioning as intended.
- The desired seeded species are establishing well and cover at least 95 percent of the Replication Area, excluding areas of open water areas or planned bare soil.
- No sediments have entered the wetland.
- Adjacent slopes are stabilized with desirable vegetation.
- All planted species (if included) are living and establishing well.
- There are no visible invasive plants.
- Silt fence and non-biodegradable sediment barrier materials have been removed.
- 75% of plant survival.

If the mitigation work does not meet the above condition and is not approved, the Acton Conservation Commission will issue a rejection letter requiring corrective action. The Wetland Specialist shall recommend corrective actions. Work not approved will be addressed by the Contractor at no extra cost. Wetland Specialist shall be compensated under Item 755.75.

ITEM 755.35 (Continued)

MONITORING REPORTS FOR REGULATORY COMPLIANCE

Post wetland construction Monitoring Reports shall be completed and submitted by the Wetland Specialist as specified and compensated under Item 755.76 Wetland Monitoring Reports.

Generally, the following conditions shall be met upon each inspection:

- Hydrology is functioning as intended.
- The desired seeded species are establishing well and cover 95 percent of the area, excluding areas of open water areas or planned bare soil.
- No sediments have entered into wetland.
- Adjacent slopes are stabilized with desirable vegetation.
- All planted species (if included) are living and establishing well.
- There are no visible invasive plants.

If, at the end of the required monitoring period, the requirements have not been met and success of the wetland replication area has not been achieved as determined by the Monitoring Reports, the Contractor shall provide corrective measures. All costs associated with corrective measures and plant replacement shall be incidental to this item with no additional compensation.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 755.35 will be paid for at the Contract unit price per Lump Sum, which price shall include all labor, materials, equipment, submittals, maintenance, all required soil, site preparation, grading, wetland seeding, planting, mulching, watering, monitoring wells, **registered surveyor**, as-built plans, Request for Certificate of Compliance, and all incidental costs necessary to complete the work as required.

Payment shall be as follows:

- 60% upon Conditional Acceptance.
- 20% after receipt and acceptance of Certificate of Compliance by the Engineer and once all permit construction requirements have been met and approved.
- 20% upon Final Acceptance.

Excavation will be paid under Item 120.1

Sediment Control Barrier will be paid under Item 767.121

Wetland Specialist will be paid under Item 755.75

Wetland Monitoring Reports for follow-up monitoring will be paid under Item 755.76

ITEM 755.75

WETLAND SPECIALIST

HOOR

Work under this Item shall be for services of a Wetland Scientist, Wetland Ecologist, Restoration Ecologist, or other professional with similar qualifications hereafter referred to as the “Wetland Specialist.”

“Wetland Mitigation” shall be used herein for applicable wetland work. For this project, applicable wetland work is for: Item 755.35 Inland Wetland Replication Area (creation of a new wetland).

The Wetland Specialist shall demonstrate knowledge and expertise to coordinate and oversee all work associated with the Wetland Mitigation as defined herein, as shown on the Plans, as required by permits, and as specified under the relevant Wetland Mitigation items.

Regulatory monitoring reports following Final Acceptance of the Wetland Mitigation shall be per Item 755.76, Wetland Monitoring Reports.

For all onsite work, the Wetland Specialist shall sign in and sign out with the Engineer.

The Wetland Specialist shall not be from the same company as the company responsible for planting, seeding, and/or maintaining the wetland.

QUALIFICATIONS

The Wetland Specialist shall have a minimum of five (5) years of experience with construction and monitoring of wetland mitigation areas similar in size, type, and complexity to the Contract mitigation. When required by permits, at least ten (10) years of experience may be required. The Wetland Specialist shall be thoroughly versed in the Commonwealth of Massachusetts Wetlands Protection Act (MGL C.131, s.40), U.S. Army Corps of Engineers New England District Compensatory Mitigation Guidance, and all other relevant regulations of the Massachusetts Department of Environmental Protection and the U.S. Army Corps of Engineers New England District.

ITEM 755.75 (Continued)

SUBMITTALS - QUALIFICATION

Within sixty (60) days following the Notice to Proceed, the Contractor shall provide proof of qualifications for the Wetland Specialist to the Engineer for approval. Submittals shall include, but not be limited to, the following:

- Resume of the individual on-site implementing the Wetland Specialist work. If the Wetland Specialist changes over the course of the project, the new individual shall submit resume and qualifications for approval 30 days prior to doing any work on-site.
- Resume of any personnel working on-site in place of the Wetland Specialist. Individual shall be approved prior to work on-site.
- Narrative describing the company, its expertise, technical qualifications and experience with wetland construction.
- At least three (3) references from prior work of a similar nature completed in the last five (5) years and by the individuals who will perform the work. Provide contact information for each reference including address, phone number and email.
- A summary of each reference project including nature of the work, project size, dates, and period of construction and monitoring, methodologies used, and summary of success (or not) in terms of meeting performance objectives. Summary shall include a minimum of one before and one after photo for each project.

SUBMITTALS – DOCUMENTATION AND REPORTS

Wetland Construction Oversight

Wetland Specialist shall provide documentation of pre-existing conditions and wetland construction as specified below and as part of fulfilling the Scope of Work described below. Documentation shall include photos that are clear and legible. Photos are incidental to this item.

- ***Site Walk Prior to Disturbance and Construction of Wetlands:*** Provide brief assessment with photos, including documentation of the existing wetlands to be impacted (both permanent and temporary), proposed wetland replication area, and reference/model wetland areas (typically an adjacent undisturbed wetland or the existing wetland to be impacted). Photos of existing wetlands that will be temporarily impacted shall include a view from at least 3 angles.
- ***Excavation and Grading:*** Documentation shall include minimum of two photos of the excavated wetland and two photos after final grading prior to planting and seeding. For restoration areas, photos shall show soil preparation (i.e, tilling and grading), if applicable.
- ***Approval of Subgrades:*** The Wetland Specialist shall inspect the sub-grade of the Replication Area to ensure that proper hydrology is likely to be established and shall provide the Engineer with written confirmation and photographs upon completion of subgrade excavation work. Written confirmation shall include recommended field adjustments, based on field observations, to achieve the desired hydrology and designed wetland system.
- ***Planting and Seeding:*** Provide assessment and photos of vegetation upon completion of planting and seeding work.

ITEM 755.75 (Continued)

Wetland construction documentation and reports shall be submitted with Request for Conditional Acceptance and for the Order of Conditions, Water Quality Certifications, and other regulatory permits as required

Requests for Acceptance of Work & Regulatory Compliance

The Wetland Specialist shall submit the following documents if and as specified herein and under Item the relevant Wetland Mitigation items:

- Request for Conditional Acceptance.
- Request for Certificate of Compliance (Partial or Full) when applicable.
- Request for Final Acceptance.

SCOPE OF WORK

In the event of discrepancies with the applicable permits, the Wetland Specialist shall submit a Request for Information (RFI) to the Engineer.

General

The Wetland Specialist shall be responsible for the following:

- Review and have a comprehensive knowledge of the environmental permits relevant to the specific mitigation work being done so as to ensure compliance throughout the duration of the contract.
- Identify and inform the Contractor and Engineer of unique site conditions which may require adjustments to the schedule, design, or construction methods. For example, wildlife nesting, illegal dumping, or rare species.
- Identify and inform the Contractor and Engineer of any sediment or erosion control problems observed within mitigation areas.
- Advise so as to avoid impacts to adjacent areas and regulated wetland resources.
- Participate in necessary meetings as required by permits and when requested by the Engineer.

Inspections & Construction Oversight

The Wetland Specialist shall be responsible for, but not limited to, the following:

- Pre-Construction Site Walk
 - Following surveying, flagging, and staking of all relevant boundaries and elevations by the Contractor, the Wetland Specialist shall walk the site with the Engineer and the Contractor to review existing and proposed conditions, recommend changes if necessary, and approve the following: location and boundaries of the Mitigation Area, target elevations and grades, location of tree protection associated with the Mitigation Area, and final layout and limits of clearing for access route.
 - Select and mark snags, logs, and woody material to be retained for placement in the Wetland Mitigation, as appropriate.
 - Note invasive plants in and adjacent to Wetland Mitigation.
 - Provide summary report if and as specified under Wetland Mitigation items.

ITEM 755.75 (Continued)

- Excavation, Soil Placement, Grading for Replication Areas
 - Approve excavated depth and grading for appropriate wetland hydrology, subsoil preparation, and finished grade of placed wetland soil.
 - Adjust grades as required and approve microtopography. If grades need to be adjusted, submit an RFI to the Engineer.
 - If requested by the Engineer, the Wetland Specialist shall inspect stockpiled wetland soil for moisture content and signs of undesirable weeds.
- Soil Protection and Restoration Measures for Restoration Areas
 - Review and approve methods of soil protection and restoration if required.
 - Confirm decompaction will adequately restore appropriate wetland hydrology. If decompaction measures need to be adjusted, submit an RFI to the Engineer.
- Re-vegetation of Mitigation Area
 - Placement of woody material to be re-used.
 - Verify seed used complies with specifications and site conditions, determine limits for wetland seeding based on elevations, approve seeding and mulching methods, and collect seed tags to submit with Request for Conditional Acceptance.
 - Review planting methods (if applicable) prior to installation and oversee layout of wetland plants.

Conditional Acceptance

Upon completion of construction of the wetland, as part of the Request for Conditional Acceptance, the Wetland Specialist shall provide a brief narrative demonstrating that the wetland construction work was done according to plans (or how modified) and meets the conditions required for acceptance as specified under the Wetland Mitigation items. Submittal shall include a report and photo documentation of pre-construction conditions, construction work, seeding, planting, and other work as specified under the Wetland Mitigation items. Photos of completed Wetland Restoration areas shall include the same views as the pre-construction reference photos.

Upon receipt of a Request for Conditional Acceptance, the Engineer, the Wetland Specialist and regulatory representative (if required) shall assess the Wetland Mitigation and surrounding area to ensure that it meets the conditions specified under the Wetland Mitigation items.

Upon approval, the Town of Acton Conservation Commission will issue a letter of Conditional Acceptance. If the Wetland Mitigation work is not approved, Town of Acton Conservation Commission will issue a rejection letter requiring corrective action. The Wetland Specialist shall recommend corrective actions.

Request for Certificate of Compliance

If required, a Request for Certificate of Compliance shall be prepared and submitted to the Engineer immediately following Conditional Acceptance. Request shall be as specified under the relevant Wetland Mitigation items.

ITEM 755.75 (Continued)

Request for Final Acceptance

Following one full growing season, the Wetland Specialist shall provide a brief narrative of the status of the Wetland Mitigation to be submitted with the Request for Final Acceptance.

Upon receipt of the Request, the Engineer, the Wetland Specialist and regulatory representative (if required) shall assess the Wetland Mitigation and surrounding area to ensure that it meets the conditions specified under the relevant Wetland Mitigation items.

If the Wetland Mitigation is not approved, Town of Acton Conservation Commission will issue a rejection letter requiring corrective action. The Wetland Specialist shall recommend corrective actions.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 755.75 Wetland Specialist shall be measured per hour for on-site service provided by the Wetland Specialist.

Work shall include all inspections, photos, submittals, and associated tasks for construction and restoration oversight, narratives for Conditional and Final Acceptance, Request for Certificate of Compliance (Partial or Full) if required, documentation required for permits, and all other work specified above. Payment shall not include travel time or time spent off-site on reports. Decimal Pay Limits will be 0.25 hours.

Item 755.75 Wetland Specialist shall be paid at the Contractor bid price for each hour, or fraction thereof, spent on-site to perform the work as described above. Reports and photo documentation are required for payment.

Post wetland construction reports shall be per Item 755.76, Wetland Monitoring Reports.

ITEM 755.76

WETLAND MONITORING REPORTS

LUMP SUM

Work under this item shall be for the submittal of Wetland Monitoring Reports following the completion of wetland construction and shall include all inspections, photos, and other work required to complete those reports as specified herein.

“Wetland Mitigation” shall be used herein for applicable wetland work, whether Wetland Replication (creation of a new wetland) and/or Wetland Restoration (restoration after temporary impacts).

The Contractor shall retain the services of a Wetland Scientist, Wetland Ecologist, Restoration Ecologist, or other professional with similar qualifications, hereafter referred to as the “Wetland Specialist,” to complete the Wetland Monitoring reports. Wetland Specialist shall meet requirements specified under Item 755.75 Wetland Specialist.

All on-site Wetland Specialist services required to complete the construction and revegetation of the wetland replication, including preparation and submission of monitoring reports during construction, shall be per Item 755.75 Wetland Specialist.

SCOPE OF WORK

Post-Construction Wetland Monitoring Reports

Final Acceptance of the wetland construction work as specified under item 755. shall initiate the beginning of the Monitoring Period.

