

# 100% Design Submission

## City of Northampton Mass Central Rail Trail

### Extension of Mass Central Rail Trail In Leeds, Massachusetts

April 2, 2015

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#### Submitted To:

City of Northampton  
210 Main Street  
Northampton, MA  
(413) 587-4900



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**ProTerra**  
DESIGN GROUP, LLC

## **Special Provisions**

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## **SCOPE OF WORK**

The work to be done under this Contract consist of extending the existing Mass Central Rail Trail beyond its current northern limit into the Village of Leeds as follows.

The existing rail trail consists of a ribbon of pavement snaking through Northampton and Look Park largely utilizing a previous railroad alignment. The current northern terminus of the rail trail is approximately 400 feet northwest of the northern end of Grove Avenue in Leeds. An access trail connects the terminus to Grove Avenue where users are encouraged to exit. The rail trail alignment north of the terminus consists of a rutted dirt path unsuitable for many of the users of the completed portions of the rail trail.

The City of Northampton wishes to extend the improved section of rail trail from its northern terminus and along its alignment for a distance of approximately 1948 linear feet on a parcel of land owned in-fee by the City. A further 278 linear feet of rail trail will be constructed within an existing easement north of the property line. The extensions will consist of an eight to ten foot wide paved trail with railing, drainage structures, and slope stabilization. A 400 linear foot section of the existing Grove Avenue access from its intersection with the rail trail to the property line will be milled, resurfaced and further improved to promote positive drainage. An existing stone arch culvert utilized by the alignment will be rehabilitated.

Main construction access will be from the intersection of the existing rail trail and Florence Street approximately 0.4 mile south of the southerly limit of work. This 0.4 mile length of rail trail will be closed and utilized for access, laydown, and overnight storage or equipment to support construction. Limited access is available to the top of the Grove Avenue access from Grove Avenue.

## **DESIGN STANDARDS**

All work done under this Contract utilizes existing MassDOT specifications as outlined in the following documents and standards noted therein:

- Standard Specifications for Highways and Bridges; Massachusetts Highway Department (1988)
- Supplemental Specifications to the 1988 English Standard Specifications for Highways and Bridges; Massachusetts Department of Transportation, Highway Division (June 15, 2012)
- Interim Supplemental Specifications; Massachusetts Department of Transportation, Highway Division (December 12, 2014)

## **PERSONAL PROTECTIVE SAFETY EQUIPMENT FOR CONTRACTOR PERSONNEL**

The Contractor is responsible to ensure that all personnel, including all subcontractors, working on the project are issued and are wearing all necessary personal protective safety equipment while working within the project limits. This equipment shall include, as a minimum, a hardhat and a safety vest, regardless of the type of work being performed. Other safety equipment shall be added as required to perform the work in which they are engaged and in accordance with all local, state and federal requirements in effect. Safety equipment shall be provided at no additional cost to the City of Northampton.

## **MASSACHUSETTS DEP FILE NUMBER SIGN**

(Supplementing Subsection 7.01 of the Standard Specifications)

This project is subject to Massachusetts General Laws Chapter 131 Section 40 as amended and has been issued an Order of Conditions by the Northampton Conservation Commission. The Order of Conditions is

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part of this contract and a copy of the Order and all plans shall be on-site while activities regulated by the Order are being performed.

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.

For this project the Massachusetts Department of Environmental Protection File Number is 246-588.

**PRESERVATION OF TRAILSIDE GROWTH**

(Section 8.08 shall be amended as follows)

The Contractor shall take all necessary care when excavating or working in the vicinity of existing trees so that the root systems, trunks, and branches are not damaged. All precautions shall be taken to insure that heavy equipment does not damage any roots, including those that lie below the limits of excavation.

Do not store equipment or stockpile materials within drip line of trees or in areas enclosed by tree protection fencing.

Extreme care shall be exercised during excavation operations beneath the canopy of trees designated to be preserved. All excavation within ten feet of designated trees shall be performed by hand labor to preserve the root system of the tree.

Avoid any direct soil contamination in root zone area by petroleum, petroleum products or solvents, salts or any other pollutant during construction.

All cutting or trimming of trees to be preserved shall be executed under the direction of a Massachusetts Certified Arborist. The Contractor shall provide the Engineer with a copy of the certification prior to any work on trees.

Existing plants adjacent to construction may be protected as a group using temporary fencing as specified under Item 657.51, or in the event of construction close to individual trees, using Individual Tree Protection as specified under Item 102.51.

Trees that, in the judgment of the Engineer, have been irreparably damaged by the Contractor shall be replaced in kind and in size, or, with a quantity of 2 inch caliper replacement trees (the quantity of which shall be determined by the Engineer) such that the cumulative caliper of the replacement trees will be up to the equivalent of diameter of the lost tree at breast height. Cost of replacement trees shall be paid by the Contractor.

Cost of removal of destroyed tree, including roots and stump, as well as the cost of replacement trees, shall be paid for by the Contractor.

**LOCAL PERMITS**

A Northampton DPW Trench Permit is required and shall be obtained by the Contractor. The permit fee is waived.

A City of Northampton DPW Stormwater Permit (National Pollution Discharge Elimination System - NPDES) is required and shall be obtained by the Contractor for disturbances over one (1) acre. The permit fee is waived.

## **CONSTRUCTION SEQUENCE**

The Contractor shall prepare and submit a construction sequence to be accomplished while maintaining free-flowing two-way traffic on all streets during non-working hours and peak traffic periods (7am – 9am and 4pm – 6pm.) During working hours and non-peak traffic hours, traffic on Florence and Mulberry Streets may be stopped solely for the purpose of turning vehicles onto the rail trail. Traffic on side streets and access to abutters' properties shall be maintained. All work shall be performed in accordance with Section 850 of the MassDOT Specifications, and as directed by the Engineer to insure the safe and efficient movement of traffic in around the affected areas of construction.

## **WORK SCHEDULE**

No work shall be performed on Saturdays, Sundays and Holidays without approval of the Engineer & City.

Work on this project is restricted to a typical 8-hour day, 5-day week, with the Prime Contractor and all Subcontractors working on the same shift. No work shall be done on this contract on the day before or the day after a long weekend which includes a holiday without prior approval of the Engineer & City.

## **GENERAL NOTES**

1. All safety signing, temporary pavement markings, reflectorized and lighted drums, and all other safety controls for construction operations shall conform to the 2009 MUTCD for Streets and Highways with Massachusetts amendments.
2. The Contractor is to maintain pedestrian traffic on all intersecting and adjacent sidewalks along Florence and Mulberry Streets.
3. The PVTA bus stop at the intersection of Florence Street and the Rail Trail is to remain unobstructed and in operation.
4. Intersections are to remain open and construction is to be accomplished during the daytime working hours using MassDOT trained flaggers where necessary.
5. Prior to the start of construction, the Contractor shall install all silt fencing and haybales for soil erosion control in the locations shown on the plans to prevent the siltation and erosion of soils into the wetland resource areas. These control devices shall be inspected daily and cleaned and maintained on a regular basis and shall be left in place until all disturbed areas have been revegetated or permanently stabilized. A stockpile of erosion control materials shall be kept on site for emergency purposes.
6. The contractor shall not park his equipment nor store equipment or materials in any wetland resource area, nor will fueling of equipment be conducted within resource areas or their buffers. These shall be no underground storage of fuel or other hazardous substance on the property, within the buffer zone.
7. Site grading and construction shall be scheduled to avoid periods of high surface water. Once begun, grading and construction shall move uninterrupted to completion to avoid erosion and siltation of the wetlands.

## **PROVISIONS FOR TRAVEL AND PROSECUTION OF WORK**

Access shall be maintained for all abutters so that they may use the driveways and approaches adjacent to their properties.

Immediately after executing the Contract, the Contractor shall confer with the owners of all utilities within the scope of the project in order that relocation of services, if any, may be made at a time consistent with operations of this Contract.

The Contractor shall give notice in writing to the Engineer and City at least 48 hours in advance of beginning any work affecting the maintenance of traffic on any of the intersecting or adjacent roads.

## **SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS**

(Supplementing Subsection 850.21)

Payment for safety control for construction operations in accordance with the Traffic Management Details shall be considered incidental to the contract and costs included in the unit bid price for those items requiring such controls.

## **ORDERING OF MATERIALS, EQUIPMENT, AND PREPARATION**

The Contractor shall provide the Department, within 10 working days of receipt of the Contract, written evidence that:

1. He/she has ordered the shop drawings for the materials for which shop drawings are required on the subject contract.
2. He/she has ordered the materials for which shop drawings are not required on the subject contract
3. He/she has been in contact with suppliers of all plant materials, in order to ascertain their availability. Within ten (10) working days of the execution of the Contract, the Contractor shall forward to the Department of Public Works Director written evidence that he has ordered from a supplier or manufacturer the retaining wall materials, and any other castings necessary to complete the project. Upon receipt of a notice of proposed delivery from the supplier or manufacturer. All castings shall also meet the requirements of the City of Northampton for standardization, as appropriate.

The Contractor shall further provide the Department of Public Works written evidence within 30 days of execution of the Contract that those orders have been confirmed in writing by the manufacturer with delivery dates appropriate for timely completion of the project.

Failure to comply with any of the ordering requirements shall nullify a request for an extension of the project completion date as a consequence of late delivery of castings.

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**DRAINAGE**

It shall be the Contractor's responsibility to maintain drainage functioning properly in the areas under construction.

**NOTICE TO OWNERS OF UTILITIES**

Written notice shall be given by the Contractor to all public service corporations or officials owning, or having charge of publicly or privately owned utilities, of their intention to commence operations affecting such utilities at least one week in advance of the commencement of such operations. The Contractor shall at that time file a copy of such notice with the Engineer. This may occur after DigSafe has completed marking the site when presence of utilities has been confirmed.

Before the Contractor begins any work or operations which might damage any subsurface structures, he/she shall carefully locate all such structures and conduct his operations so as to avoid any damage to them. The following are the names and addresses of the utilities presumed to be affected, but the completeness of the list is not guaranteed:

**Electric:**

National Grid  
55 Bearfoot Road  
Northborough, MA 01532  
Attn: Tom Mulligan  
508-421-7207

**Sewer:**

Northampton DPW  
125 Locust Street  
Northampton, MA 01060  
Attn: Ned Huntley  
413-587-1570

**Gas:**

Columbia Gas of Massachusetts  
2025 Roosevelt Avenue  
Springfield, MA 01101  
Attn: Robert Tetreault  
413-781-9200 x2253

**Water:**

Northampton DPW  
125 Locust Street  
Northampton, MA 01060  
Attn: Ned Huntley  
413-587-1570

**Telephone:**

Verizon  
125 Lundquist Drive  
Braintree, MA 02184  
Attn: Susete Seely  
781-849-6311

**Other:**

MCI Metro Access Transmission Services of MA  
82B Northside Rd. P.O. Box 600  
Charlton, MA 01507  
Stephen Parretti  
508-248-1305

**Cable:**

Comcast  
676 Island Pond Road  
Manchester, N.H. 03109  
Attn: Deena Vandeberghe  
603-695-1457

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**CITY OF NORTHAMPTON**

Public Works Department  
125 Locust Street  
Northampton, MA 01060  
Edward Huntley, Director  
Tel. (413) 587-1570

Fire Department  
26 Carlon Drive  
Northampton, MA 01060  
Brian Duggan, Chief  
Tel. (413) 587-1032

Police Department  
29 Center Street  
Northampton, MA 01060  
Russell P. Seinkiewicz, Chief  
Tel. (413) 587-1100

**PROTECTION OF UNDERGROUND FACILITIES**

The Contractor's attention is directed to the necessity of making their own investigation in order to assure that no damage to existing structures, drainage lines, traffic signal conduits, etc. will occur.

The Contractor shall notify DIG SAFE and procure a DIG SAFE ticket number for each location prior to disturbing existing ground in any way.

**"DIG SAFE" Call Center 811**

**PROCEDURES FOR SHOP DRAWING & CATALOG CUT SUBMITTAL**

The Design Engineer for this project is ProTerra Design Group, LLC. The following procedure shall be followed when making shop drawing submittals for this project.

1. The Prime Contractor shall submit five (5) sets of drawings or catalog cuts directly to the Design Engineer for review and approval.
2. The Design Engineer shall send a written reply, returning two (2) sets to the Prime Contractor.
3. If the Design Engineer's reply indicates rejection or advises corrections or additions to the drawings, Steps 1 and 2 are repeated until the Design Engineer indicates that approval will be given.
4. The Contractor shall then submit five (5) sets of drawings to the Design Engineer for approval and distribution by the Design Engineer per the standard operating procedures of the City of Northampton Public Works Department.
5. The Contractor shall take care that every separate document in each set of every submittal shall carry the following identifying information:

**Information Required**

- a. Community name of project
- b. Northampton project number
- c. Identifying item number from proposal, if applicable

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- d. Locations where material is proposed to be used, if applicable
- e. Name of submitting Contractor
- f. Personal signature and title of an official of the Prime Contractor authorized to make shop drawings submittals
- g. Date of signature or submittal.

The Contractor shall not receive payment for -- nor be allowed to install -- any items or materials which require shop drawing approval unless and until shop drawing approval is received for said items or materials as detailed above. All shop drawings shall bear the seal of a Professional Engineer registered in Massachusetts.

