

DOCUMENT A00801

SPECIAL PROVISIONS**DISTRICT 6****Scheduled & Emergency Tree Trimming & Sight Distance Improvement
at Various Locations**

Labor participation goals for this Project shall be 15.3% for minorities and 6.9% for women for each job category. The goals are applicable to both Contractor's and Subcontractor's on-site construction workforce. Refer to Document 00820 for details.

SCOPE OF WORK

The work under this contract will consist of removing, trimming, or shaping roadside growth: to eliminate trees and branches that are considered hazardous to the traveling public; to re-establish design sight distance; to re-establish safety recovery zones; and to clear overgrowth for sign visibility.

The Contractor shall be prepared to respond to emergency repair work once the Notice to Proceed is issued.

All work under this Contract shall be done in conformance with the *2026 Standard Specifications for Highways and Bridges*, the *Supplemental Specifications* contained in this book, the *Construction Standard Details* in effect as of August 2026, the *1990 Standard Drawings for Signs and Supports*, the *2015 Overhead Signal Structure and Foundation Standard Drawings*, the *11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD)* and the *January 2026 Massachusetts Amendments to the MUTCD*, the *1968 Standard Drawings for Traffic Signals and Highway Lighting*, the latest edition of *The American Standard for Nursery Stock*, the Plans and these Special Provisions.

LOCATION OF WORK

Work under this contract will be required on any or all state highways and roadways within District 6 assigned by the Engineer. The following web link provides the cities and towns under the jurisdiction of District 6.

<https://www.mass.gov/service-details/find-your-highway-district-office>

MassDOT - Highway Division reserves the right to add additional roadways or locations throughout the duration of this contract. Locations will be determined by the Engineer.

CONTRACTOR QUESTIONS AND ADDENDUM ACKNOWLEDGMENTS

Prospective bidders are required to submit all questions to the Construction Contracts Engineer by 3:00 P.M. on the Tuesday of the previous week before the scheduled bid opening date. Any questions received after this time will not be considered for review by the Department.

Contractors should email questions and addendum acknowledgments to the following email address massdotspecifications@dot.state.ma.us The MassDOT project file number and municipality is to be placed in the subject line.

ACCESS MASSDOT HIGHWAY INFORMATION ON WEBSITE

Access MassDOT Highway Information related to Construction, Design/Engineering, Contractor/Vendor Information, Approved Materials and Fabricators, Manuals, Publications and Forms at:

<https://www.mass.gov/orgs/highway-division>

WORK SCHEDULE

All proposed work hours shall conform to Subsection 7.09 and be subject to the written approval of the Engineer.

Work is restricted to a normal 8-hour day, 5-day week, with the Prime Contractor and all Subcontractors working on the same shift. No work shall be done on Saturdays, Sundays, holidays, or the day before or after a holiday without prior approval of the Engineer.

Allowable work hours for specific locations will be determined by the District Highway Director or his/her representative. On high volume and/or high-speed roadways, work may be restricted to non-peak hours or night work as directed by the Engineer to avoid peak traffic volumes in order to maintain safety and productivity.

Work may not proceed beyond the normal 8-hour day unless prior approval is obtained from the Engineer for that day. Approval to work overtime will only be given when special conditions exist that warrant working overtime as determined by the Engineer.

The Contractor may schedule night shifts longer than 8-hours with approval of the Engineer. No additional compensation will be made for work scheduled during nighttime hours.

WORK SCHEDULE

Activity on this project may be done during the daytime or during the nighttime as needed and as directed. No additional compensation will be made for work scheduled during nighttime hours. Night time work will be done in accordance with the following schedule:

Sunday,	9:00 P.M.	to Monday,	5:00 A.M.
Monday,	9:00 P.M.	to Tuesday,	5:00 A.M.
Tuesday,	9:00 P.M.	to Wednesday,	5:00 A.M.
Wednesday,	9:00 P.M.	to Thursday,	5:00 A.M.
Thursday,	9:00 P.M.	to Friday,	5:00 A.M.

Any approved daytime operation(s) that consistently has (have) an adverse effect on traffic flow may be shifted to nighttime at the Engineers' discretion. For daytime operations on high volume and/or high speed roadways, no work will be done on the roadways between the hours of 6:00 AM to 10:00 AM, and between the hours of 3:30 PM to 8:30 PM, Monday through Friday, unless otherwise directed by the Engineer.