Inspections and reports shall be performed to ensure compliance with mitigation requirements defined under the relevant Wetland Mitigation items and with all applicable environmental permits. Monitoring reports shall cover the following:

- Identification of all plant species present
- Percent cover for each plant species and overall percent surface area cover by indigenous wetland plant species for replication area and upland
- Description of the viability, health, and vigor of installed plants as well as volunteer plant species within the replication areas
- Description of remedial measures taken to ensure criteria are met
- Depth to apparent water table and/or depth of surface inundation, both as measured from the soil surface and data loggers, as appropriate.
- A conclusion regarding the success of the wetland mitigation area relative to the performance standards at 310 CMR 10.55(4)(b) (unless varied), the design plans, and performance criteria established by MADEP in the variance conditions (when applicable), and the reference wetland.
- Recommendation for a corrective plan of action if needed.

ITEM 755.76 (Continued)

Reports shall be submitted to the Engineer as a digital copy in Portable Document Format (PDF) unless otherwise requested. Hard copies shall be provided as requested by the Engineer. All reports shall be marked with the applicable permit numbers and identifying information as required in the permits. Reports shall include photo documentation of the wetland/s being monitored and shall include a minimum of 3 views from different orientations. Views shall be labeled.

Spring Reports, when required, shall be submitted to the Engineer by July 1 for dispersal to the appropriate permitting agencies.

End of Year Reports (which may serve as the Fall Report) shall be based on inspections that occur prior to October 15th. Reports shall be submitted to the Engineer no later than November 1 of each year.

Monitoring Reports shall be as follows for 2 years:

- *MassDEP: 2 Reports - (1 end of year).*
- *Conservation Commission: 2 Reports (1 end of year).*

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 755.76 Wetland Monitoring Reports and associated inspections shall be at the Contract unit price per Lump Sum and shall include all labor, materials, equipment, and all incidental costs required to complete the work. Lump Sum will be paid in equal installments of the Lump Sum divided by the number of reports submitted. Payment shall be upon submittal and acceptance of each report, based on the following schedule:

- Year 1 = 2 Reports
- Year 2 = 2 Reports

ITEM 767.121

SEDIMENT CONTROL BARRIER

FOOT

The work under this item shall conform to the relevant provisions of Section 751 and 767 of the Standard Specifications and the following:

This work shall include the furnishing and placement of a linear, compost-filled tube for the purpose of slowing the velocity of and filtering suspended sediments from storm water flow at locations required by the Conservation Commission and the Engineer.

MATERIALS

Material for the filter tubes shall be compost meeting M1.06.0, except that no manure or bio-solids shall be used. In addition, no kiln-dried wood or construction debris shall be allowed. Particle size analysis: 98% shall pass through a 3 inch (75mm) sieve; 30-50% shall pass 3/8 inches (10mm) sieve.

Tubes for compost filters shall be a minimum of 12 inches (300 mm), a maximum of 18" (450mm) in diameter. Tube material shall be a knitted mesh with 1/8" - 3/8" (3-10 mm) openings and made of 100% biodegradable (cotton, hemp or jute) materials. Additional tubes shall be used at the direction of the Engineer.

Stakes for anchors, if required, shall be as noted on the plans.

CONSTRUCTION METHODS

Tubes of compost may be filled on site or shipped. Tubes shall be placed, filled and staked in place as required to ensure stability against water flows. All tubes shall be tamped to ensure continuous contact with the soil. Stakes shall not puncture compost tube fabric.

The Contractor shall ensure that the filter tubes function as intended at all times. Tubes shall be inspected after each rainfall and at least daily during prolonged rainfall. The Contractor shall immediately correct all deficiencies, including, but not limited, to washout, overtopping, clogging due to sediment, and erosion. The contractor shall review location of tubes in areas where construction activity causes drainage runoff to ensure that the tubes are properly located for effectiveness. Where deficiencies exist, such as overtopping or wash-out, additional staking or compost material shall be installed as required by the Engineer. Contractor shall remove sediment deposits as necessary to maintain the filters in working condition. The functional integrity of filter tubes shall be maintained in sound condition at all times. Filter tubes that are decomposing, cut, or otherwise compromised shall be repaired or replaced as required by the Engineer and be incidental to this item. At specific locations, such as at gully points, steep slopes, or identified failure points in the sediment capture line, compost filter tube may be reinforced by either staked hay bales and/or silt fence at the direction of the Engineer. Such reinforcing shall be incidental to the cost of this item and shall not exceed 10 percent of the overall length of compost filter tube required for the project.

ITEM 767.121 (Continued)

Stakes shall be removed by the Contractor when site conditions are sufficiently stable to prevent surface erosion, and after receiving permission to do so from the Engineer. Biodegradable fabric and material shall be left in place to decompose on-site unless required otherwise by the Engineer in urban or residential locations. In those instances, the Contractor shall rake out compost so that it blends evenly and is no greater than 1-2 inches in depth on soil substrate. Raked compost shall then be seeded with a mix appropriate to the surrounding vegetation.

MEASUREMENT AND PAYMENT

Compost Filter Tubes will be measured for payment by the foot, installed, approved and maintained in place for the duration of the contract. Compost Filter Tubes will be paid for at the Contract unit price per foot which price shall include all labor equipment, materials and incidental costs required to complete the work.

No separate measurement and payment will be made for the required overlapping of compost mulch filter tubes.

ITEM 865.11

**IMPRINTED THERMOPLASTIC
PAVEMENT MARKINGS (BRICK PATTERN)**

SQUARE FOOT

The work to be done under this item shall conform to the relevant provisions of Sections 860 of the Standard Specifications and the following.

GENERAL

The work consists of furnishing and installing an imprinted aggregate reinforced preformed thermoplastic pavement marking system where shown on the plans or as required by the Engineer.

MATERIALS

The preformed thermoplastic material shall be composed of an ester modified rosin impervious to degradation by motor fuels, lubricants etc. in conjunction with aggregates, pigments, binders, and anti-skid/anti-slip elements. Pigments and anti-skid elements shall be uniformly distributed though out the material.

The material shall conform to AASHTO designation M249, with the exception of the relevant differences due to the material being supplied in a preformed state, being non-reflective, and potentially being of a color different from white or yellow.

The material shall be supplied in preformed panels such that when it is installed it gives the appearance of an “offset brick” or “running bond” brick pattern in general conformance with the pattern as shown on the drawings.

The individual size of the brick shape within the pattern shall be 4-3/4 inch by 9-5/8 inch. The preformed thermoplastic material panels shall be positioned such that upon final stamping and completion of the installation, there are no visible seams or joints visible between adjoining panels and that the material appears to be one contiguous homogenous product.

Pigments-

The color of the preformed thermoplastic material shall be “grey” as approved by the Engineer. The pigment system must not contain heavy metals or any carcinogen, as defined in 29 CFR 1910.1200 in amounts exceeding permissible limits as specified in relevant Federal Regulations.

Skid Resistance-

The surface of the material shall contain factory applied anti-skid/anti-slip elements with a minimum hardness of 6 (Mohs scale). Upon application the material shall provide a minimum skid resistance value of 60 BPN when tested according to ASTM E 303.

ITEM 865.11 (Continued)

Slip Resistance-

The surface of the material shall contain factory applied anti-skid/anti-slip elements with a minimum hardness of 6 (Mohs scale). Upon application the material shall provide a minimum static coefficient of friction of 0.6 when tested according to ASTM C1028 (wet and dry), and a minimum static coefficient of friction of 0.6 when tested according to ASTM D 2047.

Thickness-

The material shall have a minimum thickness of 150 mils.

Environmental Resistance-

The material must be resistant to deterioration due to exposure to sunlight, water, salt or adverse weather conditions and impervious to oil and gasoline.

Storage Life-

The material may be stored for 12 months, if stored indoors and protected from the elements.

SUBMITTALS

The contractor shall submit the following materials for review and approval prior to ordering any material or beginning the work.

- Applicators certification from the manufacturer as an approved installer of the material.
- Applicators diagram depicting the exact pattern and dimensions to be used in positioning the material for all areas shown on the plans to contain the imprinted thermoplastic pavement marking system.
- Manufacturers product information that demonstrates the thermoplastic pavement marking product conforms to the above referenced criteria.
- An actual finished product material sample of the product (6-inch by 6 inch min.) showing the proposed color, texture and thickness of the product.

ITEM 865.11 (Continued)

EQUIPMENT

Stamping Templates-

A wire rope template is required for the installation of the pavement marking material. The template is used for imprinting the defined pattern once the preformed thermoplastic has been applied. The wire rope diameter for the imprinting template used for the specified pattern is 3/8 inch.

Heating equipment-

The pavement marking material shall be installed with the use of a reciprocating infrared heating unit designed to specifically elevate the temperature of the preformed thermoplastic material and asphalt pavement without adversely affecting it. The primary heating unit must employ a bank of propane fired infrared heaters, mounted on a track device that allows the heater bank to reciprocate back and forth over a designated area, thereby allowing the operator to monitor the temperature of the preformed thermoplastic at all times during the pavement heating process.

A smaller, mobile infrared heater can be used to heat areas such as borders and narrow areas that are inaccessible to the primary heater. This secondary heater also allows the operator to monitor the temperature of the preformed thermoplastic at all times during the heating process.

Sealer-

A two-part epoxy sealer specified and distributed by the pavement marking manufacturer shall be applied to the substrate prior to material application to ensure proper adhesion, and to provide reinforcement for larger volumes of material.

Specialized Sealer Dispensing Gun-

A specialized sealer dispensing gun shall be used to dispense the required two-part epoxy sealer onto the substrate. The sealer dispensing guns shall be distributed/approved by the system manufacturer.

Finishing Tools-

Hand held finishing tools shall be used to complete the imprinting of the thermoplastic in areas around permanent structures, such as curbs and manhole covers, which may be inaccessible to the stamping template. The hand held finishing tools shall be distributed/approved by the system manufacturer.

ITEM 865.11 (Continued)

Air powered spray hopper-

Air powered spray hoppers shall be used to spray supplemental anti-skid/anti-slip elements (aggregate) on the surface of the molten preformed thermoplastic in a uniform manner. The air powered spray hoppers shall be distributed/approved by the manufacturer.

Vibratory Plate Compactor (700-900 lb.)-

A vibratory plate compactor shall be used for pressing the 3/8-inch wire rope stamping templates into the thermoplastic to create the specified pattern in both the thermoplastic and asphalt substrate.

CONSTRUCTION METHODS

Manufacturer's certification-

The thermoplastic pavement marking system shall be applied by an applicator certified by the manufacturer to install the material. The applicator shall supply the Engineer with a copy of the manufacturer's certification a minimum of 1 week prior to beginning the work.

Substrate Condition-

The thermoplastic pavement marking system shall be applied to a stable, uniform hot mix asphalt substrate free of cracks or deformations. The substrate asphalt surface shall be dry and free from all foreign matter, including but not limited to dirt, dust, de-icing materials, and chemical residue.

Procedure-

The imprinted thermoplastic pavement marking system shall be applied to the asphalt substrate with reciprocating infrared heating equipment that has been approved by the manufacturer for the specific use of installing this material. The material must be able to be applied at ambient and road temperatures down to 45 degrees Fahrenheit, without any preheating of the pavement to a specific temperature.

A two-part epoxy sealer (approved by the manufacturer) must be applied to the substrate prior to preformed thermoplastic application. Immediately following the sealer application, the panels of preformed thermoplastic shall be positioned properly on the asphalt substrate.

The preformed thermoplastic panels shall then be heated to the required melting temperature. As the material is cooling, it shall be imprinted with the stamping template using a vibratory plate compactor. The thermoplastic material shall be allowed to cool to the surrounding ambient air temperature before being opened to vehicle or pedestrian traffic.

ITEM 865.11 (Continued)

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Imprinted Thermoplastic Pavement Markings (Brick Pattern) will be measured by the SQUARE FOOT installed complete and in place.

Imprinted Thermoplastic Pavement Markings (Brick Pattern) will be paid for by the SQUARE FOOT on the pavement surface complete in place, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

Hot Mix Asphalt Surface Course will be paid for under Item 460.72

ITEM 874.2

TRAFFIC SIGN REMOVED AND RESET

EACH

The work under this Item shall conform to the relevant provisions of Subsection 840 of the Standard Specifications and the following:

CONSTRUCTION

The Contractor shall carefully remove all existing signs, attachment hardware and sign support posts as shown on the drawings and as directed by the Engineer. Existing foundations shall be removed to a depth of at least 3 feet (within roadway) or 12 inches (outside roadway) below the existing ground, and the holes backfilled with gravel. The surface shall be patched with a material to match the existing ground or as directed by the Engineer.

Signs and attachment hardware shall be satisfactorily stored and protected until reset in the proposed work. Sign support posts shall be disposed of in a satisfactory manner. New sign support posts shall be provided as called for under Items 847.1 and 841.2 as applicable. Signs and attachment hardware lost, damaged or otherwise made unsuitable for reuse while being removed, transported, stored or reset shall be replaced with new material at no additional cost. New attachment hardware shall be furnished and installed as necessary to replace any missing or unusable existing hardware.

The sign shall be mounted in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) and the 1990 Standard Drawings for Signs and Supports. Sign panels shall be cleaned before being reset.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Traffic sign removed and reset will be measured for payment by the Each, complete in place.