**DISPOSAL OF SURPLUS EXCAVATED MATERIALS**

All surplus materials resulting from excavation and not needed for use on the project, as determined by the Engineer, shall be tested for contamination prior to disposal. Materials deemed uncontaminated shall be disposed of by the Contractor outside and away from the limits of the project, subject to the regulations and requirements of local authorities governing the disposal of such materials. Payment for this work shall be included in the unit price under the applicable item from which the material was obtained. Materials deemed contaminated shall be stockpiled and protected from erosion until they can be reused onsite or disposed of according to the recommended disposal method of contaminant found.

Upon completion of all disposal operations, the Contractor shall provide written documentation to the Engineer indicating all surplus material has been properly disposed of. At a minimum, the documentation shall include specific dates of disposal, types of material, and location where material was disposed. The contractor is solely responsible for the proper disposal of all material and assumes any and liability related thereto.

**ENVIRONMENTAL PERMITTING**

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 may occur until all required environmental permits have been either amended or obtained allowing such work. The Contractor shall notify the Northampton Conservation Commission and City in writing at least 60 days prior to the desired commencement of the proposed activity. All environmental submittals, including any contact with Local, State, or Federal environmental agencies, shall be coordinated with the Northampton Conservation Commission and City. The Contractor is expected to fully cooperate with requests for information and provide same in a timely manner. The Contractor is further advised that the Department will not entertain a delay claim due to the time required to modify or obtain environmental permits.

**ORDER OF CONDITIONS**

This project is subject to the Massachusetts General Laws, Chapter 131, Section 40 as amended, and has been issued an Order of Conditions ("Order") by the Conservation Commission. The Order and Notice of Intent ("NOI") are to be considered part of this contract and a copy of the Order and all plans/attachments shall be on-site while activities regulated by the Order are being performed. **The Contractor is hereby notified that he/she will be responsible and held accountable for performing any/all work necessary**

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**to satisfy and comply with the entire Order of Conditions.** Arrangements to view and/or discuss the Order and/or the RDA can be made by calling the Northampton Conservation Commission.

The Contractor is advised that no additional compensation will be allowed for work required to establish, achieve, and maintain compliance with the Order and Notice of Intent, as payment for the work shall be included in the various bid items. This work includes, but is not limited to, the following: the sign required in General Condition # 9, shall be manufactured, installed, reset and removed, at no additional compensation; the hiring and paying for the services of a Professional Biologist, Botanist, Wetland Scientist, Engineer, Landscape Architect, etc.; preparation and submission of as-built plans; wetland flagging; wetland replication monitoring reports, etc.

**SPECIAL PROVISIONS FOR EXCAVATION, EMBANKMENTS AND EROSION CONTROL**  
(Supplementing the Standard Specifications)

The Contractor is cautioned that prior to commencing any operation that will expose the soil and render it subject to erosion, necessary hay bales and silt fences shall be positioned at the top of proposed slopes as indicated on the drawings, and in all other locations required and as directed by the Engineer. All slopes shall be seeded. Slopes shall be seeded as soon as practicable to keep the area of soil open to the elements at a minimum.

The following conditions shall be adhered to:

1. Bank stability should be maintained in the area of disturbance. In the event the bank is altered in any fashion, proper steps should be taken to stabilize the area. Hay bales, jute netting, erosion control blankets, scarifying, and other standard forms of erosion prevention should be used to prevent silt from entering the Beaver Brook.
2. No chemicals (cement, mortar, etc.) should be mixed with or poured into the Beaver Brook or the unnamed stream.
3. Equipment refueling for this project should be conducted in areas where accidental spills would not enter river flows via catch basins or other means.
4. The Contractor will not be permitted to begin any work until schedules and methods for accomplishment of temporary and permanent erosion control have been submitted and approved.

**EROSION/SEDIMENTATION CONTROL**

In accordance with General Condition #17 of the Order of Conditions, 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 Contractor or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The Contractor shall immediately control any erosion problems that occur at the site and shall also immediately notify the Engineer & City who reserves the right to require additional erosion and/or damage prevention controls she/he may deem necessary.

In accordance with Condition #27 of the two Orders, soils exposed for periods greater than two months shall be stabilized with erosion control blankets and netting, a covering of straw mulch, or a temporary cover of rye or other grass to prevent erosion and sedimentation. Drainage ditches shall be stabilized and seeded with native perennial grass mixture. Any stabilization materials such as jute netting shall be firmly

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anchored to prevent them from being washed from slopes by rain or flooding. Preference should be given to biodegradable materials.

In accordance with Condition #28 of the two Orders, all disturbed areas shall be graded, loamed and seeded, or stabilized with erosion control blankets or netting, and a covering of straw mulch prior to November 30, of each year. No disturbed areas or stockpiled materials will be left unprotected or without erosion control after this date. Applicant must use native seed wildflower/conservation mix on all disturbed areas. Contractor shall provide the Northampton Conservation Commission with a native seed species list at the preconstruction meeting.

The Contractor shall be responsible for compliance with General Condition #16 of the Order of Conditions, at no additional compensation. General Condition #16 requires that prior to the start of work, the boundaries of all wetlands in the vicinity of the work areas be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall serve as the limit of work (unless another limit of work line has been noted in the plans of record) and be maintained by the Contractor until a Certificate of Compliance has been issued by the Conservation Commission.

**WETLAND FLAGGING**

The Contractor shall be responsible for compliance with General Condition #16 of the Order of Conditions, at no additional compensation. General Condition #17 requires that prior to the start of work, the boundaries of all wetlands in the vicinity of the work areas be marked by wooden stakes or flagging to the extent practicable. Once in place, the wetland boundary markers shall serve as the limit of work (unless another limit of work line has been noted in the plans of record) and be maintained by the Contractor until Certificates of Compliance have been issued by the Conservation Commissions.

**CONSTRUCTION (STAKES) STAKINGS, SURVEY, AND AS-BUILT**

All the requirements of Section 5.07 of the MassDOT *Standard Specifications for Highways and Bridges* with subsequent revisions regarding employment by the Contractor of engineering personnel or the furnishing and setting of stakes are hereby enforced by the City for this project. The Contractor will furnish all engineering and surveying necessary to maintain lines and grades and accurate control for the work.

In accordance with Condition #31 of the Order of Conditions, an as-built survey shall be conducted at the conclusion of construction activities. An as-built plan set stamped by a registered professional engineer or land surveyor shall be submitted to the City. The as-built plan shall include, at a minimum, elevations of all pipe inverts and outlets, pipe sizes, materials, and slopes; all other drainage structures; limits of clearing, grading, and fill; all structures, pavement, and contours within 100 feet of wetland boundaries; all alterations within the wetland resource areas; and all dates of fieldwork. A document specifying any ways that the completed project differs from the plans shall also be submitted.

**TRAFFIC OFFICER**

Attention is directed to the provisions of Section 7.11 of the MassDOT *Standard Specifications for Highways and Bridges* with subsequent revisions which shall apply to this contract. Where required, the Contractor shall be responsible for deciding and scheduling police detail at least one week in advance for the desired shift with the Northampton Police Department, and keep track of all scheduled hours. In addition, the Contractor shall pay at their own expense all charges for traffic officers who were scheduled to perform traffic duty and were not notified at least 24 hours prior to the scheduled shift, in accordance with the Northampton Police Department's rules and regulations, of either a change in schedule, inclement weather or a work shift cancellation.

## **STONE ARCH REPAIR**

The existing stone arch requires minor repairs to preserve serviceability of the structure. These repairs are recommended in a letter regarding "Leeds Bike Path Bridge, Project #12108" prepared by Robert Leet, PE of Whetstone Engineering addressed to Wayne Feiden, Director of Planning and Development, City of Northampton dated April 9, 2013. In summary, these repairs include:

1. Resetting of a loose stone block at the northeastern corner of the abutment.
2. Cleaning and repair of mortar joints susceptible to water infiltration.
3. Clearing, grubbing, removal of organics, and stabilization of the embankment slope above the spandrel walls and behind the wing walls.

A recommended procedure and required progress submission schedule for resetting of the stone block is noted on the Plans.

## **STABILIZATION OF SLOPE OVER STONE ARCH BRIDGE**

As recommended by the Stone Arch Repair report, the embankment shall be stabilized above the spandrel walls. Clearing and grubbing shall be performed as outlined in the MassDOT construction item specifications. Stabilization shall be provided by a cable-tied concrete block revetment mat or equal which will discourage further growth of vegetation. Areas over the wing walls will be stabilized with a blanket of decorative stone. Details of both surfaces is noted on the Plans

The contractor shall provide the City with written proof that s/he has ordered the materials required to construct the stabilized slopes and that the delivery schedule is appropriate for timely completion of the project.

## **WOODEN RAILING**

To preserve user safety by reducing fall hazards, a wooden railing will separate the rail trail from any steep downward slopes. The section of trail over the arch bridge will incorporate a more substantial railing. Portions of the rail trail requiring railings and the construction of the railing itself is shown on the Plans. Three each six foot long gaps for wildlife crossing shall be field located.

The contractor shall provide the City with written proof that s/he has ordered the materials required to construct the railing and that the delivery schedule is appropriate for timely completion of the project. Users shall not be allowed onto the rail trail without completed construction of all wooden railings.

The contractor shall construct a 20' long mockup of each type of railing for approval by the City and Engineer prior to the construction of the full railing.

## **WASHOUT REPAIR**

The existing railway alignment to be improved has been subject to unchecked runoff and has developed washouts at locations noted on the plans. These locations shall be repaired and stabilized as detailed on the plans.

**TREE ROOT BARRIER**

Tree roots have extended across the rail trail at the surface in the areas noted on the plans. The roots are to be cut and cleared under ITEM 101: CLEARING AND GRUBBING. To prevent future infiltration of roots, a rigid plastic root barrier product shall be buried at the extents of the trail shoulder or swale. The location, length, and depth of root barrier is shown on the plans.

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**AWARD AND EXECUTION OF THE CONTRACT**  
(Supplementing Section 3.00 of the Standard Specifications)

3.41 Certification of Construction Equipment Standard Compliance Requirement.

The Contractor shall certify that any and all large non-road diesel construction equipment (greater than 50 horsepower) used on this contract have emission control devices installed, such as oxidation catalysts or particulate filters, on the exhaust system side of the diesel combustion engine equipment.

The Certification of Construction Equipment Standard Compliance form shall be sent with the notification of award to the successful bidder, who shall execute and deliver the said form within 14 days after the date of the notice of award.

Should the successful bidder fail to execute the said form, MassHighway may, at its option, determine that the Contractor has abandoned the Contract, and shall take action in accordance with the Standard Specifications for Highways and Bridges, Subsection 3.06 - Failure to Execute Contract.

SAMPLE FORM. This form in this proposal pamphlet is not to be filled out by the Contractor. The actual form to be filled out will be sent after the Award of Contract along with the Performance and Payment Bond paperwork.

State Contract No. \_\_\_\_\_

**CERTIFICATION OF CONSTRUCTION EQUIPMENT STANDARD COMPLIANCE**

I, \_\_\_\_\_ authorized signatory for  
\_\_\_\_\_ whose principal place of business is at  
\_\_\_\_\_

do hereby certify that any and all large non-road (greater than 50 horsepower) diesel construction equipment (DCE) to be used in this contract has emission control devices installed, such as oxidation catalysts or particulate filters, on the exhaust system side of the diesel combustion engine equipment.

I am submitting on behalf of \_\_\_\_\_, a list of said diesel construction equipment, labeled "Diesel Retrofit Data", that will be used in connection with this contract. The said list includes but is not limited to the number of vehicles subject to this certification and the number of vehicles retrofitted by vehicle type.

I acknowledge that this certificate is being furnished as a requirement under this contract, and is subject to applicable, State and Federal Laws, both criminal and civil.

Signature \_\_\_\_\_ Date \_\_\_\_\_



**CHANGED CONDITIONS.**

(Supplementing Subsection 4.04 of the Standard Specifications)

This Subsection is revised by deleting the two sequential paragraphs near the end that begin “The Contractor shall be estopped...” and “Any unit item price determined ...” (1/6/2006).

**SUBSECTION 4.06 INCREASED OR DECREASED CONTRACT QUANTITIES**

(Replacing Subsection 4.06 of the Standard Specifications)

The quantities contained in the Contract are set forth as a basis for the comparison of bids only and may not necessarily reflect the actual quantity of work to be performed. The City or Engineer reserves the right to increase, decrease or eliminate the quantity of any particular item of work.

Where the actual quantity of a pay item varies more than 25 percent above or below the estimated quantity stated in the Contract, an equitable adjustment in the Contract Price for that pay item shall be negotiated upon demand of either party regardless of the cause of the variation in quantity. No allowances will be made for loss of anticipated overhead costs or profits suffered or claimed by the Contractor resulting directly or indirectly from such increased, decreased or eliminated quantities or from unbalanced allocation among the contract items from any other cause. It is the intention of this provision to preserve the bid basis while limiting the Contractor’s risk exposure to 25% of each bid quantity.

In the case of an overrun, the contractor will be compensated at the Contract Unit Price for a quantity up to 125% of the Contract quantity. The adjusted unit price shall only be applied to that quantity above 125% of the contract quantity.