All personnel and equipment must be off the traveled way, including shoulders, during the restricted hours. The Engineer reserves the right to alter night work hours to accommodate road-closing schedules as needed.

All scheduled work under this contract will be done during a specified 8-hour shift, 5 day week, unless otherwise directed by the Engineer. Some Items may require extended work hours.

Approval to work overtime will only be given when special conditions exist that warrant working overtime as determined by the Engineer.

Prior to the commencement of work, the Department shall approve all work hours on this project. Work orders may contain restricted hours.

WORK ACCESS

Access to District 6 Roadway work sites requires coordination. The Contractor is required to complete an Access Work Request Form and submit the completed form, via email to District6AWRequest@dot.state.ma.us by noontime Wednesday of the week preceding the work. MassDOT notifications (approvals and denials) will be delivered via email by noon on Friday. All forms shall be signed by the Engineer prior to submittal.

Cancellations shall be submitted to the email; District6AWRequest@dot.state.ma.us at least 2 hours prior to the end of the most recent day shift (i.e., 7am- 3:30pm). Failure to notify the District within the specified time may result in back-charges for any costs incurred. Excessive cancellations or no-shows will be addressed at the District's discretion.

CONTRACTOR NOTIFICATION**Scheduled Work**

The Contractor will be notified of scheduled work by either a written or electronic Work Order. The work order will identify the location and a detailed scope of work for the assignment. This work shall be scheduled and commence on site within forty-eight (48) hours of notification by the Department.

MassDOT may also direct that scheduled or routine assignments shall commence on a particular date and time. If the Contractor has not reported and started work within 4 hours of the time expected, a non response damages will be assessed to the contractor.

Emergency Work

Since it may be necessary for the Contractor to respond to emergency situations where immediate response is necessary, the Contractor is required to provide to MassDOT the name(s) and telephone number(s) of a person or persons who can be contacted 24 hours a day for the contract's duration. and who has the authority to provide whatever labor, materials, and equipment that may be necessary to address the emergency.

The Contractor will be notified of emergency work that **REQUIRES IMMEDIATE ATTENTION** by verbal *and* written/electronic Work Order. The work order will identify the location of the work, the scope of the work and details the Engineer's expectations. The Work Order will also identify lane closure(s) required.

The Contractor will be required to commence this emergency work on site within four (4) hours, unless otherwise directed, after notification by the Department.

NON-RESPONSE DAMAGES*(Supplementing Subsection 8.11)***Scheduled Work**

If after notification, the Contractor has not started scheduled work on site forty-eight (48) hours of the notification, a non-response penalty will be assessed to the Contractor. Contract payments will be reduced by five hundred dollars (\$500.00) for each day or portion of a day that the work is delayed, excluding Saturdays, Sundays, and Holidays, *unless the work was scheduled to be performed on one of these days.*

The non-response damages for scheduled work can be waived at the discretion of the Engineer when it is deemed that the weather, traffic or other environmental conditions prohibit the performance of the scheduled work.

Emergency Work

If after notification, the Contractor has not started emergency work on site within four (4) hours of the notification, a non-response damages will be assessed to the Contractor. Contract payments will be reduced by one thousand dollars (\$1000.00) for each time there is a failure to respond within the specified hours.

The Contractor is advised that operational circumstances may not allow access and completion of repairs within the specified response window above. Therefore, the Contractor shall coordinate with the Engineer to schedule access for earliest MassDOT availability.

PROVISIONS FOR TRAVEL AND PROSECUTION OF WORK*(Supplementing Subsections 7.09, 7.10, and 8.03)*

Attention is directed to the fact that these work areas may be heavily traveled, high speed roads. Operations that will affect the flow of traffic on such roads within the project limits are restricted to the hours of least volume. This may include night and weekend work. The hours of all work operations shall be as authorized by the Engineer.

The Contractor shall contact the District to obtain the allowable work hours for each location prior to starting the necessary work.

On a two lane undivided highway two way traffic shall be maintained during “peak hours”. On Interstate highway all lanes shall remain open during the “peak hours”. “Peak hours” are defined as the hours from 5:00 AM to 10:00 AM and from 3:00 PM to 7:00 PM.