Traffic sign removed and reset will be paid for at the Contract unit price per Each, which price shall include all labor, materials, equipment and incidental costs required to complete the work. No separate payment will be made for dismantling, storing and resetting of the signs as designated above, the excavation and disposal of the existing foundation, disposal of existing sign supports and hardware, the supplying and placing of compacted gravel backfill where foundations and posts are removed and the patching of the existing surface, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 874.4

TRAFFIC SIGN REMOVED AND STACKED

EACH

The work under this item shall be performed in accordance with the relevant provisions of Section 828 of the Standard Specifications and the following:

Work to be done under this item includes the dismantling, removal, transporting, and stacking of existing warning, and regulatory signs, and their supports as indicated on the Contract Drawings. Signs not required for reuse and to be stacked shall be removed by the Contractor and stacked at a site designated by the Engineer for pick up by the Town of Acton or Private Owner.

The existing foundation shall be removed in its entirety, backfilled with compacted gravel, and the holes restored. The sign panels and supports shall be stacked on boards. The existing signs shall not be removed until the new signs and supports replacing them are ready for traffic or until the Engineer shall permit.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Work to be done under this item shall be paid for by the unit, each, which price will be full compensation for dismantling, loading, transporting and stacking of the signs and their supports, the excavation of the existing foundations, and placing of compacted gravel backfill and the restoration or replacement in kind where foundations are removed.

ITEM 877.101

TRAFFIC SIGN REMOVED AND DISCARDED

EACH

The work under this item shall be performed in accordance with the relevant provisions of Section 828 of the Standard Specifications and the following:

Work to be done under this item includes the dismantling, removal, and disposal of existing warning, and regulatory signs, and their supports as indicated on the Contract Drawings. Signs not required for reuse and to be discarded shall be removed by the Contractor and disposed of off site.

The existing foundation shall be removed in its entirety, backfilled with compacted gravel, and the holes restored.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Work to be done under this item shall be paid for by the unit, each, which price will be full compensation for dismantling, loading, transporting and disposing of the signs and their supports, the excavation of the existing foundations, and placing of compacted gravel backfill and the restoration or replacement in kind where foundations are removed.

ITEM 999.500

MBTA ALLOWANCE

LUMP SUM

The work includes allowances for MBTA needed coordination for all services, personnel, labor, materials, and equipment necessary to perform the work within the MBTA Zone of Influence paid for under the respective contract pay items.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Work to be done under this item shall be paid for by the contract lump sum bid cost, which price will be full compensation for MBTA coordination for the completion of work identified in the contract documents. If the value of this allowance needs to be increased, the Town to be notified prior and such increase shall be approved by the Town.

APPENDIX:

APPENDIX A: TOWN OF ACTON CONSERVATION COMMISSION ORDER
OF CONDITIONS (DEP # 085-1395 & DEP # 085-1398)

APPENDIX B: MASSACHUSETTS BAY TRANSIT AUTHORITY ZONE OF
INFLUENCE ACCESS PERMIT

APPENDIX A: TOWN OF ACTON
CONSERVATION COMMISSION ORDER OF
CONDITIONS (DEP # 085-1395 & DEP #
085-1398)



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:
 085-1395

MassDEP File #

eDEP Transaction #

Acton

City/Town

A. General Information

Please note:
 this form has
 been modified
 with added
 space to
 accommodate
 the Registry
 of Deeds
 Requirements

1. From: Acton
Conservation Commission
2. This issuance is for
 (check one): a. ☒ Order of Conditions b. ☐ Amended Order of Conditions
3. To: Applicant:

Important:
 When filling
 out forms on
 the
 computer,
 use only the
 tab key to
 move your
 cursor - do
 not use the
 return key.



a. First Name Town of Acton b. Last Name _____
 c. Organization 14 Forest Road
 d. Mailing Address Acton MA 01720
 e. City/Town _____ f. State _____ g. Zip Code _____

4. Property Owner (if different from applicant):

a. First Name Town of Acton b. Last Name _____
 c. Organization 472 Main Street
 d. Mailing Address Acton MA 01720
 e. City/Town _____ f. State _____ g. Zip Code _____

5. Project Location:

19-21 Maple Street Acton
 a. Street Address b. City/Town
H2 37
 c. Assessors Map/Plat Number d. Parcel/Lot Number
 Latitude and Longitude, if known: 42 d 46 m 00 s -71 d 45 m 71 s
 d. Latitude e. Longitude



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:
 085-1395

MassDEP File #

eDEP Transaction #

Acton

City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):

Middlesex South

a. County

60628

c. Book

b. Certificate Number (if registered land)

287

d. Page

June 24 2025

August 06 2025

8/15/25

7. Dates:

a. Date Notice of Intent Filed

b. Date Public Hearing Closed

c. Date of Issuance

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

Town of Acton Maple Street Commuter Lot Parking Lot Reconstruction

a. Plan Title

Nitsch Engineering

Matthew J. Soltys

b. Prepared By

c. Signed and Stamped by

June 24 2025

1" = 20'

d. Final Revision Date

e. Scale

f. Additional Plan or Document Title

g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- a. ☐ Public Water Supply b. ☐ Land Containing Shellfish c. ☒ Prevention of Pollution
 d. ☐ Private Water Supply e. ☐ Fisheries f. ☒ Protection of Wildlife Habitat
 g. ☒ Groundwater Supply h. ☒ Storm Damage Prevention i. ☒ Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. ☒ the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



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Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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085-1395

MassDEP File #

eDEP Transaction #

Acton

City/Town

B. Findings (cont.)

Denied because:

- b. ☐ the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. ☐ the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
3. ☐ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. ☐ Bank	<u> </u> a. linear feet	<u> </u> b. linear feet	<u> </u> c. linear feet	<u> </u> d. linear feet
5. ☐ Bordering Vegetated Wetland	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
6. ☐ Land Under Waterbodies and Waterways	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
7. ☒ Bordering Land Subject to Flooding	<u> </u> e. c/y dredged 15,655	<u> </u> f. c/y dredged 15,655	<u> </u> c. square feet	<u> </u> d. square feet
Cubic Feet Flood Storage	<u> </u> a. square feet 0	<u> </u> b. square feet 0	<u> </u> c. square feet	<u> </u> d. square feet
8. ☐ Isolated Land Subject to Flooding	<u> </u> e. cubic feet	<u> </u> f. cubic feet	<u> </u> g. cubic feet	<u> </u> h. cubic feet
Cubic Feet Flood Storage	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. cubic feet	<u> </u> d. cubic feet
9. ☐ Riverfront Area	<u> </u> c. cubic feet	<u> </u> d. cubic feet	<u> </u> e. cubic feet	<u> </u> f. cubic feet
Sq ft within 100 ft	<u> </u> a. total sq. feet	<u> </u> b. total sq. feet	<u> </u> e. square feet	<u> </u> f. square feet
Sq ft between 100-200 ft	<u> </u> c. square feet	<u> </u> d. square feet	<u> </u> i. square feet	<u> </u> j. square feet
	<u> </u> g. square feet	<u> </u> h. square feet		



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:
 085-1395

MassDEP File #

eDEP Transaction #

Acton

City/Town

B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. ☐ Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. ☐ Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. ☐ Coastal Beaches	a. square feet	b. square feet	cu yd c. nourishment	cu yd d. nourishment
14. ☐ Coastal Dunes	a. square feet	b. square feet	cu yd c. nourishment	cu yd d. nourishment
15. ☐ Coastal Banks	a. linear feet	b. linear feet		
16. ☐ Rocky Intertidal Shores	a. square feet	b. square feet		
17. ☐ Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. ☐ Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. ☐ Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. ☐ Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. c/y dredged	b. c/y dredged		
21. ☐ Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		
22. ☐ Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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085-1395

MassDEP File #

eDEP Transaction #

Acton

City/Town

B. Findings (cont.)

* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. ☐ Restoration/Enhancement *:

a. square feet of BVW

b. square feet of salt marsh

24. ☐ Stream Crossing(s):

a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on 6/15/22 unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1395

MassDEP File #

eDEP Transaction #

Acton

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
"File Number 085-1395 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1395

MassDEP File #

eDEP Transaction #

Acton

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
 - (1) ☒ is subject to the Massachusetts Stormwater Standards
 - (2) ☐ is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
 - i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
 - ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
 - iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1395

MassDEP File #

eDEP Transaction #

Acton

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 19(f) through 19(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 19(f) through 19(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1395

MassDEP File #

eDEP Transaction #

Acton

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

See page 16

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1395

MassDEP File #

eDEP Transaction #

Acton

City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No
2. The Acton hereby finds (check one that applies):
Conservation Commission
- a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw

2. Citation

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. ☒ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

STANDARD CONDITIONS REQUIRED UNDER THE TOWN OF ACTON WETLAND PROTECTION BYLAW CHAPTER F

OOC page 16-17

1. Municipal Ordinance or Bylaw

2. Citation

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.
- The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

See page 16

By vote on August 7, 2024, the Acton Conservation Commission authorized the Conservation Agent to sign on their behalf. Olivia Barksdale has affixed her original Signature.

x.

Olivia Barksdale, Conservation Agent



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1395

MassDEP File #

eDEP Transaction #

Acton

City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

Please indicate the number of members who will sign this form.

This Order must be signed by a majority of the Conservation Commission.

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

8/15/25

1. Date of Issuance

5

2. Number of Signers

Signature <i>Jillian Peters</i>	Jillian Peters
Signature <i>Amy Green</i>	Printed Name Amy Green
Signature <i>James C. Colman</i>	Printed Name James C. Colman
Signature <i>Kate Warwick</i>	Printed Name Kate Warwick
Signature <i>Peter Hocknell</i>	Printed Name Peter Hocknell
Signature	Printed Name Zyvia Chadzynska
Signature <i>Terry Maitland</i>	Printed Name Terry Maitland
Signature	Printed Name
Signature	Printed Name

☐ by hand delivery on

Date

☒ by certified mail, return receipt requested, on

Date

8/15/25



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1395

MassDEP File #

eDEP Transaction #

Acton

City/Town

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
 Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:
 085-1395

MassDEP File #

eDEP Transaction #

Acton

City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Acton

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Acton

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Project Location

085-1395

MassDEP File Number

Has been recorded at the Registry of Deeds of:

County

Book

Page

for:

Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

085-1395

Provided by DEP

A. Request Information

1. Location of Project

a. Street Address

b. City/Town, Zip

c. Check number

d. Fee amount

2. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

4. DEP File Number:

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



B. Instructions

1. When the Departmental action request is for (check one):

- ☐ Superseding Order of Conditions – Fee: \$120.00 (single family house projects) or \$245 (all other projects)
- ☐ Superseding Determination of Applicability – Fee: \$120
- ☐ Superseding Order of Resource Area Delineation – Fee: \$120



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

**Request for Departmental Action Fee
Transmittal Form**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

085-1395

Provided by DEP

B. Instructions (cont.)

Send this form and check or money order, payable to the *Commonwealth of Massachusetts*, to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.
3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see <https://www.mass.gov/service-details/massdep-regional-offices-by-community>).
4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

STANDARD CONDITIONS

REQUIRED UNDER THE TOWN OF ACTON WETLAND PROTECTION BYLAW CHAPTER F

1. No work shall be undertaken until the Order of Conditions has been reviewed and is clearly understood by the Contractor or his agent. It is the Applicant's responsibility to see that the Contractor clearly understands all items herein.
2. This Order of Conditions shall apply to any successor in interest or successor in control.
3. Members and agents of the Conservation Commission shall have the right to enter and inspect the premises to evaluate compliance with the Order and to require the submittal of any data deemed necessary by the Commission for that evaluations.
4. All drainage facilities and related structures and equipment shall be continually operated and maintained so as to comply with this Order of Conditions. The operation and maintenance of the facilities and structures shall be on-going and will not expire at the end of one year or with the issuance of the Certificate of Compliance.
5. Any change made, or intended to be made, in the plans shall require the applicant to file a new Notice of Intent, or to inquire of the Commission, in writing, whether the change is substantial enough to require a new filing.
6. The Conservation Commission shall have the right to file this Order of Conditions in the Registry of Deeds should the applicant fail to do so within 60 days.
7. Accepted engineering and construction standards and procedures shall be followed in the completion of this project.
8. The Commission shall be notified in writing 10 days prior to the commencement of any site work. Failure to so notify the Commission shall result in the issuance of an Enforcement Order.
9. The Petitioner is advised that this Order in no way absolves him of responsibility to other property owners upon whose land he discharges water directly or indirectly.
10. Erosion control measures consisting of staked haybales unless otherwise approved by the Commission shall be installed during the first phase of construction and the Commission shall be notified of their placement and no work shall begin before inspection by the Commission.
11. Any materials collected by the erosion control measures shall be removed and properly disposed of.
12. All work shall be completed as quickly as possible to minimize the duration of exposure of disturbed areas. If work is suspended for a significant period of time (i.e. as during winter months), then temporary stabilization methods must be employed and maintained during the period of inactivity.
13. No salt or other deicing chemicals shall be used on roadways and parking areas on the site.
14. This order applies only to the work described in the Notice of Intent and shown on the plans referenced in Condition 12. A Determination of Applicability Form must be filed for any additional work on site in areas governed by the Town of Acton Wetlands Protection Bylaw.
15. All disturbed areas shall be top-soiled six inches and seeded.
16. Violation of any condition of this Order may result in the issuance of an Enforcement Order. Such Enforcement Order, if issued, will require the immediate cessation of all work until a hearing is held; such hearing will be held not more than 10 days from the issuance of the Enforcement Order.