Neither party shall be required to demonstrate any change in the cost to perform the work based solely on the overrun. The original Contract unit bid price shall have no bearing on determining the adjusted unit price for an overrun. The adjusted unit price shall be based on the estimated cost of performing the added work over 125% of the bid quantity. In the event that an adjusted unit price cannot be agreed upon within 60 days after being requested by either party, a unit price will be established that is deemed to be fair and equitable by the Engineer, whether higher or lower than the unit price bid. Payment will be made at that rate until agreement is reached or until the Contractor chooses to exercise their rights under Section 7.16.

To assist the Engineer in the determination of an equitable adjustment for an overrun, the Contractor shall prepare a submission in the following manner and accept as full payment for work or materials an amount for an equitable adjustment in the Contract Price equal to the following:

1. The actual cost or a reasonable cost estimate for direct labor, material (less value of salvage, if any) and use of equipment, plus 10 percent of this total for overhead;
2. Plus actual cost or a reasonable cost estimate of Worker’s Compensation and Liability Insurance, Health, Welfare and Pension Benefits, Social Security deductions and Employment Security Benefits;
3. Plus 10 percent of the total of (1) and (2) for profit and other unallocated costs;
4. Plus the estimated proportionate cost of surety bonds.
- 5.

No allowance shall be made for general superintendence and the use of small tools and manual equipment.

For work performed by a Subcontractor, the Contractor shall accept as full payment therefore an amount equal to the actual cost or the reasonable cost estimate to the Contractor of such work as determined by the Engineer, plus 10 percent of such cost. The Subcontractor is bound by the same criteria for the determination of an equitable adjustment as the Contractor.

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In the case of an underrun, the unit price for the actual quantity installed, if less than 75% of the bid quantity, shall only be adjusted to account for increased unit costs that result solely from the decreased quantity. The adjusted unit price shall be the bid price plus the demonstrated unit change in the cost of performing the work due solely to the decreased quantity.

The Contractor shall prepare a submission demonstrating actual increased unit costs for review and evaluation by the Engineer. No allowance will be made for loss of anticipated overhead costs or profits suffered or claimed by the Contractor resulting directly or indirectly from such decreased or eliminated quantities.

The Contractor is required to furnish itemized statements of cost and give the Department access to supporting records.

**JOINTS**

(Supplementing Subsection 460.65 of the Standard Specifications)

The application of hot poured rubberized asphalt sealer between the cement concrete and bituminous concrete, where required in accordance with Subsection 460.65 of the Supplemental Specifications, shall be considered incidental to the work included under Item 460.

**PROMPT PAYMENT AND RELEASE OF RETAINAGE TO SUBCONTRACTORS**

The Contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of subcontract work not later than 10 business days from the receipt of each payment the prime contractor receives from City of Northampton. Failure to comply with this requirement may result in the withholding of payment to the prime contractor until such time as all payment due under this provision has been received by the subcontractor(s) and/or referral for action which may affect the contractor's status for further work with the City.

The Contractor further agrees to make payment in full, including retainage, to each subcontractor not later than 10 business days after the subcontractor has completed all of the work required under its subcontract.



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The tree protection fencing shall be constructed in accordance with the plans and specifications.

Prior to any construction activities, the Contractor shall meet on site with the Engineer to designate which trees are to be protected.

The Contractor shall coordinate construction staging so that no equipment or materials are under the canopy of any trees.

Equipment movement over the root zone is prohibited.

For each tree to be protected, the Contractor shall set posts and fencing at the limits of the tree canopy. Where construction activities must occur closer to the trees, the Contractor shall move branches out of the way and place aged pine bark mulch to a depth of 2 inches on the ground to protect the root systems.

Individual tree protection fencing and wood chips shall be maintained throughout the duration of the construction. Protective fencing shall be repaired and aged pine bark mulch replaced as required.

After all other construction is complete, but prior to final seeding, aged pine bark mulch and protective fencing materials shall be removed and legally disposed off site by the Contractor.

**Cutting and Pruning**

Some pruning of roots and branches may be a necessary part of construction. Such pruning shall be performed on the same side of the tree that roots have been severed.

The Contractor shall retain the services of a state-certified tree surgeon to oversee any cutting of limbs, stem or roots of existing trees. All cuts shall be clean and executed with an approved tool. Under no circumstances shall excavation in the tree protection area be made with mechanical equipment that might damage the existing root systems.

Any tree root area exposed by construction shall be closed and watered within eight hours. If during that period of time, tree roots are exposed to full sun and/or air temperature exceeds 70° F, exposed roots shall be protected by covering with dampened burlap.

Water each tree until saturated within the construction area where work is in progress twice per week for the duration of construction activities.

**Tree Damage**

Any tree damage which, in the Engineer's determination, can be remedied by corrective maintenance shall be repaired immediately. Broken limbs shall be pruned according to industry standards. Wounds shall not be painted. Trees which are damaged irreparably shall be replaced by the Contractor with new trees of approved size and type.

**Measurement and Payment**

Individual tree protection will be measured for payment by the number of trees actually protected by protective fencing.

Individual tree protection will be paid for at the Contract unit price each, which price shall include full compensation for all labor, equipment, materials and incidental costs for the work, including the services



**Compensation**

**Method of Measurement**

All classes of excavation will be measured in their original position by the cross section method except where such measurement is impracticable the volume shall be measured by such other methods as the Engineer may determine.

**Basis of Payment.**

All classes of excavation will be paid for at the contract unit price per yard of the particular type of excavation as defined hereinbefore.

In Contracts where ordinary borrow is required, excavated material taken by the Contractor with the prior written permission of the Engineer, and used on the project for purposes other than for forming embankments will be paid for at the contract price for the purpose of which it is used, in addition to the payment to be made for excavation, provided that any additional filling material made necessary by such use shall be replaced except Bituminous Concrete excavated by Cold Planer.

The amount of borrow to be replaced shall be as follows:

If Earth Excavation is used for gravel borrow, special borrow, etc., the amount of gravel borrow, special borrow, etc., as computed (including any percentage added to in place measurement) shall be the amount of borrow to be replaced.

Payment shall be made only for the purpose the borrow was used until such time as replacement borrow is supplied, at which time an equal volume of excavation will be paid for.

In Contracts where excavated materials are used as described in the paragraph above and no additional filling material is required, the following will govern:

Material such as gravel, sand, special borrow, or impervious soil borrow obtained in excavation and used as gravel, sand borrow, special borrow or impervious soil borrow will be paid for only at the contract price for the purpose used.

**ITEM 129                      HOT MIX ASPHALT PAVEMENT MILLING                      SQUARE YARD**

This work shall consist of milling and removal of existing Hot Mix Asphalt (HMA) pavement courses from the project by the Contractor. Milling shall be performed in conformity with the limits, line, grade, and typical cross-section shown on the plans. The milled material shall become the property of the Contractor.

**Sequence of Operations**

The Cold Planer must be equipped with an elevating device capable of loading planed material directly into dump trucks while operative. It shall have all necessary safety devices such as reflectors, headlights, taillights, flashing lights, and back up signals so as to operate safely in traffic both day and/or night. For night time planing operations the temporary illumination of the paving area shall be in accordance with the requirements of Section 850, and shall require an approved lighting plan before any planing work begins.

The Cold Planer shall be designed and built for planing flexible pavements and possess the ability to plane cement concrete patches when encountered in bituminous pavement. It shall be self-propelled and have the



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roadbeds in cut sections, foundations, shoulders, or backfill the Contractor shall obtain such additional material as may be necessary from outside the location, and this material will be borrow material.

**Materials**

All embankment material, whether coming from excavation or borrow shall consist of solid, sound mineral aggregate. It shall be free from deleterious, organic, elastic or foreign matter and shall be adequately graded for satisfactory compaction into a stabilized soil structure.

The material will be classified into particular groups according to AASHTO M 145, "The Classification of Soils and Soil Aggregate Mixtures for Highway Construction Purposes".

All borrow material to be furnished shall meet the requirements specified in the following Subsections of Division III, Materials:

Ordinary Borrow	M1.01.0
Gravel Borrow	M1.03.0 (Type B)

**Construction Methods**

Prior to starting work, the Contractor shall obtain approval for the compaction equipment to be used. Unless otherwise required in the Special Provisions, each layer of embankment material shall be thoroughly compacted with power rollers or tamping rollers. Other equipment or equivalent compactive capacity may be used subject to trial on the project and approval by the Engineer. Compacting equipment will not be used for any other purpose during compaction operations.

The use of tractors, trucks, scrapers or other equipment designed primarily for purposes other than compaction and being used for purposes other than solely compaction will not be considered as compaction equipment, but traffic of such vehicles shall be distributed over this fill in such a manner as to take advantage of the additional compaction afforded thereby.

Sufficient levelling and compacting equipment shall be provided to do the work of spreading and compacting the material promptly after it has been deposited. When, in the Engineer's judgment, such equipment is inadequate to spread and compact the material properly, the Contractor shall reduce the rate of excavation and placing of the fill to a rate not to exceed the capacity of the leveling and compacting equipment or employ additional equipment.

The Contractor shall plan his grading operation to use all rock possible from all excavation either as backfill in excavated muck areas or in areas of greatest depth. Before placing of any fill, the areas under embankments shall be cleared, grubbed, and stripped as specified in Section 101 and 120.

Frozen material shall not be placed on embankments nor shall embankment be placed on material frozen to a depth of over 3 inches. If during the construction of an embankment, the top layer becomes frozen to a depth of over 3 inches, the frozen material shall be removed before a succeeding layer is placed on the embankment. This work shall be performed at no additional expense to the Department.

Frozen excavated material which will be suitable when dry shall be allowed to thaw and dry and then be placed in the embankment. No compensation will be allowed for the storing and rehandling of these materials.

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Embankments shall be formed by placing successive layers of material uniformly distributed and compacted over the full width of the cross section unless otherwise directed. Stumps, rubbish, sod, frozen or other unsuitable materials shall not be incorporated in the embankment.

**Preparation of Foundation & Subgrade Areas**

The foundation areas shall be cleared, grubbed and stripped as required, and any soft, spongy or other material undesirable for embankment foundation shall be removed. When, in the Engineer's judgment, there is reasonable doubt as to the suitability of the existing material for embankment foundation, no further work shall be performed in the area in question until the material is tested and approved for use or remedial methods are ordered by the Engineer.

Embankment areas 3 feet or less in height from the subgrade to the existing ground shall be rough graded and compacted to not less than 95 percent of the maximum dry density of the material as determined by the AASHTO Standard Method of Test T99, Method C at optimum moisture content, as determined by the Engineer, without additional compensation before placing any fill. If the material retained on the #4 sieves is 50% or more of the total sample this test shall not apply and the material shall be compacted to the satisfaction of the Engineer.

For embankments greater in height than 3 feet below the proposed subgrade to existing ground no additional embankment foundation area preparation will be required, provided the material within the area is suitable for the purpose.

Regardless of the height of fill, where embankment is to be placed against existing earth slopes, steeper than 3 to 1, the slope shall be broken up into steps of random width as the fill is placed in order to provide a suitable bond between the existing ground and the new embankment. Both the material cut out and the bottom of the area cut into shall be compacted along with and to the same degree as the material being placed in the embankment without additional compensation for excavation, benching or compacting.

**Embankment Construction with Materials Other Than Rock**

Embankment construction with materials other than rock shall not be placed from December 1 to April 1, except with written permission of and under such special conditions and restrictions as may be imposed by the Engineer.

Earth embankment shall be placed and compacted in uniform layers not exceeding 12 inches in depth, loose measurement; each layer of material shall be spread on the entire width of the embankment and levelled off by approved equipment.

The embankment materials shall be compacted to not less than 95 percent of the maximum dry density of the embankment material as determined by AASHTO Standard Method of Test T 99, Method C, corrected in accordance with AASHTO T 224. If the material retained on the ¾ inch (19 mm) sieve is 30 percent or more of the total sample, this test shall not apply and the material shall be compacted to the target density. The target density shall be established by determining the number of passes of a roller required to produce a constant and uniform density, after conducting a series of tests using either AASHTO T 310, In-Place Density and Moisture Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth), or AASHTO T 191, Density of Soil In-Place by the Sand-Cone Method. The Contractor shall, without additional compensation, employ whatever measures may be necessary to adjust the natural water content of the suitable embankment material to permit the placement and compaction as hereinbefore specified.

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If the natural-in-place moisture of the excavated material makes it impractical to compact the soil, the Contractor shall dry the soil by disking, harrowing, blading, rotary mixing or by other approved means, or compaction of the layer of wet material may be deferred until the layer has dried so that it can be properly compacted. If these above methods do not produce the desired results, or when in the judgment of the Engineer, excess moisture resulting from climatic conditions beyond the control of the Contractor is considered to have affected adversely the stability of the previously placed and satisfactorily compacted embankment materials, the Engineer may direct the placement of single layers of "Special Borrow" to act as stabilizing drainage layers. When so ordered by the Engineer, the Contractor shall place a layer of "Special Borrow" having a depth of not more than 12 inches in thickness, loose measure. Such materials shall be placed completely over the entire width between the limits designated by the Engineer, and shall be compacted as hereinafter specified before the succeeding layer of suitable embankment materials from the roadway excavation is placed.