The time periods outlined above include the “set-up” and “breakdown” of the traffic pattern employed.

Work will be restricted to one roadway at all times unless additional work crews are approved by the Engineer. The Contractor shall not begin any work, other than emergency work, in any other roadway until the roadway being worked on is completed.

TRAFFIC CONTROLS FOR CONSTRUCTION OPERATIONS (DISTRICT 6)

(Supplementing Subsections 850.62 and 850.63)

For Interstate and freeway work, the District reserves the right to provide traffic setups for the Contractor. During these situations, the MassDOT District Six Operations will take the responsibility for the traffic management in the work zone. Where this is the case, the Contractor will not be compensated for traffic control for work at these specific locations.

TRAFFIC OFFICERS AND RAILROAD FLAGGING SERVICE

(Supplementing Subsection 7.11)

Under the provisions of Chapter 634 of the Acts of 1971, the railroad (excluding MBTA) shall furnish, without cost, the necessary flag protection on the railroad right-of-way which may be required for the performance of the work.

For MBTA railroad, MassDOT will pay the Contractor for flagging costs in accordance with the procedure described in Subsection 7.11.

For non-Chapter 634 bridges MassDOT will pay the Contractor for flagging costs in accordance with the procedure described in Subsection 7.11.

The Contractor, however, is responsible for all costs incurred in restoring tracks that have been disturbed by the Contractor's operations. Contractor shall comply with the requirements of the Railroad Special Provisions.

SUBSECTION 7.05 INSURANCE REQUIREMENTS

The insurance requirements set forth in this subsection are in addition to the requirements of the Standard Specifications.

7.05.B: Public Liability Insurance 3.

Railroad Protective Liability Insurance and Protective Property Damage Liability Insurance shall be obtained in the amount of \$3,000,000. / \$6,000,000 ([Fill in the correct limits from the RR special provisions](#)), on behalf of (name of RAILROAD COMPANY(IES) HERE).

(Supplementing Subsection 7.05)

Railroad insurance will be in accordance with Section 7.05 of the Standard Specifications and the following:

Since the locations of projects involving railroads are unknown, the Contractor will not be required to submit the necessary railroad insurance amounts prior to execution of the contract. Some of the Railroad companies, State agencies and Authorities that operate railroads in District 6 are as follows:

MBTA, CSX, Amtrak, Fore River Transportation, and Pan Am,

Upon assignment of a project which requires railroad insurance, the Contractor shall contact the railroad for insurance requirements and submit estimates (as determined by the Engineer) for insurance acceptable to the railroad and the Engineer. The insurance policy should be in the form that is acceptable to the Railroad and generally the policy may be AAR/AASHTO or ISO/RIMA (but not Oregon) or current edition for Railroad Protective Liability. The price shall be approved by the Engineer before purchasing coverage. The Engineer may request up to three insurance quotes. After approval the Contractor shall obtain the insurance and submit the policy to the Department.

The Contractor will be reimbursed for the insurance premium upon submittal of paid receipts.

A notice to proceed will be given after the acquisition of the insurance.

If the Contractor is unable to secure said railroad insurance (and especially if the Contractor is uninsurable) the Engineer may decide to cancel all future obligations and terminate the contract.

NONCONFORMING COMPRESSIVE STRENGTH OF CEMENT CONCRETE

Concrete with compressive strength test results failing to attain the limits specified in Table 901.64-3 of 901.64.B: Acceptance Testing shall be evaluated for structural adequacy and serviceability at the Contractors' expense. The Department will review all production records, the concrete test records, petrographic analysis report, field notes, and the placement records for the concrete in question. If the Engineer determines the material is found to be adequate to remain in place, payment shall be adjusted in accordance with the following formula:

$$P = \frac{2(fc - f'c)(UP)(Q)}{f'c}$$

Where:

P = pay adjustment for substandard concrete

f'c = specified minimum compressive strength at 28 days

fc = substandard concrete cylinder compressive strength at 56 days

Q = quantity of concrete represented by the acceptance cylinders tested

UP = unit contract price or the lump sum breakdown price per cubic yard
for the class of concrete involved complete in place

SUBMITTALS/CONTRACTOR'S WORK REPORT

Each time there is an improvement or repair performed, it shall be recorded by the Contractor in a log supplied by him at no additional compensation. Three (3) legible copies of all pages of the log that contain new entries shall be furnished once every month to the Engineer. Each log entry shall include a breakdown of the contract items and include detailed locations with corresponding mile marker or station. A sample daily report shall be submitted to the Engineer for approval at the pre-construction conference.