17. The work authorized hereunder by the Acton Wetlands Protection Bylaw shall be completed within three years from the date of this Order unless the Order is renewed prior to expiration.
18. A fifty (50) foot setback of natural vegetation shall be maintained up-gradient from the wetland.
19. No construction, either temporary or permanent shall occur within seventy-five (75) feet of the edge of wetlands. This shall include driveways; roadways; residential, commercial or industrial structures.
20. There shall be no use of fertilizers, pesticides, herbicides or chemicals of any kind within the fifty (50) foot no disturbance zone.
21. There shall be no underground storage of gasoline, oil or other fuels or hazardous materials within the one-hundred (100) foot buffer zone.
22. The Commission reserves the right to impose additional conditions to mitigate any actual or potential impacts resulting from the permitted work.
23. All haybales placed for siltation prevention must be removed from the site within 30 days of the stabilization of the area of activity.
24. The work shall conform to the following plans and special conditions:

Special Conditions:

1. No special Conditions



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1398

MassDEP File #

eDEP Transaction #

Acton

City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):

a. County

b. Certificate Number (if registered land)

c. Book

d. Page

7. Dates: October 22 2025 November 19 2025 12/16/25
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

Town of Acton Stow Street Shared Use Path

a. Plan Title

Nitsch Engineering

Kristen Antunes

b. Prepared By

October 25 2025

c. Signed and Stamped by

1" = 20'

d. Final Revision Date

e. Scale

Town of Acton 19-21 Maple Street Commuter Lot & Stow Street Shared Use Path Sheet 24 of 29 Wetland Detail

December 9 2025

f. Additional Plan or Document Title

g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

- a. ☐ Public Water Supply b. ☐ Land Containing Shellfish c. ☒ Prevention of Pollution
 d. ☐ Private Water Supply e. ☐ Fisheries f. ☒ Protection of Wildlife Habitat
 g. ☒ Groundwater Supply h. ☒ Storm Damage Prevention i. ☒ Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. ☒ the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1398

MassDEP File #

eDEP Transaction #

Acton

City/Town

B. Findings (cont.)

Denied because:

- b. ☐ the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. ☐ the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
3. ☐ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. ☐ Bank	<u> </u> a. linear feet	<u> </u> b. linear feet	<u> </u> c. linear feet	<u> </u> d. linear feet
5. ☒ Bordering Vegetated Wetland	<u> </u> a. square feet	<u> </u> 324 b. square feet	<u> </u> c. square feet	<u> </u> 324 d. square feet
6. ☐ Land Under Waterbodies and Waterways	<u> </u> a. square feet	<u> </u> b. square feet	<u> </u> c. square feet	<u> </u> d. square feet
	<u> </u> e. c/y dredged	<u> </u> f. c/y dredged		
7. ☒ Bordering Land Subject to Flooding	<u> </u> a. square feet	<u> </u> 463 b. square feet	<u> </u> c. square feet	<u> </u> 0 d. square feet
Cubic Feet Flood Storage	<u> </u> e. cubic feet	<u> </u> f. cubic feet	<u> </u> g. cubic feet	<u> </u> h. cubic feet
8. ☐ Isolated Land Subject to Flooding	<u> </u> a. square feet	<u> </u> b. square feet		
Cubic Feet Flood Storage	<u> </u> c. cubic feet	<u> </u> 406 d. cubic feet	<u> </u> e. cubic feet	<u> </u> f. cubic feet
9. ☒ Riverfront Area	<u> </u> a. total sq. feet	<u> </u> b. total sq. feet		
Sq ft within 100 ft	<u> </u> c. square feet	<u> </u> 308 d. square feet	<u> </u> e. square feet	<u> </u> f. square feet
Sq ft between 100-200 ft	<u> </u> g. square feet	<u> </u> h. square feet	<u> </u> i. square feet	<u> </u> j. square feet



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1398

MassDEP File #

eDEP Transaction #

Acton

City/Town

B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. ☐ Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. ☐ Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. ☐ Coastal Beaches	a. square feet	b. square feet	c. nourishment cu yd	d. nourishment cu yd
14. ☐ Coastal Dunes	a. square feet	b. square feet	c. nourishment cu yd	d. nourishment cu yd
15. ☐ Coastal Banks	a. linear feet	b. linear feet		
16. ☐ Rocky Intertidal Shores	a. square feet	b. square feet		
17. ☐ Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. ☐ Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. ☐ Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. ☐ Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. c/y dredged	b. c/y dredged		
21. ☐ Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		
22. ☐ Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1398

MassDEP File #

eDEP Transaction #

Acton

City/Town

B. Findings (cont.)

* #23. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. ☐ Restoration/Enhancement *:

a. square feet of BVW

b. square feet of salt marsh

24. ☐ Stream Crossing(s):

a. number of new stream crossings

b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on 12/16/26 unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1398

MassDEP File #

eDEP Transaction #

Acton

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
"File Number 085-1398 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1398

MassDEP File #

eDEP Transaction #

Acton

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.
19. The work associated with this Order (the "Project")
 - (1) ☒ is subject to the Massachusetts Stormwater Standards
 - (2) ☐ is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
 - i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
 - ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
 - iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1398

MassDEP File #

eDEP Transaction #

Acton

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 19(f) through 19(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 19(f) through 19(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1398

MassDEP File #

eDEP Transaction #

Acton

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
 - 1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 - 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 - 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

See page 16

- 20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:
085-1398
MassDEP File #

eDEP Transaction #
Acton
City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No
2. The Acton hereby finds (check one that applies):
Conservation Commission

- a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw

2. Citation

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. ☒ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

STANDARD CONDITIONS REQUIRED UNDER THE TOWN OF ACTON WETLAND PROTECTION BYLAW CHAPTER F

OOC page 16-17

1. Municipal Ordinance or Bylaw

2. Citation

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

See page 16

By vote on August 7, 2024, the Acton Conservation Commission authorized the Conservation Agent to sign on their behalf. Olivia Barksdale has affixed her original Signature.

x. 
Olivia Barksdale, Conservation Agent



**Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands**

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1398

MassDEP File #

eDEP Transaction #

Acton

City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

Please indicate the number of members who will sign this form.

This Order must be signed by a majority of the Conservation Commission.

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

12/16/25

1. Date of Issuance

5

2. Number of Signers

Signature <i>Jillian Peters</i>	Jillian Peters
Signature	Printed Name
Signature	Amy Green
Signature	Printed Name
Signature <i>James C. Colman</i>	James C. Colman
Signature	Printed Name
Signature <i>Kate Warwick</i>	Kate Warwick
Signature	Printed Name
Signature <i>Peter Hocknell</i>	Peter Hocknell
Signature	Printed Name
Signature <i>Zyvia Chadzynska</i>	Zyvia Chadzynska
Signature	Printed Name
Signature <i>Terry Maitland</i>	Terry Maitland
Signature	Printed Name
Signature	Printed Name

☒ by hand delivery on

12/16/25

Date

☐ by certified mail, return receipt requested, on

Date



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1398

MassDEP File #

eDEP Transaction #

Acton

City/Town

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40
Town of Acton Wetland Protection Bylaw, Chapter F

Provided by MassDEP:

085-1398

MassDEP File #

eDEP Transaction #

Acton

City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Acton

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Acton

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Project Location

085-1398

MassDEP File Number

Has been recorded at the Registry of Deeds of:

County

Book

Page

for: Property Owner

and has been noted in the chain of title of the affected property in:

Book

Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

**Request for Departmental Action Fee
Transmittal Form**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

085-1398

Provided by DEP

A. Request Information

1. Location of Project

a. Street Address

b. City/Town, Zip

c. Check number

d. Fee amount

2. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

4. DEP File Number:

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



B. Instructions

1. When the Departmental action request is for (check one):

- ☐ Superseding Order of Conditions – Fee: \$120.00 (single family house projects) or \$245 (all other projects)
- ☐ Superseding Determination of Applicability – Fee: \$120
- ☐ Superseding Order of Resource Area Delineation – Fee: \$120



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

**Request for Departmental Action Fee
Transmittal Form**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

085-1398

Provided by DEP

B. Instructions (cont.)

Send this form and check or money order, payable to the *Commonwealth of Massachusetts*, to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.
3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see <https://www.mass.gov/service-details/massdep-regional-offices-by-community>).
4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

STANDARD CONDITIONS

REQUIRED UNDER THE TOWN OF ACTON WETLAND PROTECTION BYLAW CHAPTER F

1. No work shall be undertaken until the Order of Conditions has been reviewed and is clearly understood by the Contractor or his agent. It is the Applicant's responsibility to see that the Contractor clearly understands all items herein.
2. This Order of Conditions shall apply to any successor in interest or successor in control.
3. Members and agents of the Conservation Commission shall have the right to enter and inspect the premises to evaluate compliance with the Order and to require the submittal of any data deemed necessary by the Commission for that evaluations.
4. All drainage facilities and related structures and equipment shall be continually operated and maintained so as to comply with this Order of Conditions. The operation and maintenance of the facilities and structures shall be on-going and will not expire at the end of one year or with the issuance of the Certificate of Compliance.
5. Any change made, or intended to be made, in the plans shall require the applicant to file a new Notice of Intent, or to inquire of the Commission, in writing, whether the change is substantial enough to require a new filing.
6. The Conservation Commission shall have the right to file this Order of Conditions in the Registry of Deeds should the applicant fail to do so within 60 days.
7. Accepted engineering and construction standards and procedures shall be followed in the completion of this project.
8. The Commission shall be notified in writing 10 days prior to the commencement of any site work. Failure to so notify the Commission shall result in the issuance of an Enforcement Order.
9. The Petitioner is advised that this Order in no way absolves him of responsibility to other property owners upon whose land he discharges water directly or indirectly.
10. Erosion control measures consisting of staked haybales unless otherwise approved by the Commission shall be installed during the first phase of construction and the Commission shall be notified of their placement and no work shall begin before inspection by the Commission.
11. Any materials collected by the erosion control measures shall be removed and properly disposed of.
12. All work shall be completed as quickly as possible to minimize the duration of exposure of disturbed areas. If work is suspended for a significant period of time (i.e. as during winter months), then temporary stabilization methods must be employed and maintained during the period of inactivity.
13. No salt or other deicing chemicals shall be used on roadways and parking areas on the site.
14. This order applies only to the work described in the Notice of Intent and shown on the plans referenced in Condition 12. A Determination of Applicability Form must be filed for any additional work on site in areas governed by the Town of Acton Wetlands Protection Bylaw.
15. All disturbed areas shall be top-soiled six inches and seeded.
16. Violation of any condition of this Order may result in the issuance of an Enforcement Order. Such Enforcement Order, if issued, will require the immediate cessation of all work until a hearing is held; such hearing will be held not more than 10 days from the issuance of the Enforcement Order.

17. The work authorized hereunder by the Acton Wetlands Protection Bylaw shall be completed within three years from the date of this Order unless the Order is renewed prior to expiration.
18. ~~A fifty (50) foot setback of natural vegetation shall be maintained up gradient from the wetland.~~
19. ~~No construction, either temporary or permanent shall occur within seventy five (75) feet of the edge of wetlands. This shall include driveways, roadways, residential, commercial or industrial structures.~~
20. There shall be no use of fertilizers, pesticides, herbicides or chemicals of any kind within the fifty (50) foot no disturbance zone.
21. There shall be no underground storage of gasoline, oil or other fuels or hazardous materials within the one-hundred (100) foot buffer zone.
22. The Commission reserves the right to impose additional conditions to mitigate any actual or potential impacts resulting from the permitted work.
23. All haybales placed for siltation prevention must be removed from the site within 30 days of the stabilization of the area of activity.
24. The work shall conform to the following plans and special conditions:

Special Conditions:

1. Wetland replication is increased to a ratio of 1.5:1 or to maximum extent possible. A larger replication can be considered when the Town goes to bid and receives pricing. The increased replication can be approved by the Conservation Agent.
2. A two-year monitoring period with 75% plant survival requirement, and oversight by a wetland scientist.

APPENDIX B: MASSACHUSETTS BAY
TRANSIT AUTHORITY ZONE OF INFLUENCE
ACCESS PERMIT

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

ZONE OF INFLUENCE LICENSE | MBTA – 25140

RAILROAD PROPERTIES

ACTON, MASSACHUSETTS

TOWN OF ACTON

1. **The Zone of Influence License**

The Massachusetts Bay Transportation Authority, a body politic and corporate and a political subdivision of the Commonwealth of Massachusetts, established and existing pursuant to Chapter 161A of the Massachusetts General Laws, with a usual place of business at 10 Park Plaza, Boston, Massachusetts (the “MBTA”), hereby grants to Town of Acton, a Massachusetts municipality, with a usual place of business at 14 Forest Road, Acton, Massachusetts 01720 (“Licensee”), the right and privilege to enter onto the Premises (as defined in Section 2.5 below) solely to conduct the Scope of License (as defined in Section 2.6 below), subject to the terms and conditions of this Zone of Influence License.