The work may be ordered suspended if the weather and climatic conditions are such that the embankment and excavation cannot be performed in accordance with the specifications. No additional compensation will be allowed to the Contractor for such suspension of work. If the work is ordered suspended due to weather or other climatic conditions not under the control of the Contractor, an extension of time may be granted to the Contractor by the Engineer.

**Compensation**

**Method of Measurement.**

All borrow with the exception of sand borrow and crushed stone will be measured in place. When this method of measurement is impracticable and the Engineer, prior to the start of construction, so directs and the Contractor agrees in writing, borrow, with the exception of sand borrow and crushed stone, will be measured in its original position in the pit after stripping by the cross-section method.

When ordinary borrow is paid for as measured in place, it shall be measured from existing or compacted old ground surface to the lines and grades applicable to embankment as shown on the plans or as directed.

The volume of ordinary and special borrow when in place measure is necessary, shall be determined as follows:

1. Measure the total volume of embankment in place;
2. Add 12.5 percent of this quantity (for compaction);
3. Deduct the total volume of all suitable materials available for embankments, including rock excavation; except that excavated under Section 140.60;
4. Deduct an additional 25 percent of the volume of rock excavation.

When not measured in its original position in the pit by the cross section method, gravel borrow used in subbase, gravel for base course, gravel for surfacing, gravel for bridge foundations and gravel for backfilling around structures and pipes, will be paid for as measured in place plus 15 %.

When not measured in its original position in the pit by cross section method gravel borrow used in slope stabilization and other miscellaneous uses will be paid as measured in place plus 12.5%.

If material that is measured in place is taken from a cross sectioned pit, the amount of material to be deducted from the cross-section pit quantity shall be equal to the material measured in place plus any allowable percent added to the in place measurement.



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In cut section (excluding rock excavation) where the existing soil within a depth of 2 feet below the sub-grade, after testing for gradation requirements, is found to have greater than 14% material passing the #200 mesh, the material shall be excavated.

The replacing material shall conform to the requirements of Subsection M1.02.0 for Special Borrow Material, except that it shall contain no stone larger than 6 inches in its greatest dimension and shall be placed in layers not exceeding 8 inches in depth, compacted measurement.

In areas where the contract specifies the use of gravel borrow and the existing soil, after testing, is found to comply with the requirements of Subsection M1.03.0, the material may remain in place if so directed by the Engineer. If replacement material is required to supplement the existing gravel it too shall conform to the requirements of Subsection M1.03.0.

**Fine Grading and Compacting**

Before surfacing or sub-base is spread, the subgrade shall be shaped to a true surface conforming to the proposed cross section of the highway and compacted in accordance with the provisions of Subsections 150.60 and 150.62. All depressions and high spots shall be filled with suitable material or removed and such areas compacted until the surface is smooth and satisfactorily compacted. A tolerance of 1/2 inch above or below the finished sub grade will be allowed provided that this 1/2 inch above or below grade is not maintained for a distance longer than 50 feet and that the required crown is maintained in the subgrade. Any portion of the subgrade which is not accessible to a roller shall be thoroughly compacted with the mechanical tampers or by other adequate methods approved as satisfactory by the Engineer.

**Compensation**

**Method of Measurement**

The grading and compaction of the subgrade will be measured by the horizontal square yard at the plane at the bottom of subgrade in all areas where a subgrade was placed. The grading and compacting of the existing gravel material to remain in place shall be measured by the horizontally by the square yard.

Grading and finishing for the entire project will include all grading work not included under the item of Fine Grading and Compacting (in subgrade area).

**Basis of Payment**

Payment for the shaping and compacting of the subgrade or existing gravel material as specified herein shall be included in the item for fine grading and compacting. The removal and disposal of material below subgrade will be paid for at the contract unit price per cubic yard for the appropriate excavation items in section 120.

Grading and finishing other than subgrade areas or existing gravel areas to remain in place will be included in the price of the other respective items of work involved.

In areas where Gravel Borrow material is required as stipulated in Subsection 170.60, the material shall be paid for as Gravel Borrow.

**ITEM 180.1**

**HEALTH AND SAFETY PLAN**

**LUMP SUM**

**SCOPE OF WORK**

It is the Contractor's ultimate responsibility to ensure the health and safety of all the Contractor's employees and subcontracting personnel, the Engineer and his representatives, and the public from any on-site chemical contamination.

The Health & Safety Plan (HASP) shall be prepared by a Certified Industrial Hygienist or other experienced individual with the appropriate OSHA required training to prepare such a plan. It shall include the components required by OSHA 29 CFR 1910.120(b). The preparer's name and work experience shall be included as part of the Health and Safety Plan submittal. The plan shall be designed to identify, evaluate, and control health and safety hazards and provide for emergency response if needed. The Health and Safety Plan 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 (e.g. OSHA, RCRA, CERCLA). In addition, guidelines of NIOSH, OSHA, USCG, EPA, etc., shall be followed. Equipment used for the purpose of health and safety shall be approved and meet pertinent standards and specifications of the appropriate regulatory agencies.

The Health and Safety Plan shall be submitted to the Engineer for approval at least two weeks prior to commencement of work. The review and acceptance of the plan by the Department does not relieve the contractor of the responsibility for attaining the required degree of protection and training, or to comply with all laws, rules, regulations, standards or guidelines in effect during the execution of the contract.

A copy of the Health and Safety Plan 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 Department, Contractor and subcontractors. The employee's signature on the Health and Safety Plan shall be deemed prima facie evidence that the employee has read and understands the plan. A copy of the plan with signatures shall be submitted to the Engineer at the conclusion of the Contract, or at the Engineer's request. Signature sheets shall be submitted monthly, or at the request of the Engineer.

The work to be done under this Item shall be paid at the Contract Lump Sum Price under Item 180.1 for the development and preparation of the HASP by a qualified individual.

**ITEM 180.2**

**IMPLEMENTATION OF HEALTH AND SAFETY PLAN**

**HOURLY**

**SCOPE OF WORK**

For all construction activities which require handling or exposure to potentially hazardous materials, the Health and Safety Plan shall specify an on-site Safety Officer. The Site Health and Safety Officer duties shall include, but are not limited to: implementation of the site Health and Safety Plan, training, evaluating risks, safety oversight, determining levels of personnel protection required, and performing any required monitoring at the site. A daily log shall be kept by the on-site Safety Officer and provided weekly to the Engineer. This log shall be used to record a description of the weather conditions, levels of personnel protection being employed, monitoring data and any other information relevant to on-site safety conditions. The Site Health and Safety officer shall sign and date the daily log.

In the event that subsurface contamination is discovered during construction, the Site Safety Officer shall be present to oversee all handling, storage, sampling, and transport of such contaminated materials.

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The level of protection, relative to respiratory and dermal hazards, required to ensure the health and safety of on-site personnel will be stipulated in the Health and Safety Plan and will be subject to modification by the on-site Safety Officer based on changing site and weather conditions and the following factors: type of operation or activity, chemical compounds identified on-site, concentration of the chemicals, physical state of the hazardous materials, potential duration of exposure to hazardous materials, dexterity required to perform work, decontamination procedures, necessary personnel and equipment, and type of equipment to be utilized.

The Contractor shall be required to provide appropriate personnel protective equipment for anyone who is working in an area either containing or suspected of containing a hazardous environment. This work will include both individuals physically working in these areas and those directing the work of same. Contingencies for upgrading the level of protection for on-site workers will be identified in the Health and Safety Plan and the contractor shall have the necessary materials/equipment on hand to implement the level of protection upgrade in a timely manner. Payment for this level of upgraded protection shall be paid for under Item 180.3.

**BASIS OF PAYMENT**

Implementation of the Health and Safety Plan will be paid at the contract bid price per hour of implementing the plan and shall include the cost of enforcement by an on-site Safety Officer. Personnel protective clothing and equipment below Level "C" shall be considered incidental to the project and shall be a cost borne by the contractor.

**ITEM 180.3                      PERSONNEL PROTECTION LEVEL 'C' UPGRADE                      HOUR**

**SCOPE OF WORK**

The Contractor shall provide to all workers disposable, protective clothing appropriate to the hazard level of the work. The protective equipment and its use shall be in strict compliance with the Health and Safety Plan (Item 180.1), and all appropriate regulations that address employee working conditions.

**BASIS OF PAYMENT**

Payment for Item 180.3 will be at the contract unit price, per hour, per man, required in level 'C' personnel protection.

**ITEM 180.4                      MONITORING/HANDLING AND STOCKPILING OF                      CUBIC YARD  
CONTAMINATED SOILS**

The On-Site Safety Officer or Environmental Consultant shall be responsible for evaluating soil with non-natural discoloration, petroleum or chemical odor, the 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 contaminated with oil or hazardous materials. Soil suspected of gasoline contamination shall be field tested using the jar headspace procedures according to Department of Environmental Protection Bureau of Waste Site Cleanup Interim Policy #WSC-94-400 (Remedial Waste Management Policy for Petroleum Contaminated Soil) and the Bureau of Waste Prevention Interim Policy #COMM-97-001 (Reuse and Disposal of Contaminated Soil and Massachusetts Landfills). The Engineer shall be contacted immediately when any results indicate contamination requiring soil removal or when contamination not detectable by on-site instrumentation is suspected.

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The Contractor shall be required to supply all personnel and materials necessary to comply with this section and to support the anticipated levels of protection and monitoring described above.

Within limited areas of the project site, it is likely that excavated soils may be contaminated. Where possible, all soils originally in contact with groundwater will be replaced in the same trench up to the existing groundwater level. All soils determined to be contaminated by metals or petroleum products, through the monitoring/evaluation program will be stockpiled for disposal in accordance with all Massachusetts Department of Environmental Protection statutes, policies, and regulations.

The Environmental Consultant/Contractor shall be responsible for identifying a disposal/recycling facility and obtaining all permits, approvals, Bill of Lading, etc. prior to the removal of the contaminated soil from the site. Any soils contaminated with hazardous materials that are not of petroleum origin shall be handled on a case-by-case basis. The contractor shall obtain at least three bids for the handling and disposal of any contaminated material. All manifest, bills of lading, etc. will be the responsibility of the Contractor with copies provided to the Department. The Contractor is also responsible for hiring a Licensed Site Professional (LSP), as needed, for oversight and Bills of Lading, etc.

**Method of Measurement**

Measurement shall be made by the volume, in cubic meter, of contaminated material monitored, handled and/or stockpiled as described under Item 180.4.

**Basis of Payment**

Work under this Item shall be paid at the Contractor bid price, per cubic meter, which payment shall be considered compensation for all labor, tools, equipment and materials needed to do the work as described above.

**ITEM 180.5                      LICENSED SITE PROFESSIONAL (LSP) SERVICES                      HOUR**

A Licensed Site Professional will be required to provide the services necessary to comply with the requirements of the Massachusetts Contingency Plan (MCP), 310 CMR 40.000, with respect to the scope of work for this Contract. These services will include, but are not limited to, sampling and analysis of potentially contaminated media, preparation of IRA, URAM and RAM Plans, status reports, transmittal forms, release notification forms, completion statements and related documents required pursuant to the MCP. The LSP will be responsible for obtaining all permits related to the characterization, treatment, and disposal of contaminated media. The LSP will provide oversight of handling, stockpiling, re-use, treatment and disposal of contaminated media, including preparation of Bills of Lading, Manifests, and related shipping documents. Environmental technicians, including but not limited to personnel conducting field monitoring and sampling, data interpretation and support services directly related to MCP compliance, are also included in this item.

The name and qualifications of the Licensed Site Professional (LSP) will be submitted to the Engineer for review and approval at least two weeks prior to initial site activities. The LSP shall have significant experience in the oversight of MCP activities at active construction sites.

The LSP will coordinate all activities with the City and the Massachusetts Department of Environmental Protection through the Engineer or his/her designee.

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The LSP will be responsible for adequately characterizing contaminated media to insure that it meets the requirements of the MCP and, in the case of contaminated media to be disposed of offsite, to insure that it meets the acceptance criteria set forth by the disposal facility.

The LSP will be responsible for adequately characterizing subsurface conditions prior to backfill in areas where contaminated soil/sediments are excavated. The cost of laboratory analyses conducted in accordance with the sampling and assessment requirements for compliance with the MCP will be paid for within the unit bid price for Item 180.4 – Monitoring/ Handling and Stockpiling of Contaminated Soils, Item 180.6 - Soil Tests, and Item 181.1 - Disposal of Contaminated Soil.

Work under this Item shall be paid at the Contractor bid price per hour of service provided to perform the work as described above. The bid price shall reflect the cost of the LSP and any environmental technicians providing the services described above.

**ITEM 180.6 MISCELLANEOUS SOILS TESTING EACH**

The work under this item shall conform to all relevant provisions of the Standard Specifications, the Special Provisions and the following:

The LSP may, from time to time, direct the Contractor to obtain soil samples from various locations in the contract area and to perform laboratory analyses on those soil samples to assess reuse or disposal options.

**Sampling and Analysis**

The Contractor shall collect three (3) discrete soil samples from locations within individual soil piles or specific land area identified by the LSP or Engineer. The soil samples shall be collected at a depth specified by the Engineer, LSP or as required by the Department of Environmental Protection's (DEP's) approved sampling procedures. The samples shall be delivered to a DEP approved laboratory for the analysis of corrosivity, pH, free liquids, ignitability, reactive sulfide, reactive cyanide, total solids, total organic carbon, Resource Conservation and Recovery Act (RCRA) 8 metals, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and total petroleum hydrocarbons (TPH).

Data Evaluation and Report

The laboratory data from the soil sampling analyses shall be analyzed and presented in letter form.

**Method of Measurement**

Soil Testing shall be measured by each round of samples collected, tested and reported on to the Engineer. A round of samples shall include a total of six (6) samples: the three (3) samples obtained for analysis of corrosivity, pH, free liquids, ignitability, reactive sulfide, reactive cyanide, total solids, total organic carbon, RCRA 8 metals, PCBs, VOCs, SVOCs and TPH and the three (3) samples obtained for TCLP analyses.

**ITEM 181.12 DISPOSAL OPTIONS FOR CONTAMINATED SOILS TON**

The contractor shall be responsible for the proper disposal or recycling of contaminated soils. The proper methods of disposal and recycling of contaminated soils shall comply with the methods described under Item 180.4 and in accordance with all Massachusetts Department of Environmental Protection and Environmental Protection Agency statutes, policies, and regulations. The following are disposal options for contaminated soils. MassDOT prefers methods involving recycling options.

**DIRECTLY LANDFILLED HAZARDOUS WASTE**

**TREATED AND LANDFILLED HAZARDOUS WASTE**

**INCINERATED HAZARDOUS WASTE**

**DISPOSAL OF SPECIAL WASTE SOIL**

**PETROLEUM CONTAMINATED SOIL RECYCLED AT ASPHALT BATCH FACILITY**

Method of Measurement

Measurement shall be made by the weight, in tons, of contaminated material removed from the site and delivered to an approved landfill, disposal facility, or recycling facility, and includes any costs for approvals, permits, testing, transportation and disposal.

Basis of Payment

The work under the appropriate method shall be paid at the Contractor's unit bid price, per ton, which payment shall be considered full compensation for all labor, tools, equipment, permits, shipping papers and materials required to do the work as described above.

**ITEM 184.1                      DISPOSAL OF TREATED WOOD PRODUCTS                      TON**

This section shall apply to the disposal of all treated wood. The timber components of the existing structure are suspected to be treated with creosote, pentachlorophenol and/or CCA. This item shall include all costs for sampling, laboratory testing, loading, transportation and disposal of the treated wood to a waste-to-energy facility that is licensed to burn treated wood. The Contractor is required to submit manifests and certificates of destruction to the Engineer prior to the completion of the project. All aspects of this Item are to be completed in accordance with state and federal regulations.

Method of Measurement

Measurement shall be made by the weight, in tons, of treated timber removed from the site and subsequently accepted at the waste-to-energy facility.

Basis of Payment

The work to be done under this Item shall be paid at the contract unit bid per ton under Item 184.1 and shall be considered full compensation for all labor, tools, equipment, materials, testing, removal, grading, loading, transportation, approvals, and permits necessary for the completion of the work.

**ITEM 205    LEACHING BASIN    EACH**

The work under this item shall conform to the applicable provisions of Section 201 of the Standard Specifications, and the following:

Leaching Basins shall conform to the details on Standard Drawing E205.2.0: "Concrete Block Leaching Basin." An equivalent cast concrete leaching basin may be used upon approval of the engineer.





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**Materials**

The material for this work shall be of the kind shown on the plans and shall meet the requirements of the following Subsections of Division III, Materials.

Calcium Chloride      M9.01.0

**Construction Methods**

The required material shall be properly applied where directed by the Engineer and distributed uniformly at the rate specified or ordered. The means of distribution shall depend upon the kind of material used, and the method and equipment used shall be satisfactory to the Engineer. The number and frequency of applications shall be as determined by the Engineer

Treatment with Calcium Chloride

Calcium chloride shall be uniformly applied at the rate of 1-1/2 pounds per square yard or at any other rate as directed by means of a mechanical spreader, or other approved methods.

Treatment with Water

Water shall be applied at locations at such times and in the amount as directed by the Engineer. Quantities of water wasted or applied without authorization will not be paid for.

Watering equipment shall consist of pipelines, tanks, tank trucks, or other devices, approved by the engineer, which are capable of applying a uniform spread of water over the surface. A suitable device for a positive shut-off and for regulating the flow of water shall be located so as to permit positive operator control.

**Compensation**

Method of Measurement

Calcium chloride will be measured the pound.

Water will be measured for payment by the number of M gallons (1000 gallons). The water will be measured in tanks or tank trucks or predetermined capacity, or by means of satisfactorily installed meters. Any and all measuring devices shall be furnished by the Contractor.

Basis of Payment.

Calcium chloride will be paid for at the contract unit price per pound under the item for Calcium Chloride for Roadway Dust Control, complete in place.

Water will be paid for at the contract price per "M" gallons for Water for Roadway Dust Control which price shall include all water, labor, tools and equipment required to furnish and measure the water applied to surfaces designated by the engineer and at the times specified.









## **Construction Methods**

### **Installation**

Install fence posts no further than 8 feet (2.4 m) apart along the line of the proposed fence. The top of the posts shall extend at least 2 feet (600 mm) above the normal water level. Posts shall be driven into the soil to a sufficient depth to form a stable support for the filter fabric.

Attach the fabric to the posts on the upstream side. Attachment of the fabric to the posts can be made with prefabricated pockets in the fabric, staples or other suitable arrangements approved by the Engineer. The fabric shall extend 2 feet (600 mm) above the normal water level and at least 1 foot (300 mm) shall extend horizontally along the soil at the bottom. Excavate a 6 x 6 inch (150 mm<sup>2</sup>) trench along the bottom upstream side of the fence, wrap the bottom of the fabric around the inside of the trench and then backfill the soil into the fabric pocket so as to anchor the fence fabric.

Soil shall then be placed over the horizontal bottom layer of fabric to a depth of 6 inches (150 mm).

Fabric may be spliced together along the vertical edge by overlapping the pieces by one post spacing or 6 feet (2 m) whichever is greater and securing the layer together at intervals of 2 inches (50 mm).

Should the required height exceed the roll width, a second roll shall be used. The width shall be overlapped a minimum of 1 foot (300 mm) and the layers shall be secured together at not more than 2 foot (600 mm) intervals along the midpoint of the overlap.

Installation procedures may be varied to comply with manufacturer's recommended procedures with the approval of the Engineer. The contractor may submit alternate installation procedures for approval by the Engineer.

### **Maintenance**

The installed fence shall be inspected at least daily by the contractor and restored as necessary to its approved, newly installed condition. Accumulations of debris and/or silt shall be removed and properly disposed of as necessary at no additional cost. In no case shall accumulations of more than 4 inches (100 mm) above the original ground line be permitted to remain. If a breach or other failure of the fence occurs, the fence shall be immediately restored. Any delay in maintaining the fence shall be cause to immediately suspend the work as provided for in Subsection 8.09.

### **Removal**

Following the completion of the work and stabilization of adjacent soil, the fence shall be completely removed from the site and the area restored to its original condition.

## **Compensation**

### **Method of Measurement.**

Sedimentation Fence approved by the Engineer shall be measured in place by the length along the top of the fence. Overlaps shall be measured as a single layer of cloth.

### **Basis of Payment.**



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Placing Loam or Topsoil

The Contractor shall notify the Engineer when areas to receive loam are ready for inspection and approval. Placement of loam fill material shall not begin until the Engineer has approved the subgrade.

Loam shall not be handled or placed when the subgrade or the loam is frozen or saturated, i.e. when squeezed sample shows any sign of free moisture.

The Engineer shall approve the use of the Contractor's equipment. Any equipment or procedures that are likely to damage or over-compact underlying structure or materials shall be rejected.

Loam shall be placed in lifts not to exceed 4 inches. After each lift, the soil shall be thoroughly mixed into the soil layer beneath it. Compaction of each lift shall be minimal, sufficient only to achieve the required grades. Over-compaction of existing soils or fills that would be detrimental to planting objectives shall be corrected by tilling or other means at no additional cost.

Grade stakes shall be set to check finished grades. Deviation from lines and grades that are greater than 1 inch shall not be permitted.

The Contractor shall supply additional loam as necessary so that following finish the grading and compaction operations, the placed loam shall conform to the depth required.

Finish grades shall exhibit no abrupt changes, and shall blend in evenly with the undisturbed grade of the ground at the limits of work.

During hauling operations, the roadway surfaces shall be kept clean and any loam or other dirt which may be brought upon the surface shall be removed promptly and thoroughly before it becomes compacted by traffic. If necessary, the wheels of all vehicles used for hauling shall be cleaned frequently and kept clean to avoid bringing any dirt upon the surface. The Contractor shall take all reasonable precautions to avoid injury to existing or planted growth.

**Compensation**

Method of Measurement

The quantity of Loam Borrow shall be determined by measurement in place after compaction to the depth specified on the plans or as directed, and to the volume so ascertained there shall be added 20% to compensate for such loss as may be due to settlement, shrinkage and penetration into the underlying material.

Basis of Payment.

Loam Borrow will be paid for at the contract unit price per cubic yard, complete in place, which prices shall include all testing, analysis and the grading of areas where stockpiles of topsoil are removed.

**ITEM 756**

**NPDES STORM WATER POLLUTION  
PREVENTION PLAN**

**LUMP SUM**

This Item addresses the preparation and implementation of a Storm Water Pollution Prevention Plan required by the National Pollutant Discharge Elimination System (NPDES) and applicable Construction General Permit.

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Pursuant to the Federal Clean Water Act, effective March 10, 2003, construction activities which disturb one acre or more are required to apply to the U.S. Environmental Protection Agency (EPA) for coverage under the NPDES General Permit for Storm Water Discharges From Construction Activities. On July 1, 2003 (68 FR 39087), EPA published the final NPDES construction general permit for construction activity. On August 4, 2003 (68 FR 45817), EPA reissued the General Permit for the Commonwealth of Massachusetts and included state specific requirements.

The NPDES General Permit requires the submission of a Notice of Intent (NOI) to the U.S. EPA prior to the start of construction (defined as any activity which disturbs land, including clearing and grubbing). There is a seven (7) day review period commencing from the date on which EPA enters the Notice into their database. The Contractor is advised that, based on the review of the NOI, EPA may require additional information, including but not limited to, the submission of the Storm Water Pollution Prevention Plan for review. Work may not commence on the project until final authorization has been granted by EPA. Any additional time required by EPA for review of submittals will not constitute a basis for claim of delay.

In addition, if the project discharges to an Outstanding Resource Water, vernal pool, or is within a coastal ACEC as identified by the Massachusetts Department of Environmental Protection (DEP), a separate notification to DEP is required. DEP may also require submission of the Storm Water Pollution Prevention Plan for review and approval. Filing fees associated with the notification and, if required, the SWPPP filing to DEP shall be paid by the Contractor.

The owner – City of Northampton – and the operator – the Contractor – must submit separate NOIs. The Contractor is responsible to prepare and file both NOIs and shall provide proof of same to the Engineer.

The General Permit also requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the afore-mentioned statutes and regulations. The Plan will include the General Permit conditions and detailed descriptions of controls of erosion and sedimentation to be implemented during construction. It is the responsibility of the Contractor to prepare the SWPPP to meet the requirements of the most recently issued CGP. The Contractor shall submit the Plan to the Engineer for approval at least four weeks prior to any site activities. It is the responsibility of the Contractor to be familiar with the General Permit conditions and the conditions of any state Wetlands Protection Act Order, Water Quality Certification, Corps of Engineers Section 404 Permit and other environmental permits applicable to this project and to include in the Stormwater Pollution Prevention Plan the methods and means necessary to comply with applicable conditions of said permits.

It is the responsibility of the Contractor to complete the SWPPP in accordance with the EPA Construction General Permit, provide all information required, and obtain any and all certifications as required by the Construction General Permit. Any amendments to the SWPPP required by site conditions, schedule changes, revised work, construction methodologies, and the like are the responsibility of the Contractor. Amendments will require the approval of the Engineer prior to implementation.

Included in the General Permit conditions is the requirement for inspection of all erosion controls and site conditions on a weekly basis as well as after each incidence of rainfall exceeding 0.5 inches in twenty-four hours. The Contractor shall choose a qualified individual who will be onsite during construction to perform these inspections. The Engineer must approve the contractor's inspector. In addition, if the Engineer determines at any time that the inspector's performance is inadequate, the Contractor shall provide an alternate inspector. Written weekly inspection forms, storm event inspection forms, and Monthly Summary Reports must be completed and provided to the Engineer. Monthly Summary Reports must include a summary of construction activities undertaken during the reporting period, general site conditions, erosion



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The Contractor shall remove all debris and stones having any dimensions greater than 2 inches before the application of limestone, fertilizer and seed.

Application of Limestone

Limestone may be applied in dry form or hydraulically as provided in Subsection 765 .65. Limestone where necessary shall be spread and thoroughly incorporated in the layer of loam or topsoil to adjust the acidity of the loam or topsoil. The rate of application of the limestone will vary up to a maximum of 1 pound per square yard depending on the results of laboratory tests conducted by the Department. The limestone shall be thoroughly incorporated into the layer of loam or topsoil and the upper 1 inch of the underlying subsoil by harrowing or other methods satisfactory to the Engineer so as to provide a layer of thoroughly mixed material for the seed bed

Application of Fertilizer for Grass

Fertilizer may be applied in dry form or hydraulically as provided in Subsection 765.65.