2. **General Conditions**

Among the terms and conditions of this Zone of Influence License are included the following General Conditions:

2.1 **Effective Date:** December 9, 2025

2.2 **Licensee:** Town of Acton

2.3 **Term:** From the Effective Date to December 8, 2026; except that the MBTA may terminate this Zone of Influence License with thirty (30) days written notice.

Holding Over: Per Section 8 of this License, if work (as defined in the Scope of Activity) continues after the expiration or termination of this Zone of Influence, Licensee shall pay a monthly fee equal to three (3) times the original monthly License Fee (see “Holdover Fee” below), paid in advance, until the License is terminated by either party with thirty (30) days’ written notice.

2.4 **Fees:**

Administrative Fee: \$1,000.00 paid with the application for this Zone of Influence License.

License Fee: \$1,000.00 to be paid contemporaneously with the execution of the Zone of Influence License.

Design and Construction Plan Review Fee: \$1,600.00 paid in accordance with Section 4.1(h) below.

Holdover Fee: \$250.00 monthly.

2.5 **Premises:** Those certain areas within the Zone of Influence of the MBTA’s Fitchburg Main Line right-of-way, located near 19 Maple Street in Acton,

Massachusetts, as more fully described/shown in Exhibit A, attached hereto and incorporated herein, but only to the extent that use of such property is reasonably necessary to permit Licensee to conduct the activities described in Section 2.6 below.

2.6 Scope of License:

Subject to, and in accordance with, the terms and conditions of this Zone of Influence License, and the plans and/or documentation attached as Exhibit A, Licensee may perform the following work: a) Utility improvements to the existing stormwater management system; b) Reconstruction of the Town-owned parking lot; and c) Upgrades to existing pedestrian facilities. All work shall take place within the Zone of Influence of the MBTA's Fitchburg Main Line right-of-way, located near 19 Maple Street in Acton, Massachusetts. In addition, the Licensee seeks approval to demolish the existing 20-foot by 120-foot overhang structure adjacent to MBTA property located at 21 Maple Street in Acton, Massachusetts. No other investigations or activities of any kind may be performed on the Premises or any other property of the MBTA. Licensee shall have the right to permit its employees, contractors, and agents to use the Premises as permitted hereunder and acting by and through Licensee, subject to all of the terms and conditions of this Zone of Influence License.

Licensee understands and agrees to the following terms and conditions:

1. Licensee shall adhere to the terms and conditions of the MBTA's Operations Department's correspondence, hereto attached as Exhibit C and incorporated herein by reference.
2. Licensee shall adhere to the terms and conditions of the Keolis Commuter Services, LLC's ("KCS") correspondence dated December 8, 2025, hereto attached as Exhibit D and incorporated herein by reference.

In the event of a conflict between the conditions stated in this Section 2.6 and other provisions of this Zone of Influence License, whichever provisions are more restrictive of Licensee or impose a higher standard on Licensee shall control.

2.7 Notices:

The MBTA:

The MBTA Real Estate Department
Massachusetts Bay Transportation Authority
10 Park Plaza, Suite 5720
Boston, Massachusetts 02116
Attn: Chief of Real Estate

and

Massachusetts Bay Transportation Authority
10 Park Plaza
Boston, Massachusetts 02116

Attn: General Counsel

and

MBTA Transit-Oriented Development Group
10 Park Plaza, Suite 5170
Boston, Massachusetts 02116
Attn: Deputy Chief of Transit-Oriented Development

and

The MBTA Railroad Operations Department
Engineering and Maintenance
32 Cobble Hill Road
Somerville, Massachusetts 02143
Attn: Director of Engineering

and

Keolis Commuter Services, LLC ("KCS")
32 Cobble Hill Road
Somerville, Massachusetts 02143
Attn: John Connors

and

CSX Transportation, Inc. ("CSX")
500 Water Street
Jacksonville, Florida 32202
Attn: Mark E. Austin

and

National Railroad Passenger Corporation ("Amtrak")
30th Street Station, Box 64
2955 Market Street
Philadelphia, Pennsylvania 19104
Attn: Michael Kolonauski

and

Greystone Real Estate Advisory Group
20 Park Plaza, Suite 1120
Boston, Massachusetts 02116
Attn: MBTA License Management

LICENSEE:

Town of Acton
14 Forest Road
Acton, Massachusetts 01720

3. Consideration

The rights contained in this Zone of Influence License are granted for good and valuable consideration, the sufficiency of which is hereby acknowledged.

4. Terms and Conditions of Zone of Influence License

This Zone of Influence License is subject to the following terms and conditions:

4.1 Scope of Activity

(a) Scope of Activity:

The Scope of Activity is the Scope of License (Section 2.6) as modified by the terms of this Zone of Influence License, including, without limitation, Exhibit B attached hereto and incorporated herein. Licensee shall minimize the disruption to and alteration of the Premises and, as soon as possible after each entry onto the Premises, shall return the Premises to the condition existing immediately prior to the initiation of the Scope of Activity and entry hereunder; except as specifically authorized under the Scope of License.

Except pursuant to an approved Access Plan, defined in Exhibit B, attached hereto and incorporated herein, or in case of emergency, Licensee shall provide at least ten (10) days' prior written notice of its desire to enter the Premises to the MBTA's applicable operations department(s), including MBTA's Railroad Operations, in accordance with this Zone of Influence License at the address(es) noted above and shall also make arrangements at least ten (10) days in advance with the applicable Railroad Companies (as defined below) for access. The MBTA and the Railroad Companies (as defined below) may have an observer present at all times when Licensee is present on the Premises. See Exhibit B for required notice from Licensee when Licensee needs access because of an emergency. Licensee shall do all work in accordance with the Plan described in Exhibit B.

(b) Utilities:

Licensee acknowledges that there may be surface and subsurface utilities on and adjacent to the Premises and agrees to exercise extreme caution in performance of the Scope of Activity. Licensee shall comply with Massachusetts General Laws, Chapter 82, Section 40 (said statute also known as the "Dig Safe" law) and the regulations promulgated pursuant thereto including but not limited to the Code of Massachusetts Regulations, more particularly, 220 CMR 99.00 et seq. To the extent the MBTA, the Railroad Companies (as defined below), or parties acting on behalf of any of them, locate and mark railroad utilities in the railroad rights of way and appurtenant thereto, Licensee shall be responsible for payment to such parties for such services which may include, but not be limited to, locating and marking utilities, facilities and appurtenances thereto serving the railroad and transit line(s) or used in connection with services or operations of the MBTA and/or the Railroad Companies (as defined below). Any damage to any utilities on or near the Premises caused by Licensee shall be the sole responsibility of Licensee. If Licensee does not immediately repair any utilities it has damaged, the MBTA, without being under any obligation to do so and without waiving Licensee's obligation hereunder, may repair any utilities damaged by Licensee immediately and without notice in case of emergency. In the event the MBTA exercises such right, Licensee shall pay to the MBTA immediately upon demand all of the MBTA's cost of performing such repairs plus a fee equal to twenty-five percent (25%) of the MBTA's cost of performing such repairs to reimburse the MBTA for its administrative costs.

- (c) Subordination to the MBTA's Operating Requirements:
The work permitted hereby shall be subordinate to the requirements of the MBTA in maintaining and operating a transportation system and may be stopped or delayed, at any time, in response to each requirement. The MBTA shall not be responsible for any damages incurred by Licensee as a result of any such work stoppage, delay or required relocation.
- (d) Environmental Cooperation:
If for any reason Licensee is not responsible for Hazardous Materials, defined below, on the Premises then Licensee agrees to cooperate with the MBTA in the determination of the party liable for the remediation of the Premises under applicable Federal and/or state law. Such cooperation may include the temporary adjustment of the rights granted to Licensee hereunder. The MBTA shall not be responsible for any damages incurred by Licensee as a result of such temporary adjustment. "Hazardous Materials" shall mean "oil" or "hazardous materials", as those terms are defined in Massachusetts General Laws Chapter 21E ("Chapter 21E") and the regulations promulgated pursuant thereto, the Massachusetts Contingency Plan, 310 CMR 40.0000 et seq. (the "MCP").
- (e) Remediation Obligation of Licensee:
Whenever by law or the terms of this Zone of Influence License, Licensee is responsible for remediation of Hazardous Materials on MBTA property, Licensee, upon written demand of the MBTA, shall conduct, at Licensee's sole cost and expense (or, at the MBTA's election, reimburse the MBTA for the cost and expense incurred by the MBTA in connection with the MBTA's conduct of), all response actions required by Chapter 21E and the MCP with respect to the Hazardous Materials (including the hiring of a Licensed Site Professional). Any such response action, if performed by Licensee, shall be performed in accordance with Chapter 21E, the MCP, any other applicable statutes and regulations, and in accordance with plans and specifications approved by the MBTA, shall be completed in a timely manner to the reasonable satisfaction of the MBTA, and shall allow the MBTA to use the Premises, and/or adjacent or contiguous property owned by the MBTA, for its present use and for any future transportation use. Licensee shall also be responsible for the reasonable costs incurred by the MBTA in hiring consultants (including a Licensed Site Professional) to review, supervise and inspect any plans, specifications, proposed method of work, installation, operation and results.
- (f) Notice of Project Commencement and Completion:
Upon commencement and completion of its work, Licensee shall provide written notice to the MBTA and the Railroad Companies (as defined below) at the notice addresses set forth in Section 2.7.
- (g) Evidence of Financial Responsibility:
Prior to commencement of Licensee's activities hereunder, Licensee shall provide evidence to the MBTA's reasonable satisfaction that Licensee has sufficient financial resources available to discharge any anticipated obligations hereunder. Such resources may be in the form of Licensee's net worth, insurance coverage, a bond or such other financial security as may be acceptable to the MBTA in form and amount.

(h) Plan Review Costs:

In addition to the Fees allocated in Section 2.4 above, Licensee shall also be responsible for any additional costs that may be incurred by the MBTA for Design and Construction Plan Review within thirty (30) days of being invoiced for same. Such costs and Fees are in addition to the Administrative Fee and the License Fee, and are included within the Licensee's indemnity obligations in Section 4.2(a) below.

(i) Settlement, Heaving or Lateral Movement

Licensee shall be responsible for any settlement, heaving or lateral movement caused to the roadbed, right-of-way and/or tracks, facilities and appurtenances of the MBTA or the Railroad Companies, arising from or as a result of the Scope of License or other Licensee activities at the Premises from the date of completion of the Scope of License, and Licensee agrees to pay the MBTA and/or the Railroad Companies the full cost and expense of repair or restoration to the MBTA's and/or Railroad Companies' facilities, promptly upon receipt of invoices therefore.

4.2 Indemnification and Release of the MBTA

(a) Licensee shall indemnify, defend (at the option of the MBTA) and save the MBTA, KCS, Amtrak, CSX, and any other company operating on the rights-of-way (collectively, except for the MBTA, the "Railroad Companies"; and individually, each a "Railroad Company") harmless from and against any and all liabilities, losses, damages, costs, expenses (including reasonable attorneys' expenses and fees), causes of action, suits, claims, demands or judgments of any nature whatsoever including, without limitation, those related to Hazardous Materials that may be imposed upon, incurred by, or asserted against the MBTA or the Railroad Companies by reason of any of the following occurrences:

- (1) the activities of Licensee hereunder or the exercise by Licensee of any rights or privileges hereby granted; or
- (2) the presence, discovery or revealing of any pre-existing Hazardous Materials on the Premises (or other property of the MBTA adjacent to the Premises) (i) which discovery is a result of Licensee's activities hereunder; (ii) where said Hazardous Materials are present because of Licensee's previous occupancies of the Premises, whether those occupancies were unauthorized or permitted pursuant to prior agreements between the parties; or (iii) where those pre-existing Hazardous Materials migrated from land now or previously owned, leased, occupied or operated by Licensee or for which Licensee is a potentially responsible party as defined under Chapter 21E; or
- (3) the placement or accidental release of any Hazardous Materials onto the Premises (or other property of the MBTA adjacent to the Premises) by Licensee or its employees, agents, contractors or consultants or by the employees, agents, or consultants of Licensee's contractors or subcontractors; or
- (4) any use, condition or occupation of the Premises or any part thereof by Licensee; or

- (5) any failure of Licensee to perform or comply with any of the terms hereof, or of any contracts, agreements or restrictions, statutes, laws, ordinances or regulations affecting the activities or any part thereof.

In subsection (2) above, Licensee's previous occupancies of the Premises include occupancies by the predecessors in interest of Licensee.