After the application of limestone, if found necessary, on the seed bed, fertilizer shall be spread on the top layer of loam or topsoil at the rate of 800 pounds per acre and worked into the seed bed. The full depth of loam or topsoil shall then be spaded or harrowed and graded to the required cross section.

Seeding Grass

After the loamed or topsoil areas have been prepared and treated as hereinbefore described, grass seed conforming to the respective formulas hereinbefore specified shall be carefully sown thereon at the rate of approximately 50 pounds per acre. Seeding shall be done in two directions at right angles to each other. Seeding on level areas and on slopes up to and including 4: 1 slopes shall be done by means of an approved seeder that will seed and roll in one operation. On shoulders and other narrow areas, the seeding may be done longitudinally in one application.

Seeding Grass by Spray Machine

A hydraulic spray machine, approved by the Engineer, and designed specifically for seed dissemination may be utilized. The application of limestone as necessary, fertilizer and grass seed may be accomplished in one operation by the use of an approved spraying machine. The materials shall be mixed with water in the machine and kept in an agitated state in order that the materials may be uniformly suspended in the water. The spraying equipment shall be so designed that when the solution is sprayed over an area the resulting deposits of limestone, fertilizer and grass seed shall be equal in quantity to those quantities specified above in Subsections 765.61, 765.62 and 765.63.

A certified statement shall be furnished, prior to start of work, to the Engineer by the Contractor as to the number of pounds of limestone, fertilizer, and grass seed, per 100 gal of water.

This statement should also specify the number of square yards of seeding that can be covered with the solution specified above.

If the results of the spray operation are unsatisfactory, the Contractor will be required to abandon this method and to apply the limestone, fertilizer and seed in accordance with the requirements of Subsections 765.61, 765.62 and 765.63.

Care During Construction.

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The Contractor shall be responsible for the watering of all seeded and grassed areas which shall be kept moist. The Engineer's decision will prevail in the event a dispute develops with the Contractor as to whether or not the seeded and grassed areas are moist. Seeded areas on which growth has started shall be watered to a minimum depth of 2 inches to assure continuing growth. Watering shall be done in a manner which will provide uniform coverage, prevent erosion due to application of excessive quantities over small areas, and prevent damage to the finished surface by the watering equipment. The Contractor shall furnish sufficient watering equipment to apply one complete coverage to the seeded areas in an 8 hour period.

If necessary, suitable signs and barricades of brush or other materials shall be placed to protect the seeded areas.

After the grass has appeared, all areas and parts of areas which fail to show a uniform stand of grass, for any reason whatsoever, shall be reseeded and such areas and parts of areas shall be seeded repeatedly until all areas are covered with a satisfactory growth of grass.

The Contractor shall care for all of the seeded areas until the work has been physically accepted, without compensation in addition to the amount regularly to be paid under this item as hereinafter provided. Care shall include all regrading, refertilizing, reseeding and mowing which may be necessary.

Prior to the acceptance of the project the Contractor will be responsible for mowing the grass when necessary on all flat or rolling slopes from level to and including 4 to 1 slopes to a height of 3 inches when the grass has attained a height of eight inches. The grass on all slopes steeper than 4 to 1 shall be cut when necessary to a height of 3 inches at such a time as a stable turf has been established in the Engineer's judgment.

**Liability**

A satisfactory stand of grass, as determined by the Engineer, shall be required. To be acceptable, a stand of grass shall consist of a uniform stand of at least 60 percent established permanent grass species, with a uniform count of at least 100 plants per square foot.

When all items of the contract, including the work specified under this item, have been acceptably completed except that a satisfactory stand of grass has not been produced, the contract may be accepted.

**Compensation**

**Method of Measurement**

The quantity of seeding shall be the number of square yards based on actual measurements made over the general contour of the areas seeded, complete in place, and accepted.

**Basis of Payment**

This work, including all mowing, will be paid for at the contract unit price per square yard under the item for Seeding, completed in place. When a satisfactory stand of grass has not been established at the time of acceptance, no payment for seeding shall be allowed at the time of acceptance. At the time the final estimate is ready to be forwarded to the Contractor the seeded areas will again be inspected by the Engineer and if a satisfactory stand of grass has been established, the seeded areas with a satisfactory stand of grass will be included for payment.

**ITEM 767.4**

**WOOD CHIP MULCHING**

**CUBIC YARD**

This work shall consist of furnishing and placing wood chip mulch, as particularly specified, in the required amounts on the areas indicated on the plans or as directed.

**Construction Methods**

The areas upon which mulch is to be spread shall be prepared by raking, harrowing or dragging to form a reasonably smooth surface. All stones larger than 2", undesirable growth over 2" in height and all debris shall be removed from the area and disposed by the Contractor in a satisfactory manner. The disposal area shall be outside the location limits of the project, when required by the Engineer and shall be the responsibility of the Contractor without additional compensation.

When required by the Engineer, the Contractor shall spread, compact and grade additional acceptable material to repair gullies or depressions. Such additional material shall be obtained from suitable excavation or furnished by the Contractor under Item ISO., Ordinary Borrow. The labor and equipment required to furnish and place the additional material shall be paid for under the respective item from which the material is obtained without additional compensation.

Grading preparatory to mulching will be included for pavement under respective items of mulching.

**Placing Mulch.**

Wood Chip Mulch shall be loosely spread to a uniform depth over all areas designated on the plans, at the rate of 390 cubic yards per acre (approximately 3" in depth), or as otherwise directed.

Wood Chip Mulch may be applied by mechanical means, except that if the equipment breaks the mulch into small pieces or changes its desired texture, as determined by the Engineer, it shall be spread by hand without additional compensation.

**Compensation**

**Method of Measurement**

Wood Chip Mulch will be measured by the cubic yard based on either truckload measurement as delivered on the project or in place measurement, the method of measurement to be determined by the Engineer.

If truckload measurement is used, wood chip mulch taken from this measured volume for mulching trees and shrubs other than placed in mass planting areas will be deducted on the basis of the volume of chips placed over the rated size of each planting pit at a depth of four (4) inches.

No deduction shall be made in mass planting areas for wood chip mulch ordinarily included in the unit price of the trees or shrubs planted therein.

**Basis of Payment**

Wood Chip Mulch will be paid for complete in place at the contract unit price per cubic yard.

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**ITEMS 772-796**

**PLANTING**

**EACH**

This work shall consist of furnishing, planting and/or transplanting specified trees, shrubs, vines and ground cover to locations as shown on the plans and/or as directed by the Engineer in accordance with Section 771 Planting Trees, Shrubs, and Groundcover.

The work shall include excavation of pits, placing of backfill mixture, mulching, watering, staking or guying, wrapping for transport, adding fertilizing and/or other soil amendments, seeding, weeding, watering, care of the plants, and replacement of unsatisfactory plants and materials during the life of the contract.

The Contractor performing work under this Section shall have five years continuous experience and expertise in management, handling and installation of ornamental plant material in large-scale landscape construction projects. Site foreman shall have at least five years experience, able to read and interpret plans, and shall be on-site during all times of plant installation.

**Materials**

772.433	Hemlock – Canada 2-3 feet
776.523	Maple – Red ‘Armstrong’ 2-2.5 inch caliper
778.161	Birch – River ‘Heritage’ 8-10 foot clump
786.079	Juniper – Bar Harbor 12-15 inch

**ITEM 828**

**TRAFFIC SIGNS**

**EACH**

The work shall consist of fabrication of temporary and permanent signage, placement of sign support, and securing signage or support. Signs shall be fabricated as directed by the Engineer in accordance with Section 828.

The signs, foundations and supports shall be fabricated and erected in conformity with the following:

- A. The Massachusetts Department of Public Works manual on "Uniform Traffic Control Devices" (Current Edition) hereinafter referred to as MUTCD.
- B. The AASHTO publication entitled "Specifications for Design and Construction of Structural Supports for Highway Signs, Luminaires and Traffic Signals" (Current Edition).
- C. The Massachusetts Department of Public Works Standard Drawings for Signs and Supports (Current Edition).
- D. Any applicable municipal guidelines and specifications.

**ITEMS 850-890**

**SAFETY CONTROLS FOR CONSTRUCTION  
OPERATIONS**

**DAY**

The work to be done under this item shall conform to the relevant provisions of Sections 850 of the aforesaid Standard Specifications and the following:

It shall also include all signs, fencing, posts, barricades, reflectorized barrels as required to establish and maintain a safe working environment for vehicles and pedestrians.

All of the above shall be made available at the job site for inspection and approval by the Engineer prior to commencement of construction.

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The contract price under this item shall constitute full payment for all material, labor and equipment required or incidental to the satisfactory completion of work as described above. Any devices provided under this section which are lost, stolen, destroyed or deemed unacceptable while their use is required on the project shall be replaced without additional compensation.

LUMP SUM PAYMENTS WILL BE MADE IN EQUAL AMOUNTS ON EACH ESTIMATE BASED ON THE NUMBER OF MONTHS ESTIMATED TO COMPLETE THE WORK.

## **Cost Estimate**

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Item #	Item Description	Unit Cost	Units	Quantity	Total Cost
101	CLEARING AND GRUBBING	\$ 17,230.76	A	0.50	\$ 8,615
102.5	ROADSIDE TREE PROTECTION	\$ 22.05	EA	30	\$ 662
103	TREE REMOVED - DIAMETER UNDER 24 INCHES	\$ 668.93	EA	50	\$ 33,447
120.1	UNCLASSIFIED EXCAVATION	\$ 24.19	CY	1069	\$ 25,859
121	CLASS A ROCK EXCAVATION	\$ 67.65	CY	50	\$ 3,383
129	HOT MIX ASPHALT PAVEMENT MILLING	\$ 12.85	SY	443	\$ 5,688
141.1	TEST PIT FOR EXPLORATION	\$ 58.16	CY	20	\$ 1,163
150	ORDINARY BORROW	\$ 23.69	CY	50	\$ 1,185
151	GRAVEL BORROW	\$ 31.34	CY	802	\$ 25,137
154	SAND BORROW	\$ 40.00	CY	57	\$ 2,261
170	FINE GRADING AND COMPACTING	\$ 2.77	SY	4200	\$ 11,634
180.1	HEALTH AND SAFETY PLAN	\$ 3,415.63	LS	1	\$ 3,416
180.2	IMPLEMENTATION OF HEALTH AND SAFETY PLAN	\$ 89.81	HR	40	\$ 3,592
180.3	PERSONNEL PROTECTION LEVEL C UPGRADE	\$ 20.14	HR	30	\$ 604
180.4	MONITORING/HANDLING AND STOCKPILING OF CONTAMINATED SOILS	\$ 56.27	CY	59.5	\$ 3,348
180.5	LICENSED SITE PROFESSIONAL	\$ 150.00	HR	50	\$ 7,500
180.6	MISCELLANEOUS SOILS TESTING	\$ 877.27	EA	5	\$ 4,386
181.12	DISPOSAL OPTIONS FOR CONTAMINATED SOILS	\$ 70.50	TON	64.25	\$ 4,530
184.1	DISPOSAL OF TREATED WOOD PRODUCTS	\$ 247.38	TON	5	\$ 1,237
205	LEACHING BASIN	\$ 4,843.09	EA	2	\$ 9,686
208	DROP INLET, TYPE C	\$ 2,110.24	EA	2	\$ 4,220
222.1	FRAME AND GRATE - MASSDOT CASCADE TYPE	\$ 770.93	EA	4	\$ 3,084
227.3	REMOVAL OF DRAINAGE STRUCTURE SEDIMENT	\$ 181.62	CY	5	\$ 908
227.31	REMOVAL OF DRAINAGE PIPE SEDIMENT	\$ 9.80	FT	120	\$ 1,176
252.12	12" CORRUGATED PLASTIC PIPE	\$ 54.41	FT	90	\$ 4,897
252.112	12" CORRUGATED PLASTIC PIPE FLARED END	\$ 428.40	EA	1	\$ 428
258	STONE FOR PIPE ENDS	\$ 57.65	SY	150	\$ 8,648
265.06	6" SUBDRAINS	\$ 26.58	FT	666	\$ 17,702
440	CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL	\$ 0.38	LB	8234	\$ 3,129
443	WATER FOR ROADWAY DUST CONTROL	\$ 50.51	MGL	12	\$ 606
460	CLASS I BITUMINOUS CONCRETE PAVEMENT (TYPE 1A)	\$ 85.00	TON	427	\$ 36,295
464	BITUMEN FOR TACK COAT	\$ 8.00	GAL	180	\$ 1,440
476	CEMENT CONCRETE PAVEMENT	\$ 126.86	SY	56	\$ 7,048
657.11	TEMPORARY CHAIN LINK FENCE	\$ 9.75	FT	300	\$ 2,925
697	SEDIMENTATION FENCE	\$ 4.10	FT	2632	\$ 10,791
748	MOBILIZATION	\$ 10,000.00	LS	1	\$ 10,000
751	LOAM BORROW	\$ 45.37	CY	137	\$ 6,217
756	NPDES STORMWATER POLLUTION PREVENTION PLAN	\$ 3,788.73	LS	1	\$ 3,789
765	SEEDING	\$ 1.23	SY	1021	\$ 1,255
767.4	WOOD CHIP MULCHING	\$ 66.92	CY	52	\$ 3,479
772.433	HEMLOCK - CANADA 2-3 FEET	\$ 202.81	EA	7	\$ 1,420
776.523	MAPLE - RED 'ARMSTRONG' 2-2.5 INCH CALIPER	\$ 423.67	EA	7	\$ 2,966
778.161	BIRCH - RIVER 'HERITAGE' 8-10 FOOT CLUMP	\$ 310.85	EA	6	\$ 1,865
786.079	JUNIPER - BAR HARBOR 12-15 INCH	\$ 37.38	EA	221	\$ 8,268
831.2	ROADSIDE GUIDE SIGN - 20 SF AND UNDER - PLYWOOD	\$ 10.74	SF	166	\$ 1,783
832.1	WARNING-REGULATORY AND ROUTE MARKER - ALUM. PANEL (TYPE A)	\$ 188.05	EA	19	\$ 3,573
850.41	ROADWAY FLAGGER	\$ 48.75	HR	160	\$ 7,800
853.2	TEMPORARY PRECAST CONCRETE MEDIAN BARRIER	\$ 815.30	EACH	2	\$ 1,631
861.04	4" REFLECTORIZED PAVEMENT MARKINGS	\$ 0.58	LF	2347	\$ 1,358

<b>MASSDOT ITEMS CONSTRUCTION TOTAL</b>
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**\$ 316,032**

Item #	Item Description	Unit Cost	Units	Quantity	Total Cost
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**SPECIAL PROVISIONS**

N/A	CONSTRUCTION STAKINGS & SURVEY	\$ 5,000.00	LS	1	\$ 5,000
N/A	MASSACHUSETTS CERTIFIED ARBORIST	\$ 2,000.00	DAY	1	\$ 2,000
N/A	WETLAND REFLAGGING	\$ 1,500.00	LS	1	\$ 1,500
N/A	STONE ARCH REPAIR	\$ 9,400.00	LS	1	\$ 9,400
N/A	STABILIZATION OF SLOPE OVER STONE ARCH BRIDGE	\$ 9,360.00	LS	1	\$ 9,360
N/A	WOODEN RAILING	\$ 40.11	LF	1964	\$ 78,771
N/A	WASHOUT REPAIR	\$ 1,883.08	EA	8	\$ 15,065
N/A	TREE ROOT BARRIER	\$ 5,100.00	LS	1	\$ 5,100
N/A	AS-BUILT SURVEY	\$ 5,000.00	LS	1	\$ 5,000

<b>SPECIAL PROVISION ITEMS TOTAL</b>	<b>\$ 131,196</b>
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<b>TOTAL ITEMS</b>	<b>\$ 447,228</b>
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<b>10% CONTINGENCIES &amp; INCIDENTAL ITEMS</b>	<b>\$ 44,723</b>
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<b>TOTAL COST ESTIMATE</b>	<b>\$ 491,951</b>
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## **Bid Comparison Sheets**

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## Bid Sheet

Engineer's Estimated Quantities noted herein are being set forth as a basis for the comparison of bids only. The actual amount of work may not correspond therewith. The City of Northampton expressly reserves the right to adjust said quantities in accordance with actual conditions as found to exist during the course of work. An increase or decrease in the quantity for any item shall not be regarded as cause for an increase or decrease in the contract unit prices, nor in the time allowed for the completion of the work, except as provided in the Contract.

ITEM NUMBER	ENGINEER'S ESTIMATED QUANTITY	BID QUANTITY	ITEM DESCRIPTION	BID UNIT PRICE WRITTEN IN WORDS	BID UNIT PRICE IN NUMERALS	TOTAL COST
000.00	99 (EXAMPLE ONLY)	99 (EXAMPLE ONLY)	EXAMPLE ONLY	Seventy five dollars and fifty cents LINEAR FOOT (EXAMPLE ONLY)	\$75.50 (EXAMPLE ONLY)	\$7474.50 (EXAMPLE ONLY)
101	0.50		CLEARING AND GRUBBING	ACRES		
102.5	30		ROADSIDE TREE PROTECTION	EACH		
103	30		TREE REMOVED – DIAMETER UNDER 24 INCHES	EACH		
120.1	1069		UNCLASSIFIED EXCAVATION	CUBIC YARD		
121	50		CLASS A ROCK EXCAVATION	CUBIC YARD		
129	443		HOT MIX ASPHALT PAVEMENT MILLING	SQUARE YARD		
141.1	20		TEST PIT FOR EXPLORATION	CUBIC YARD		
150	50		ORDINARY BORROW	CUBIC YARD		

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ITEM NUMBER	ENGINEER'S ESTIMATED QUANTITY	BID QUANTITY	ITEM DESCRIPTION	BID UNIT PRICE WRITTEN IN WORDS	BID UNIT PRICE IN NUMERALS	TOTAL COST
151	802		GRAVEL BORROW	CUBIC YARD		
154	57		SAND BORROW	CUBIC YARD		
170	4200		FINE GRADING & COMPACTING	SQUARE YARD		
180.1	1		HEALTH AND SAFETY PLAN	LUMP SUM		
180.2	40		IMPLEMENTATION OF HEALTH AND SAFETY PLAN	HOUR		
180.3	30		PERSONNEL PROTECTION LEVEL 'C' UPGRADE	HOUR		
180.4	59.5		MONITORING/HANDLING AND STOCKPILING OF CONTAMINATED SOILS	CUBIC YARD		
180.5	50		LICENSED SITE PROFESSIONAL (LSP) SERVICES	HOUR		
180.6	5		MISCELLANEOUS SOILS TESTING	EACH		
181.12	64.25		DISPOSAL OPTIONS FOR CONTAMINATED SOILS	TON		
184.1	5		DISPOSAL OF TREATED WOOD PRODUCTS	TON		

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ITEM NUMBER	ENGINEER'S ESTIMATED QUANTITY	BID QUANTITY	ITEM DESCRIPTION	BID UNIT PRICE WRITTEN IN WORDS	BID UNIT PRICE IN NUMERALS	TOTAL COST
205	2		LEACHING BASIN	EACH		
208	2		DROP INLET, TYPE C	EACH		
222.1	4		FRAME AND GRATE – MASSDOT CASCADE TYPE	EACH		
227.3	5		REMOVAL OF DRAINAGE STRUCTURE SEDIMENT	CUBIC YARD		
227.31	120		REMOVAL OF DRAINAGE PIPE SEDIMENT	LINEAR FOOT		
252.12	90		12" CORRUGATED PLASTIC PIPE	LINEAR FOOT		
252.112	1		12" CORRUGATED PLASTIC PIPE FLARED END	EACH		
258	150		STONE FOR PIPE ENDS	SQUARE YARD		
265.06	666		SUBDRAINS	LINEAR FOOT		
440	8234		CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL	POUNDS		
443	12		WATER FOR ROADWAY DUST CONTROL	THOUSAND GALLONS		

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ITEM NUMBER	ENGINEER'S ESTIMATED QUANTITY	BID QUANTITY	ITEM DESCRIPTION	BID UNIT PRICE WRITTEN IN WORDS	BID UNIT PRICE IN NUMERALS	TOTAL COST
460	427		CLASS I BITUMINOUS CONCRETE PAVEMENT, TYPE 1A	TON		
464	180		BITUMEN FOR TACK COAT	GALLON		
476	56		CEMENT CONCRETE PAVEMENT	SQUARE YARD		
657.11	300		TEMPORARY CHAIN LINK FENCE	LINEAR FOOT		
697	2632		SEDIMENTATION FENCE	LINEAR FOOT		
748	1		MOBILIZATION	LUMP SUM		
751	137		LOAM BORROW	CUBIC YARD		
756		1	NPDES STORM WATER POLLUTION PREVENTION PLAN	LUMP SUM		
765	1021		SEEDING	SQUARE YARD		
767.4	52		WOOD CHIP MULCHING	CUBIC YARD		
772.433	7		HEMLOCK – CANADA 2-3 FEET	EACH		

*Mass Central Rail Trail in Northampton, Massachusetts  
City of Northampton Contract # 75-15*

ITEM NUMBER	ENGINEER'S ESTIMATED QUANTITY	BID QUANTITY	ITEM DESCRIPTION	BID UNIT PRICE WRITTEN IN WORDS	BID UNIT PRICE IN NUMERALS	TOTAL COST
776.523	7		MAPLE – RED 'ARMSTRONG' 2-2.5 INCH CALIPER	EACH		
778.161	6		BIRCH – RIVER 'HERITAGE' 8-10 FOOT CLUMP	EACH		
786.079	221		PLANTING: JUNIPER – BAR HARBOR 12-15"	EACH		
831.2	166		ROADSIDE GUIDE SIGN – 20 SF AND UNDER - PLYWOOD	SQUARE FOOT		
832.1	17		WARNING – REGULATOR AND ROUTE MARKER – ALUMINUM PANEL	EACH		
850.41	160		ROADWAY FLAGGER	HOUR		
853.2	2		TEMPORARY PRECAST CONCRETE MEDIAN BARRIER	EACH		
861.04	2347		4" REFLECTORIZED PAVEMENT MARKINGS	LINEAR FOOT		
N/A	1		CONSTRUCTION STAKING & SURVEY	LUMP SUM		
N/A	1		MASSACHUSETTS CERTIFIED ARBORIST	DAY		
N/A	1		WETLAND REFLAGGING	LUMP SUM		

*Mass Central Rail Trail in Northampton, Massachusetts  
City of Northampton Contract # 75-15*

ITEM NUMBER	ENGINEER'S ESTIMATED QUANTITY	BID QUANTITY	ITEM DESCRIPTION	BID UNIT PRICE WRITTEN IN WORDS	BID UNIT PRICE IN NUMERALS	TOTAL COST
N/A	1		STONE ARCH REPAIR	LUMP SUM		
N/A	1		STABILIZATION OF SLOPE OVER STONE ARCH BRIDGE	LUMP SUM		
N/A	2074		WOODEN RAILING	LINEAR FOOT		
N/A	8		WASHOUT REPAIR	EACH		
N/A	1		TREE ROOT REPAIR	LUMP SUM		
N/A	1		AS-BUILT SURVEY	LUMP SUM		
					<b>Total:</b>	

## **Bridge Repair Reommendation**

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April 9, 2013

Wayne Feiden  
Director of Planning and Development  
210 Main Street, Room 11  
NORTHAMPTON MA 01060

RE: Leeds Bike Path Bridge, Project #12108

Mr. Feiden:

On October 26, 2012 I proposed to provide the Town of Northampton with a plan to repair damage to the Beaver Brook Bridge on the Manhan trail in Leeds. At the time I was aware that many of the mortared joints in the bridge appeared to be failing, and felt a fairly extensive re-pointing job was warranted, which would have included specifying a method of re-pointing without damaging the Beaver Brook. Since then I have studied several stone railway bridges of the early nineteenth century and concluded that the original design did not include mortared joints. Many bridges, including the Beaver Brook bridge, were mortared at a later date, as can be ascertained by the lack of depth of the mortar in the joint. I believe this later re-pointing in the late nineteenth and early twentieth century was due to a lack of understanding of an earlier technology, and does not enhance the structural stability of the bridge. In fact, if anything, the re-pointing detracts from the ability of the stone work to drain properly.

In the case of the Beaver Brook Bridge, I do not believe the loose mortar should be repaired, nor does it even need to be removed. I have examined the bridge extensively and feel with two exceptions the bridge should be left as it is. The first exception is a single displaced stone at the top of the east side of the bridge (see Figure 1). This stone should be lifted and its bed



Figure 1

cleaned so that it can sit in its original position. This would likely entail cutting some of the roots of the stump visible in the figure.

The second task it to institute a program of cutting the brush on top of the bridge and on

the both sides within 15 feet of the abutments once a year. The real dangers to the bridge and other similar stone structures are large root systems. I do not think trying to pave the area or devise other means of preventing vegetative growth will be successful. When the rail trail is built, however, using a properly engineered permanent pavement structure such as concrete and paving the trail to include the shoulders (total width 14 or 15 feet) may reduce the amount of required maintenance.

Sincerely,

Robert Leet, P.E.