- (b) Licensee has inspected the Premises and decided that the Premises are suitable for the uses Licensee contemplates. Licensee assumes all the risk of entry on to the Premises.
- (c) Licensee hereby releases the MBTA and the Railroad Companies from any responsibility for Licensee's losses or damages related to the condition of the Premises, and Licensee covenants and agrees that it will not assert or bring, nor cause any third-party to assert or bring, any claim, demand, lawsuit or cause of action (whether by way of original claim, cross claim, counterclaim, contribution claim, indemnification claim, third-party claim or any other claim) (hereinafter "Claims") against the MBTA or the Railroad Companies, including, without limitation, claims for response actions, response costs, assessments, containment, removal and remedial costs, governmental oversight charges, including any overhead or response action costs incurred or assessed by DEP, fines or penalties, permit and annual compliance fees, reasonable attorney and expert fees, natural resource damages, property damages, including diminution in property value claims, and personal injury damages and damages related to a person's death relating to, or arising from, the condition of the Premises.

Licensee shall obtain a written release of liability similar to the one in this Section 4.2(c) and including the language of Section 4.2(d) in favor of the MBTA and the Railroad Companies from each of Licensee's consultants and contractors before they enter onto the Premises.

- (d) In clarification of the above release and covenants of defense and indemnification, and not in limitation of them, Licensee shall indemnify, defend (at the option of the MBTA) and save the MBTA and the Railroad Companies harmless from and against any and all liabilities, losses, damages, costs, expenses (including reasonable attorneys' expenses and fees), causes of action, suits, claims, demands or judgments related to the injury, illness or death of any employee of Licensee or of an employee of Licensee's contractors or consultants; except if the "Claim" arose because of the gross negligence or willful misconduct of the MBTA or the Railroad Companies. It shall not be grossly negligent to allow access to the Premises that are in substantially the condition they were in when Licensee inspected the Premises before accepting this Zone of Influence License.
- (e) Licensee shall be notified, in writing, by the MBTA and each of the affected Railroad Companies of the assertion of any claim against it that Licensee has agreed to indemnify above (the "Indemnified Claim").
 - (1) If the MBTA decides to itself conduct the defense of an Indemnified Claim against it or to conduct any other response itself, Licensee shall reimburse the MBTA for all costs and expenses (including, without limitation, reasonable attorneys' fees and expenses) incurred by the MBTA in connection with the MBTA's defense of the Indemnified Claim against it and/or the conduct of all response actions, including, without limitation, those required by Chapter 21E and the MCP. The

settlement or compromise of any Indemnified Claim shall not include the admission of guilt (or comparable plea), wrongdoing or negligence or the permitting or imposition of civil or criminal penalties or indictments, or the entering of consent decrees or orders of any kind by the MBTA on behalf of Licensee or any other action that would materially prejudice the rights of Licensee without Licensee's express written approval. Licensee shall cooperate fully and promptly with the MBTA in the defense of any Indemnified Claim. This same right of self-defense and the right to Licensee reimbursement shall apply to each of the Railroad Companies that has an Indemnified Claim against it.

- (2) If the MBTA decides to have Licensee defend the Indemnified Claim or handle the response action, the MBTA shall notify Licensee of that decision in writing and Licensee shall bear the entire cost thereof and shall have sole control of the defense of any Indemnified Claim and all negotiations for its settlement or compromise provided that the MBTA is fully indemnified by Licensee and provided further that the settlement or compromise shall not include the admission of guilt (or comparable plea), wrongdoing or negligence or the permitting or imposition of civil or criminal penalties or indictments, or the entering of consent decrees or orders of any kind by Licensee on behalf of the MBTA or any other action that would materially prejudice the rights of the MBTA without the MBTA's express written approval. The MBTA shall cooperate with Licensee in the defense of any Indemnified Claim. If any of the Railroad Companies want Licensee to defend it against an Indemnified Claim, then they must agree to this Section 4.2(e)(2).

If any response action due to the presence of Hazardous Material or the threat of release of Hazardous Waste onto the Premises (or other property of the MBTA which abuts the Premises), is performed by Licensee, the response action shall be performed in accordance with Section 4.1(e).

- (f) Licensee and contractor shall provide to the MBTA financial assurance guaranteeing Licensee's performance of the obligations of this Zone of Influence License in a form satisfactory to the MBTA.

For purposes of this Section 4, Licensee shall include Licensee and its directors, officers, employees, agents, successors and assigns and the MBTA shall include the MBTA and its directors, officers, employees, agents, successors and assigns.

The provisions of Sections 4.1 and 4.2 shall survive the termination or expiration of this Zone of Influence License.

4.3 Insurance

Prior to entry hereunder, Licensee and its consultants and contractors shall provide the MBTA, KCS, Amtrak, CSX, and the Railroad Companies with a certificate or certificates of insurance and shall, during the Term hereof, renew and replace any expired certificate, evidencing the insurance of the activities permitted hereunder, and Licensee's covenant of indemnification hereinabove, with companies that are reasonably acceptable to the MBTA, as stated below, in which the MBTA and others hereinafter specified are either additional insureds as their interests may appear or named insureds and which provide minimum liability coverage as follows:

- (a) Commercial General Liability Insurance:
Insuring Licensee, the MBTA, the Railroad Companies, the Premises, and all activities of Licensee permitted pursuant to this Zone of Influence License, as well as Licensee's indemnification obligations contained herein, with minimum liability coverage for personal injury, bodily injury and property damage with limits not less than One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) in aggregate. Such insurance shall be written on an occurrence basis (as opposed to a claims made basis). This policy shall name the MBTA and the Railroad Companies as additional insureds. This policy shall provide coverage on a primary and non-contributory basis for the MBTA and the Railroad Companies. The policy shall contain a clause waiving the right of subrogation in favor of the MBTA and the Railroad Companies. This policy must contain endorsement(s) or language, which must be stated on the certificate of insurance, providing coverage equivalent to the coverage provided by ISO form CG 24 17 10 01.
- (b) Workers' Compensation and Employers' Liability Insurance:
Insuring all persons employed by Licensee in connection with any work done on or about the Premises with respect to which claims for death or bodily injury could be asserted against the MBTA, including (i) Workers' Compensation Insurance providing statutory coverage as required by the Commonwealth of Massachusetts, and (ii) Employers' Liability Insurance coverage with limits of not less than One Million Dollars (\$1,000,000) per accident. Each of Licensee's contractors, subcontractors, and consultants performing work on or about the Premises shall have similar policies covering their employees. All policies of insurance required by this Section 4.3 (b) must contain a clause waiving the right of subrogation in favor of the MBTA and the Railroad Companies.
- (c) Automobile Liability Insurance:
Automobile liability insurance with limits of not less than One Million Dollars (\$1,000,000) covering all owned, non-owned, hired, rented or leased vehicles of Licensee, its employees, officers, subcontractors and consultants that are used in the activities permitted hereunder. Such insurance shall be written on an occurrence basis (as opposed to a claims made basis). This policy shall name the MBTA and the Railroad Companies as additional insureds. This policy shall provide coverage on a primary and non-contributory basis for the MBTA and the Railroad Companies. This policy must contain endorsement(s) or language, which must be stated on the certificate of insurance, providing coverage equivalent to the coverage provided by ISO form CA 20 70 10 01.
- (d) Umbrella Liability Insurance:
Umbrella liability insurance with limits of not less than Ten Million Dollars (\$10,000,000) providing excess coverage over all limits and coverage noted in paragraph (a) and paragraph (c) above. Such insurance shall be written on an occurrence basis (as opposed to a claims made basis). This policy shall name the MBTA and the Railroad Companies as additional insureds. This policy shall provide coverage on a primary and non-contributory basis for the MBTA and the Railroad Companies. The policy shall contain a clause waiving the right of subrogation in favor of the MBTA and the Railroad Companies. This policy must contain endorsement(s) or language, which must be stated on the certificate of insurance, providing coverage equivalent to the coverage provided by ISO form CU 24 09 03 05.

(e) Insurance during Construction and Installation:

Licensee shall procure or cause to be procured builder's all risk insurance during any period when a construction project is being undertaken by or on behalf of Licensee on the Premises.

(f) Railroad and Transit Protective Liability Insurance:

In the event that any work occurs within fifty (50) feet of an active right-of way or if any work of any kind by Licensee poses a risk to foul an active right-of-way, Licensee shall procure Railroad Protective Liability Insurance insuring the MBTA and the Railroad Companies with limits of not less than Five Million Dollars (\$5,000,000) for all damages arising out of bodily injuries to or death of one (1) person, and, subject to that limit for each person, a total limit of Ten Million Dollars (\$10,000,000) for all damages arising out of bodily injury to or death of two (2) or more persons in any one (1) accident. The MBTA and the Railroad Companies shall be "first named insureds" on the Railroad Protective Liability Insurance Policy. Amtrak shall be provided with an original policy of Railroad Protective Liability Insurance and the MBTA and remaining Railroad Companies shall be provided with a certificate of insurance.

The MBTA may require reasonable increases in limits of the above insurance coverages from time to time. The required insurance coverages hereinbefore specified shall be placed with insurance companies licensed by the Massachusetts Division of Insurance to do business in the Commonwealth of Massachusetts and having a Best's rating of A- or better, shall be kept in full force and effect at all times, shall be primary and non-contributory to any insurance or self-insurance maintained by the MBTA and the Railroad Companies, and shall require that the MBTA be given at least thirty (30) days' advance written notice in the event of any cancellation or non-renewal in coverage. All required policies of insurance shall not contain any exclusions for acts of terrorism, and shall fully cover any acts of terrorism. All such insurance as is required of Licensee shall be provided by or on behalf of all contractors, subcontractors and consultants to cover their operations performed. At the inception date of this Zone of Influence License and throughout the term of this Zone of Influence License, the MBTA shall be provided with certificates of insurance evidencing that such insurance policies are in place and provide coverage as required. Licensee shall be held responsible for any modifications, deviations, or omissions in the compliance with these requirements by any contractor, subcontractor or consultant of Licensee.

ALL CERTIFICATES OF INSURANCE PERTAINING TO THIS REQUEST (AS WELL AS RENEWAL CERTIFICATES) SHOULD DESCRIBE THE SITE THAT IS COVERED.

4.4 Compliance with Laws

Licensee shall comply with, and shall cause all work performed to comply with all federal, state, county, municipal and other governmental statutes, laws, rules, orders, regulations and ordinances.

Licensee shall also be responsible for obtaining any and all federal, state, and/or local permits and/or approvals necessary to carry out the activities permitted hereunder.

4.5 Non-Exclusive Use

The MBTA makes no representations or warranty, express or implied, that Licensee shall have sole or exclusive use of the Premises under this Zone of Influence License. In the event other agreements, licenses, or easements have been or are granted, Licensee shall be responsible for coordinating its work and activities with that of other licensees and parties in interest. The MBTA

shall not be liable for delays, obstructions, or like occurrences affecting Licensee, arising out of the work of the MBTA or other licensees or parties in interest.

Licensee's rights herein are granted subject to easements and rights of record and existing leases and licenses.

4.6 No Warranty

Licensee accepts the Premises "As Is" and the MBTA makes no warranty, express or implied, as to the condition of the Premises.

4.7 Termination

At the termination of this Zone of Influence License, Licensee agrees to restore the Premises promptly to the condition it was in at the commencement of the term hereof, and to remove all of Licensee's personal property and debris from the Premises. Should Licensee not perform such restoration at the end of the Term, the MBTA may perform any and all necessary restoration at the sole expense of Licensee. Any personal property not so removed shall, at the option of the MBTA, either become the property of the MBTA or be removed by the MBTA and disposed of without any liability in the MBTA for such removal and disposition, all at the sole expense of Licensee.

4.8 Assignment

Licensee shall not, without the prior written consent of the MBTA, transfer or assign this Zone of Influence License or any part hereof. Such consent may be withheld in the sole discretion of the MBTA. Any assignment made by Licensee without the prior written consent of the MBTA shall be rendered null, void, and of no further force or effect.

5. Notices

All notices, demands, requests, consents, approvals and other instruments required or permitted to be given pursuant to the terms hereof (hereinafter "Notice"), shall be in writing and shall be deemed to have been properly given when deposited in registered or certified United States mail, postage prepaid, return receipt requested, addressed, as described in Section 2.7 or when delivered by messenger or overnight mail service to the correct addressee. Notice shall be deemed received when actually received or when the proffered Notice has been refused by the addressee. The signature of an employee, servant or agent of the addressee shall be determinative on the issue of actual receipt.

Licensee and the MBTA shall, at any time and from time to time, have the right to specify as their proper addresses for purposes of this Zone of Influence License any other address or addresses giving fifteen (15) days' written notice thereof to the other party.

6. Results

If this Zone of Influence License explicitly allows Licensee to conduct certain investigations on MBTA owned land, then if asked to do so by the MBTA in writing, Licensee agrees to provide to the MBTA, at no cost, a copy of the results of such investigations (including data and analysis) and all other work conducted under this Zone of Influence License in both hard copy form and in a digital format specified by the MBTA regardless of whether the report was prepared by Licensee, its agent, consultant or contractor, or prepared on behalf of Licensee. All results and reports shall be provided to the MBTA within ten (10) days of Licensee's receipt of the written request of the MBTA. Licensee agrees to consult with the MBTA prior to contacting any governmental entity, regarding any information, results of analysis or reports regarding the Premises. Licensee shall give the MBTA a copy of any reports or notifications, including but not limited to release notifications, prior to submitting the same to any governmental entity.