## **Order of Conditions**

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# WPA Form 5 – Order of Conditions

246-589

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



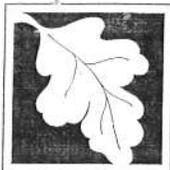
Bk: 9511Pg: 233 Page: 1 of 12  
Recorded: 06/12/2008 12:03 PM

## A. General Information

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



- From: Northampton  
1. Conservation Commission
2. This issuance is for (check one): a.  Order of Conditions b.  Amended Order of Conditions
3. To: Applicant:
- |  |                               |  |
|--|-------------------------------|--|
| <u>Wayne</u><br>a. First Name                          | <u>Feiden</u><br>b. Last Name | <u>City of Northampton</u><br>c. Company |
| <u>210 Main Street City Hall</u><br>d. Mailing Address |                               |  |
| <u>Northampton</u><br>e. City/Town                     | <u>MA</u><br>f. State         | <u>01060</u><br>g. Zip Code              |
4. Property Owner (if different from applicant):
- |   |                         |                        |
|---|-------------------------|------------------------|
| <u>City of Northampton</u><br>a. First Name | <u></u><br>b. Last Name | <u></u><br>c. Company  |
| <u></u><br>d. Mailing Address               |                         |                        |
| <u></u><br>e. City/Town                     | <u></u><br>f. State     | <u></u><br>g. Zip Code |
5. Project Location:
- |   |                                    |
|---|------------------------------------|
| <u>Look Memorial Park and former railroad ROW to Florence Street</u><br>10B-100 & 16A-002<br>c. Assessors Map/Plat Number | <u>Northampton</u><br>b. City/Town |
| <u>Latitude and Longitude, if known (note: electronic filers will click for GIS locator):</u>                             | <u></u><br>d. Parcel/Lot Number    |
| <u></u><br>e. Latitude  | <u></u><br>f. Longitude            |
6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
- |                               |  |
|-------------------------------|--|
| <u>Hampshire</u><br>a. County | <u></u><br>b. Certificate (if registered land) |
| <u>8314</u><br>c. Book        | <u>46</u><br>d. Page                           |
7. Dates: 07/12/2006 07/27/2006 8/17/2006  
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):  
Northampton Norwottuck and Williamsburg Trails-Norwottuck Rail Trail Look Park to Florence Street Section  
MS Transportation Systems, Inc  
b. Prepared By  c. Signed and Stamped by   
11/18/2004 d. Final Revision Date 1"=40' e. Scale  
 f. Additional Plan or Document Title  g. Date



# WPA Form 5 – Order of Conditions

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

## 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. 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.

**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 these interests, 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).**

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

3. <input checked="" type="checkbox"/> Buffer Zone Impacts: Shortest distance between limit of project disturbance and wetland boundary (if available)				5
				a. linear feet
Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5. <input type="checkbox"/> Bordering Vegetated Wetland	a. square feet	b. square feet	c. square feet	d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	a. square feet	b. square feet	c. square feet	d. square feet
	e. cu.yd dredged	f. cu.yd dredged		



**WPA Form 5 – Order of Conditions**

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

**B. Findings (cont.)**

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
7. <input type="checkbox"/> Bordering Land Subject to Flooding	a. square feet	b. square feet	c. square feet	d. square feet
Cubic Feet Flood Storage	e. cubic feet	f. cubic feet	g. cubic feet	h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	a. square feet	b. square feet		
Cubic Feet Flood Storage	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
9. <input checked="" type="checkbox"/> Riverfront area	24,000	24,000		
a. total sq. feet	b. total sq. feet			
Sq ft within 100 ft	9,000	9,000		
c. square feet	d. square feet	e. square feet	f. square feet	
Sq ft between 100-200 ft	15,000	15,000		
g. square feet	h. square feet	i. square feet	j. square feet	

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

10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	a. square feet	b. square feet		
	c. cu.yd dredged	d. cu.yd dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	a. square feet	b. square feet	c. c/y nourishmt.	d. c/y nourishmt.
14. <input type="checkbox"/> Coastal Dunes	a. square feet	b. square feet	c. c/y nourishmt.	d. c/y nourishmt.
15. <input type="checkbox"/> Coastal Banks	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	a. square feet	b. square feet		
	c. cu.yd dredged	d. cu.yd dredged		
19. <input type="checkbox"/> Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. cu.yd dredged	b. cu.yd dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		



## WPA Form 5 – Order of Conditions

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

### C. General Conditions Under Massachusetts Wetlands Protection Act

(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.
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.
6. 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.
7. 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.
8. 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 this 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.
9. 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, "MA DEP"]

"File Number 246-589"



# WPA Form 5 – Order of Conditions

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

## C. General Conditions Under Massachusetts Wetlands Protection Act

10. 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 DEP.
11. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
12. The work shall conform to the plans and special conditions referenced in this order.
13. Any change to the plans identified in Condition #12 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.
14. 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.
15. 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.
16. 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.
17. 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.
18. All work associated with this Order is required to comply with the Massachusetts Stormwater Policy Standards.

Special Conditions:

See "Attachment A"

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If you need more space for additional conditions, select box to attach a text document



# WPA Form 5 – Order of Conditions

246-589

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

## D. Findings Under Municipal Wetlands Bylaw or Ordinance

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

a. Municipal Ordinance or Bylaw

b. 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.

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

Northampton Wetlands Ordinance

Chapter 24/25

a. Municipal Ordinance or Bylaw

b. Citation

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.

- c. The special conditions relating to municipal ordinance or bylaw are as follows:

See "Attachment A"

If you need more space for additional conditions, select box to attach a text document



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

DEP File Number:

246-589

**E. Issuance**

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

18 AUG 2006

1. Date of Issuance

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

4

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

2. Number of Signers

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.

Signatures:

[Signature: Michael Vito]  
[Signature: Susan Corbin]  
[Signature: Paul R Wetzel]

**Notary Acknowledgement**

Commonwealth of Massachusetts County of Hampshire

On this 18th Day of August 2006 Year

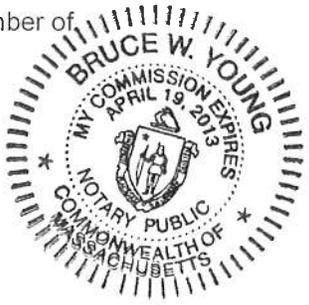
Before me, the undersigned Notary Public, personally appeared Paul Wetzel Name of Document Signer

proved to me through satisfactory evidence of identification, which was/were

PERSONAL KNOWLEDGE  
 Description of evidence of identification

to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose.

As member of Waltham City/Town Conservation Commission



Place notary seal and/or any stamp above

[Signature: Bruce W. Young]  
 Signature of Notary Public  
BRUCE W. YOUNG  
 Printed Name of Notary Public  
APRIL 19, 2013  
 My Commission Expires (Date)

This Order is issued to the applicant as follows:

by hand delivery on

by certified mail, return receipt requested, on

Date \_\_\_\_\_

18 AUG 2006  
 Date



## WPA Form 5 – Order of Conditions

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

DEP File Number:

246-589

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### 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 DEP 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 of 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 Determination, or providing written information to the Department prior to issuance of a Superseding Order or Determination.

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.

**Section G, Recording Information is available on the following page.**



**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

DEP File Number:  
246-589

**G. Recording Information**

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 Page 7 of this form shall be submitted to the Conservation Commission listed below.

\_\_\_\_\_  
 Conservation Commission

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

-----

To:

\_\_\_\_\_  
 Conservation Commission

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

\_\_\_\_\_  
 Project Location

\_\_\_\_\_  
 DEP 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

## “ATTACHMENT A”

19. Prior to the initiation of any work, the applicant/owner shall submit a letter of understanding to the Commission stating that he/she has received, read, understands and shall comply with these Orders. The applicant, and, his or her contractor, foreman and/or construction manager shall sign the letter of understanding.
20. Prior to the initiation of any work, the applicant shall submit to the Commission a sequencing plan for construction, and erosion and sedimentation control installation.
21. Prior to the start of any site work, excavation or construction, a pre-construction conference shall be held on the site, between the contractor conducting the work, the site/project engineer, the applicant, and a member or agent of the Conservation Commission, in order to ensure that the requirements of this Order are understood by all parties. Prior to the pre-construction meeting, all erosion control devices must be installed and a staging area must be identified.
22. All required permits must be obtained from the Army Corp of Engineers (Section 404, Water Quality Certification), Planning Board, Zoning Board, Department of Public Works, or Building Inspector prior to the start of any project.
23. A copy of this Order and associated plans shall remain on site during all construction and/or building activities. The project manager and all equipment operators shall be familiar with the approved plans, and shall be informed of their location on the site. **This location shall be accessible to all contractors whenever work is occurring on site.**
24. All revised plans, referenced within this Order of Conditions, shall be approved by the Conservation Commission and incorporated into the permit by reference and shall be followed during the course of construction.
25. The areas of construction shall remain in a stable condition at the close of each construction day. Erosion control measures shall be inspected at this time, and maintained or reinforced as necessary. All such devices shall be inspected, cleaned or replaced during construction and shall remain in place until such time as stabilization of all areas that may impact resource areas is permanent. These devices shall also be inspected to assure that the maximum control has been provided. Any entrapped silt shall be removed to an area outside the buffer zone and resource areas, and maintained or reinforced as necessary. Erosion controls shall be inspected after every rainfall to assure that maximum control has been provided.
26. An adequate stockpile of erosion control materials shall be on site at all times for emergency or routine replacement and shall include materials to repair or replace silt fences, straw bales, erosion control blankets, riprap, filter berms or other devices planned for use during construction.

27. Soils exposed for periods greater than two months shall be stabilized with erosion control blankets and netting, a covering of straw mulch, or a temporary cover of rye or other grass to prevent erosion and sedimentation. Drainage ditches shall be stabilized and seeded with a native perennial grass mixture. Any stabilization materials such as jute netting shall be firmly anchored to prevent them from being washed from slopes by rain or flooding. Preference should be given to biodegradable materials.
28. All disturbed areas shall be graded, loamed and seeded, or stabilized with erosion control blankets or netting, and a covering of straw mulch prior to November 30, of each year. No disturbed areas or stockpiled materials will be left unprotected or without erosion control after this date. Applicant must use native seed wildflower/conservation mix on all disturbed areas. Applicant shall provide the Northampton Conservation Commission with a native seed species list at the preconstruction meeting.
29. No disposal of soils or other materials shall be allowed within: a 100-year floodplain; 40 feet of the 100-year floodplain elevation; any wetland; or any area within 100-feet of a wetland, unless such areas are specifically approved by the Commission, in accordance with 310 CMR 10.00, and City of Northampton Ordinances - Chapter 24
30. Ongoing conditions that shall not expire with the issuance of a Certificate of Compliance are as follows: N/A
31. Upon completion of the work covered by this Order, the applicant shall submit an as-built plan, signed and stamped by a registered professional engineer or land surveyor, together with a written request for a Certificate of Compliance.

The plan and written request shall specify any ways that the completed project differs from the plans referenced in the Order. The as-built plan shall include, at a minimum, and as applicable to the project: elevations of all pipe inverts and outlets, pipe sizes, materials, and slopes; all other drainage structures; limits of clearing, grading, and fill; all structures, pavement, and contours within 100 feet of wetland boundaries; all alterations within the wetland resource areas; and all dates of fieldwork.

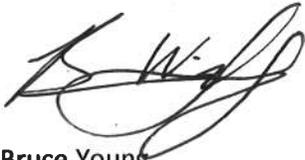
32. The owner of the property described in this Order must advise any potential buyer of the property that any construction or alteration to said property, including brush cutting or clearance, may require approval by the Northampton Conservation Commission.

Any instrument conveying any or all of the owners' interest in said property or any portion thereof, shall contain language similar to the following:

**"This property is subject to the Northampton Wetlands Protection Ordinance and/or Wetlands Protection Act. Any construction or maintenance work performed on this property requires an Order of Conditions, and/or a Determination of Applicability from the Northampton Conservation Commission."**

Order of Conditions—Certified Copy

I certify that this is a true and accurate copy of the original Order of Conditions 246-589 issued on August 17, 2006 in reference to land described in a Order of Taking recorded at Book 8314, Page 46.



Bruce Young  
Land Use and Conservation Planner  
Agent, Northampton Conservation Commission

ATTEST: HAMPSHIRE, Marianne L. Donohue, REGISTER  
MARIANNE L. DONOHUE

**HAMPSHIRE  
REGISTRY OF DEEDS**



2014 00011542

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# DOCUMENT COVER SHEET

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**THIS IS THE FIRST PAGE OF THIS DOCUMENT – DO NOT REMOVE**

Northampton

**PROPERTY ADDRESS:** Former RR Right of Way, Florence Street  
to Williamsburg Townline

**DOCUMENT TYPE:** Extension Permit for Order of Conditions

**NAME REFERENCE:** Wayne Feiden, Northampton Office of Planning and  
Sustainability.

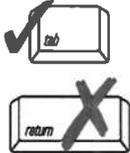


**WPA Form 7 – Extension Permit for Orders of Conditions**  
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

246-588  
Provided by DEP

**A. General Information**

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



1. Applicant:  
 Name: Wayne Feiden, Northampton Office of Planning + Sustainability  
 Mailing Address: 210 Main Street, Room 11  
 City/Town: Northampton State: MA Zip Code: 01060

2. Property Owner (if different):  
 Name: City of Northampton  
 Mailing Address: \_\_\_\_\_  
 City/Town: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**B. Authorization**

The Order of Conditions (or Extension Permit) issued to the applicant or property owner listed above on:

Date: 1/24/2008 Issued by: Northampton Conservation Commission  
 (first issued 6/17/06) for work at: Former TRR ROW - Florence St → Williamsburg TL Assessor's Map/Plat Number: 05 Parcel/Lot Number: 034  
 recorded at the Registry of Deeds for: Hampshire County: 8314 Book: 46 Page:

Certificate (if registered land) is hereby extended until: 1/24/18 Date 1/24/2008 Date the Order was last extended (if applicable)

This date can be no more than 3 years from the expiration date of the Order of Conditions or the latest extension. Only unexpired Orders of Conditions or Extension may be extended.

This Extension Permit must be signed by a majority of the Conservation Commission and a copy sent to the applicant and the appropriate DEP Regional Office (<http://www.mass.gov/dep/about/region/findyour.htm>)

Signatures: \_\_\_\_\_ Date: May 8, 2014  
 \_\_\_\_\_  
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