7. **Default and Termination**

(a) **Termination for Non-Payment:**

In the event that Licensee shall neglect or fail to pay any sum herein specified to be paid upon the due date hereunder, Licensee shall be in default and the MBTA shall have the right at any time thereafter to terminate this Zone of Influence License by giving Licensee two (2) weeks written notice of the MBTA's decision to terminate for non-payment ("Termination Notice"). Licensee shall not be entitled to cure any such default by tendering payment after the expiration of the two (2) week grace period which starts upon Licensee's, or Licensee's servants, agents or employee's receipt of (or refusal to accept) the MBTA's Termination Notice. Any amount due hereunder that is not paid when due shall be charged to 1.5% per month and 18% per annum.

(b) **Default of Terms and Conditions:**

Licensee shall also be in default if Licensee:

- (1) fails to perform or observe any of the other covenants or agreements contained in this instrument and on its part to be performed or observed, or
- (2) makes any assignment for the benefit of creditors or files petition for relief under bankruptcy law, or
- (3) has a bankruptcy petition filed against it that is not dismissed within sixty (60) days, or
- (4) has its estate taken by process of law, proceeding in bankruptcy or insolvency or otherwise,

and if such defaults continue after two (2) weeks' written notice given by the MBTA to Licensee to cure, the MBTA may terminate this Zone of Influence License by written notice to Licensee and/or deny access to the Premises and expel Licensee and those claiming through or under Licensee and remove Licensee's effects from the Premises without prejudice to any remedies which might otherwise be available for such breach of covenant, and, upon entry as aforesaid, the rights of Licensee created by this Zone of Influence License shall terminate. Notwithstanding the preceding, if Licensee begins to cure a default as soon as possible within said two (2) week period and thereafter continues to pursue a cure with all due diligence, then the MBTA shall not terminate this Zone of Influence License until and unless Licensee ceases to pursue a cure with all due diligence and has not in fact cured said default. Licensee agrees to pay any expense including reasonable attorneys' fees incurred by the MBTA in enforcing any of Licensee's obligations hereunder.

Notwithstanding the preceding, if the default is one that threatens the safety of the public or the ability of the MBTA or a Railroad Company to operate its transportation system, then it shall be considered an emergency default ("Emergency Default") and if Licensee does not affect an immediate cure, the MBTA may terminate the Zone of Influence License upon reasonable notice and use self-help at the expense of Licensee and Licensee shall be responsible for such expenses as well as for a twenty-five percent (25%) administrative fee above the expenses.

In the event this Zone of Influence License is terminated pursuant to this Section 7, the MBTA shall retain the License Fee as partial damages, without prejudice to its right to claim additional damages as a result of the breach.

8. Holding Over

If Licensee desires to continue the work defined in the Scope of Activity after the expiration or termination of this Zone of Influence License, the resulting license shall be on a month-to-month basis and may be terminated by either party at any time by providing the other party with thirty (30) days prior written notice of termination. During the holding-over period, a monthly fee equal to three (3) times the equivalent monthly License Fee (calculated based on the length of the original term and the original License Fee established hereunder) shall be paid monthly in advance by Licensee to the MBTA. During such holding-over period, Licensee shall be bound by all applicable provisions of this Zone of Influence License.

9. Work in Harmony

Licensee agrees that in any work performed in or about the Premises, it will employ only labor which can work in harmony with all elements of labor being employed by the MBTA or the Railroad Companies.

10. Promotional Material

Licensee shall not, without the prior written approval of the MBTA, refer to the MBTA in any promotional matter or material, including, but not limited to advertising, letterheads, bills, invoices and brochures.

11. Nondiscrimination

With respect to its exercise of all rights and privileges herein granted, Licensee shall undertake affirmative action as required by Federal and state laws, rules and regulations pertinent to Civil Rights and Equal Opportunity unless otherwise exempted therefrom. Licensee agrees that it shall comply with any and all required affirmative action plans submitted pursuant to the directives of any Federal agency and in accordance with applicable federal law and applicable state laws, rules and regulations.

Licensee shall not discriminate against any person, employee or applicant for employment because of race, color, creed, national origin, age, sex, sexual orientation, disability or military veteran status in its activities at the Premises, including without limitation, the hiring and discharging of employees, the provision or use of services and the selection of suppliers, contractors, or subcontractors.

Consistent with the law, Licensee shall use reasonable efforts to contact, encourage and utilize minority and female business enterprises in the procurement of materials and service under this Zone of Influence License.

12. Taxes

Licensee shall be solely responsible for the payment of any taxes, levies, betterments or assessments, fees or charges, whether in existence on the date hereof or becoming applicable during the Term, which may be assessed against Licensee or the MBTA which are directly attributable to Licensee's installations in, or use of, the Premises, or any personal property or fixtures of Licensee located thereon (collectively referred to as "Taxes"). Licensee shall pay all Taxes directly to the taxing authority before delinquency and before any fine, interest, or penalty shall become due or be imposed by operation of law for their nonpayment. Such payments shall constitute an additional License Fee hereunder.

Licensee may contest, in good faith for its own account and at its own expense, the validity or amount of any Taxes, provided Licensee shall indemnify the MBTA against any resulting loss, cost and expense. Licensee shall not permit a lien or encumbrance on the Premises by reason of failure to pay any Taxes.

13. No Third-Party Beneficiaries

This Zone of Influence License shall not be construed to create any third-party beneficiary rights in favor of any other parties (except the explicit rights granted to the Railroad Companies) or any right or privilege for the benefit of any other parties.

14. Entire Agreement

This Zone of Influence License contains the entire agreement of the parties hereto with respect to the subject matter hereof, and no representations, inducements, promises, or agreements, oral or otherwise, between the parties hereto with respect to the subject matter hereof not embodied herein shall be of any force or effect.

15. Governing Law

This Zone of Influence License shall be construed and interpreted under and pursuant to the laws of the Commonwealth of Massachusetts, and the Massachusetts and Federal conflict of laws provisions shall not be applied if the result is that other than Massachusetts law shall govern.

16. Successors and Assigns

The provisions of this Zone of Influence License shall be binding on and inure to the benefit of the parties hereto and their respective successors and assigns.

17. Limitation on Damages

The MBTA shall not be liable to Licensee for any loss of business or any indirect, incidental, special, consequential or exemplary damages or lost profits unless specified herein.

18. No Waiver

No failure by the MBTA to insist upon strict performance of any term, covenant or condition hereof, or to exercise any right or remedy consequent upon a breach thereof shall constitute a waiver of any such breach or of any such term, covenant or condition. The acceptance by the MBTA of any amount less than the full amount due to the MBTA hereunder shall not be deemed a waiver by the MBTA of its right to collect the full amount due. The MBTA may deposit checks or drafts that state "final payment", "payment in full" or the like without being deemed to have waived its right to receive all amounts due hereunder. Any waiver by the MBTA of any term, covenant or condition hereof shall not be effective unless such waiver is in writing.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Zone of Influence License to be executed as of the Effective Date.

**MASSACHUSETTS BAY TRANSPORTATION
AUTHORITY, AS LICENSOR**

By: _____
Erin McCabe
Chief of Real Estate and Asset
Management

TOWN OF ACTON, AS LICENSEE

By: _____
Name: _____
Title: _____
(Duly Authorized Representative)

EXHIBIT A
PLAN OF PREMISES

MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY

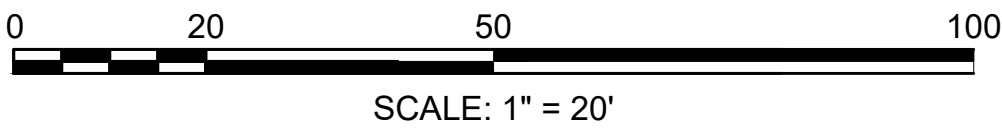
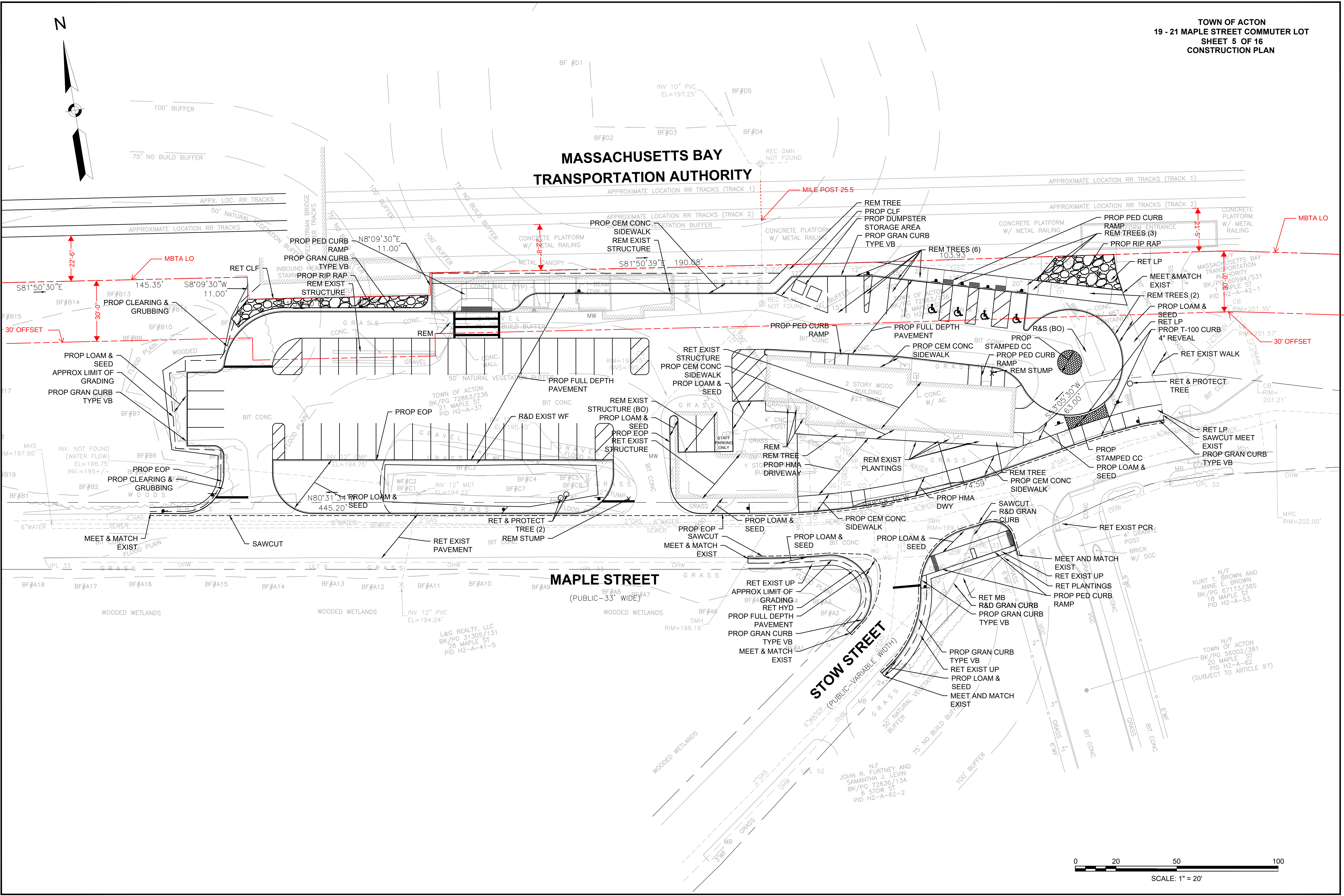


EXHIBIT B

SCOPE OF ACTIVITY

Subject to the terms and conditions in this Zone of Influence License Agreement, Licensee, its agents, employees, contractors, subcontractors, and/or representatives are hereby granted a license to enter upon the Premises for the sole purpose as described in Section 2.6.

Licensee shall conduct all activities within the Premises in a safe manner and immediately notify the MBTA and the applicable Railroad Companies if any problem occurs which may result in a safety hazard. If any unsafe situation should occur, Licensee will correct the situation by eliminating any safety hazard immediately or, if the situation cannot be reasonably cured immediately, then in such longer time as is reasonably required, and in all such unsafe situations, the MBTA Railroad Operations Safety Procedures shall be followed.

Licensee shall submit a plan and detailed specifications (including the materials to be used) and the proposed methods of performing the work, or any part thereof (the "Plan") to the MBTA, Amtrak and other applicable Railroad Companies. Licensee shall not enter the Premises until the Plan has been approved by the MBTA and the applicable Railroad Company or Railroad Companies. Such approval may be withheld in the MBTA's, or the applicable Railroad Company's sole discretion. The Scope of Activity for said construction, installation, maintenance, operation and/or replacement will be more fully defined in the approved Plan, which approved Plan will automatically be incorporated herein by reference and made part of this Zone of Influence License. Licensee shall also provide the MBTA with a detailed schedule of times when Licensee, its employees, contractors, subcontractors, or agents would like to be on the Premises to undertake the Scope of Activity (the "Access Plan"). The MBTA and the applicable Railroad Companies shall have full power to make a final determination of when Licensee may be on the Premises as it is necessary to coordinate the work of all those desiring or having the right to access the Premises.

Unless entry is made pursuant to an Access Plan approved by both the MBTA and the applicable Railroad Companies, Licensee agrees to give, each time it desires entry, at least ten (10) days' prior written notification to the MBTA and the applicable Railroad Companies (except in cases of emergency when notice shall be given to the MBTA and the applicable Railroad Companies as quickly as possible) of its need to access the Premises for all work to be performed under this Zone of Influence License. Licensee understands that the more notice given to the MBTA and the applicable Railroad Companies, the more likely it will be that Licensee can gain access at the times requested. The Licensee shall present evidence of the required insurance coverage before each entry. In the case of an emergency, Licensee shall as soon as possible contact the MBTA Control Center at 617-222-5278.

No activities permitted herein may be performed by Licensee except as approved in writing by the MBTA; and no method of testing, installation or construction shall be used by Licensee except with prior written approvals or written approvals received in the field from the MBTA's representatives at the time the work is performed.

If at any time during the work of installation or connection, either the MBTA or the applicable Railroad Company should, in its sole and absolute discretion, deem flaggers, watchpersons, communications/signaling personnel, electric traction personnel, inspectors assigned to construction crews, and/or other measures, including but not limited to train re-routing, desirable or necessary to protect its operations, its property or its employees or other persons on or near the Premises, the MBTA and/or a Railroad Company shall upon notice to Licensee (where such notice is feasible) have the right to place such personnel, including personnel of the MBTA's or the Railroad Company's agents or to take such measures, at the sole cost and expense of Licensee. Such cost and expense shall include the current wages and fringe benefits due and owing to such personnel in and for the performance of such measures. Licensee hereby covenants and agrees to bear the full cost and expense thereof and to reimburse the MBTA and/or the Railroad Company within thirty (30) days of receiving an itemized, written invoice for such reimbursement. The MBTA's or a Railroad Company's failure to furnish such personnel or take such measures shall

not relieve Licensee of any obligation or liability it might otherwise have assumed, and shall not give rise to any liability to Licensee on the part of the MBTA or the Railroad Companies. Upon being notified that the personnel or measures referred to in the first sentence of this paragraph have been deemed desirable or necessary by the MBTA and/or a Railroad Company, Licensee shall not commence or continue construction or repair measures, as the case may be, unless and until such personnel or measures are in place.

If Licensee shall deem any requirement for flagging or the like by the MBTA, a Railroad Company, or one of their agents for supervision of the activity hereunder as unreasonable, Licensee shall nevertheless pay for such flagging and the like, but may take exception in writing thereto as an unreasonable requirement in each instance. The parties agree to review such exceptions at the times of billings for such services and attempt to adjust them as the MBTA may deem appropriate. This reimbursement is in addition to the License Fee and Administrative Fee required hereunder.

Licensee shall comply with all applicable MBTA Railroad Operations Directorate requirements including, but not limited to, those entitled: "I - Guidelines and Procedures for Construction on MBTA Railroad and Transit Properties", "II - Maintenance and Protection of Railroad Traffic", "III - Insurance Specifications" dated August 2014 and MBTA Special Instructions dated April 2003. To the extent that there is an irreconcilable conflict between the aforementioned requirements and this Zone of Influence License, the terms and conditions contained in the MBTA Railroad Operations Directorate Procedures shall control, unless the requirements in this Zone of Influence License are more strict.

No individual, including representatives and employees of Licensee, may enter onto the Premises unless that individual has first attended Amtrak's Roadway Worker Protection ("RWP") class.

EXHIBIT C

RE - Licensing & Permitting

Canvassing Request Title: Acton_Town of Acton_MBTAs_25140_08.06.2025

Canvassing License #:

Location: 21 Maple St in Acton, MA.

Scope:

Please review the attached information from Town of Acton, requesting to perform construction activities within the Zone of Influence of the MBTA's Middleboro Branch located near 19 Maple St in Acton, MA.

Canvassing Review Comments:

Department / SME	Review Comment(s)	Reviewer Name	Review Date
MBTA Engineering	MBTA engineering finds this application accepted as information only. We offer the following comments: In order to construct this parking lot the contractor will need to occupy the ZOI. This condition has great potential to foul the MBTA ROW and possibly affect commuter rail services. A work plan must be submitted with a list of equipment and technical information. Equipment that will occupy the ZOI must be submitted prior to the commencement of construction activities. A review of this equipment list will need to be reviewed and coordinated with MBTA RR Ops and Keolis. A track geotechnical monitoring system during all construction activity must be installed. You are required to have a safety manager on site and they must participate in flagging support. Common Responses:	Terry McCarthy	11/21/2025
Railroad Operations	No additional comments Common Responses:	Robert Proulx	11/5/2025

	Fully complies with the MBTA Railroad Operations Directorate Specifications, August 2014 revision, available at mbtarealty.com, and the Commuter Rail Construction Safety Directive, available at mbta.com/engineering/directives.,Obtains Railroad Protective Insurance and indemnifies MBTA, Amtrak, CSX and Keolis.,Railroad Operations Department approves this canvass, with the attached conditions.		
Safety	MBTA construction safety accepts this work plan if followed as submitted. If there are any questions, please let me know. Thank you. Common Responses: All material and equipment utilized during construction activities shall be easily moved to ensure worker safety and to avoid interference with operations, even during non-revenue hours.,All personnel working on MBTA property or with the potential to foul the Commuter Rail Right of Way (ROW) must complete Keolis Roadway Worker Protection (RWP) training prior to beginning work. All personnel must have valid Keolis RWP ID cards on their person while working on or near the ROW.,All precautions must be exercised to ensure the MBTA ROW is not fouled at any time.,All work must be coordinated with MBTA Railroad Operations to ensure proper scheduling and flagging. Based on certain requirements, work may be deemed necessary for non-revenue hours.,Applicant must coordinate with MBTA Capital Delivery to ensure that the scope of the agreement or work does not interfere with other nearby MBTA projects.,Applicant must establish a secure work zone during construction to provide for passenger protection.,Applicant must notify DigSafe (811) prior to work activities.,Continued and unrestricted pedestrian and employee access must be maintained.,Existing MBTA infrastructure, including underground utilities, must be protected during work.,If at any time the MBTA deems the Applicant's activities as unsafe to its operations, infrastructure, customers, employees, or the general public, the Applicant must cease all work until safer conditions are established and approved by MBTA personnel.	Vincent Parilla	8/7/2025
Transit Oriented Development	1. The Applicant shall make any repairs to MBTA infrastructure necessitated by activities of the Applicant, which shall be performed by the Applicant or its contractor at no cost to, and to the satisfaction of, the MBTA. 2. Applicant must adhere to the Railroad Operations Construction Policy Directive of August 12, 2022. 3. No drainage shall flow onto the MBTA right-of-way. 4. A portion of the scope of proposed work includes areas already under MBTA license #14907 for parking use. Applicant will need to adhere to the terms of that license and work with MBTA Real	Jennifer Mecca	9/8/2025

	Estate to determine if any modifications to that license are needed based on the proposed work. Common Responses: A worksite hazard analysis (WSHA) must be conducted on site by Keolis, AMTRAK, or MBTA Construction Logistics, as applicable, to determine the level of protection needed prior to starting the work.,Agree to the terms and conditions governing access to the MBTA right-of-way and provide assurance that there will be no interruptions to train movements.,All MBTA comments to the Work Plan and submittals shall be incorporated into a revised submittal or shall otherwise be resolved in writing to the satisfaction of this department.,All work must be coordinated with the MBTA Operations Control Center (OCC) and the Plans and Scheduling Department to ensure proper scheduling and flagging. Based on certain requirements, work may be deemed necessary for non-revenue hours.,Any proposed change to the accepted Work Plan and submittals shall be brought to the attention of this office for review and acceptance prior to the work being performed.,Applicant must notify DigSafe (811) prior to work activities.,Existing MBTA infrastructure, including underground utilities, must be protected during work.,MBTA reserves the right to stop work at any time if it is determined that the work poses unacceptable risk to MBTA customers, employees, operations, or infrastructure.,No crane, manlift, or equipment swings shall be made within 30 feet of the nearest live track or 25 feet of the nearest catenary structure without MBTA authorization, Keolis, AMTRAK, or MBTA flag protection, as applicable, and a Capital Programs Support Field Staff person present.,No materials or equipment shall be stored within 15 feet of the nearest live track without MBTA acceptance of a work plan documenting the location and securement of materials.,No work shall be permitted on/or abutting MBTA property without an accepted Work Plan.,Plans submitted for review by the MBTA must show all property lines, structures, and the MBTA Zone of Influence (ZOI), and must be stamped and signed by a Massachusetts licensed professional engineer, architect, or land surveyor.,Prior to work, submit a Job Hazard Assessment (JHA) identifying potential hazards posed by the project site proximity to the ZOI. This JHA must be signed daily by all site workers.,Submit a Work Plan, Schedule, and Site Safety Plan to the TOD Group for review and acceptance at least five weeks prior to the start of work, identifying the means of protecting the trains, tracks, AMTRAK catenary, and transit line third rail and catenary systems where applicable.,The Applicant shall bear all costs for MBTA personnel associated with the support of this project and may be required to enter into a Force Account Agreement to cover costs incurred by the MBTA, including MBTA TOD Project Office Staff and oversight by MBTA		
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	Capital Programs Support Field Staff.,The Applicant shall remove any debris that migrates or falls onto the tracks or right-of-way using appropriate flag protection.,The Applicant will be responsible for any replacement transportation costs associated with any halt to MBTA services due to project activity.,The TOD Group will coordinate MBTA agreements and support, and will provide information regarding coordination with the applicable departments that include Railroad Operations, Keolis, AMTRAK, Red, Blue, Orange, and Green Line Operations, Engineering & Maintenance, the Power Department, and Safety. The Applicant will be required to coordinate with those applicable departments concerning notifications, scheduling, access times, entry locations, power shutoffs, safety protocols, RWP and ROW training, and flagging services for which an AMTRAK PI, Keolis PI, or MBTA Force Account Agreement, as applicable, shall be established prior to the commencement of work.,The ZOI must be physically demarcated on the project site before work begins, unless the work is within the right-of-way, and may only be removed once all licensed work is completed.		
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EXHIBIT D

December 8th, 2025

Mr. Liam Breen
Director of Licensing
Massachusetts Realty Group
Park Plaza – Suite 1120
Boston, MA 02116

SUBJECT: Request from Town of Acton, requesting to perform construction activities within the Zone of Influence of the MBTA's Right of way near 19 Maple St in Acton, MA. (Fitchburg Route Main Line MP 25.3 +/-). MBTA # 25140

Dear Mr. Breen:

Keolis Commuter Services LLC ("KCS") has reviewed the construction activities, described in the above-referenced MRG canvass subject and provides the following comments and requirements:

1. Contractor shall adhere to all the Railroad Operations Directorate – Guidelines and Procedures for Construction on MBTA Property.
2. Train protection services will be required for all Contractor-performed work on, over or adjacent to the Massachusetts Bay Transportation Authority (MBTA) property if deemed necessary.
3. KCS shall identify all railroad utilities prior to start of scope or work.
4. KCS will need to be informed in advance of all of Contractor's work related to the project in order to maintain the safety of train operations.
5. Contractor shall possess all applicable, necessary, active, executed licenses prior to start of any work on the project.
6. Prior to the start of any work requiring KCS's services, Contractor will be required to enter into an agreement with KCS, which KCS will provide to Contractor. Amongst other terms and conditions, KCS's agreement shall contain an estimate of KCS's anticipated costs to support the project. KCS's support shall include, but not be limited to, flagging protection if needed, protection of railroad utilities if needed, and project management. Contractor must pay to KCS all estimated, anticipated costs for support of the project in full prior to scheduling any flagging or support personnel. Following the satisfactory completion of all work, KCS shall provide a final billing statement to Contractor based on actual costs.
7. Prior to Contractor performing any work on the project, Contractor personnel working on, over or adjacent to the railroad right of way must be safety trained by KCS. Contractor must contact RWP@keoliscs.com to request and schedule this training. All Contractor personnel shall have KCS-issued safety ID's available at all times for KCS's and/or the MBTA's inspection.



8. Contractor shall be required to satisfy all insurance requirements contained in the KCS agreement and to provide proof of all such insurances in advance of Contractor performing any work related to the project.
9. Flagging protection may be scheduled ten (10) business days after execution of KCS's agreement.

If you have any questions or need additional information, please contact me at 617-438-2899 or James.Welch@keoliscs.com.

Sincerely,



James J Welch
Project Engineer – Supplemental Work

Copies: KCS – James Welch
 MBTA – Robert Proulx