PRUNING

Any necessary pruning will be done in accordance with the National Arborist Association Pruning Standards as found within the Standard Practices for Tree, Shrub and Other Woody Plant Material, ANSI A300.

Tree Damage

The Contractor shall be responsible for the health and survival of existing trees that are to be retained in the immediate vicinity of the work area. Damage that can be remedied by corrective measures shall be repaired immediately. Broken limbs shall be pruned according to industry standards. Wounds shall not be painted. Trees or shrubs that are damaged irreparably shall be replaced. Cost of replacement trees shall be borne by the Contractor.

WORKER PROTECTION

When poison ivy is encountered, the contractor is required to provide personal protection equipment to protect the workers at no cost to the Department. The contractor's personnel must wear eye protection during the work progress.

HOLIDAY WORK RESTRICTIONS

(Supplementing Subsection 7.09)

The District Highway Director (DHD) may authorize work to continue during these specified time periods if it is determined by the District that the work will not negatively impact the traveling public. DHD may allow work in those areas on a case by case basis and where work is behind barrier and will not impact traffic

Below are the holiday work restrictions:

New Years Day (Federal Holiday)

No work on major arterial roadways from 5:00 AM on the day before until the normal start of business on the next subsequent business day. No work on local roadways on the holiday without permission by the DHD and the local police chief.

Martin Luther King's Birthday (Federal Holiday)

No work restrictions due to traffic concerns, however work on local roadways requires permission by the DHD and local police chief.

President's Day (Federal Holiday)

No work restrictions due to traffic concerns, however work on local roadways requires permission by the DHD and local police chief.

Evacuation Day (Suffolk County State Holiday)

No work restrictions due to traffic concerns.

Patriot's Day (State Holiday)

Work restrictions will be in place for Districts 3 and 6 along the entire Boston Marathon route and any other locations that the DHD in those districts determine are warranted so as to not to impact the marathon. All other districts work restrictions will be as per DHD.

Mother's Day

No work on Western Turnpike and Metropolitan Highway System from 5:00 AM on the Friday before, until the normal start of business on the following day.

Memorial Day (Federal Holiday)

No work on major arterial roadways from 5:00 AM on the Friday before, until the normal start of business on the following day.

HOLIDAY WORK RESTRICTIONS (Continued)**Bunker Hill Day (Suffolk County State Holiday)**

No work restrictions due to traffic concerns.

Juneteenth

No work restrictions due to traffic concerns, however work on local roadways requires permission by the DHD and local police chief.

Independence Day (Federal Holiday)

No work on major arterial roadways from 5:00 AM on the day before until the normal start of business on the next subsequent business day. No work on local roadways on the holiday without permission by the DHD and the local police chief.

Labor Day (Federal Holiday)

No work on major arterial roadways from 5:00 AM on the Friday before, until the normal start of business on the following day.

Columbus Day (Federal Holiday)

No work on major arterials from 5:00 AM on the Friday before, until the normal start of business on the following day

Veterans' Day (Federal Holiday)

No work restrictions due to traffic concerns.

Thanksgiving Day (Federal Holiday)

No work on major arterials from 5:00 AM two days before until the normal start of business on the following Monday.

Christmas Day (Federal Holiday)

No work on major arterial roadways from 5:00 AM on the day before until the normal start of business on the next subsequent business day.

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 his/her intention to commence operations affecting such utilities at least one week in advance of the commencement of such operations and the Contractor shall at that time file a copy of such notice with the Engineer.

The District Office maintains a list of utility contact persons, addresses and telephone numbers for each town, which may be requested by the Contractor for each location of work. Additionally, a list of public and private utilities can be found on the MassDOT website at:

<https://hwy.massdot.state.ma.us/webapps/utilities/select.asp>

Select District 6 on top of the webpage, select the City/Town, and then locate the utility.

The utility contact list is for guidance only and is not guaranteed to be complete or up to date.

Town officials are shown at the website <http://www.mass.gov> under the "for Government" tab, select "City/Town official directory" under "Online Services" heading. Enter the city/town on the left of the webpage and locate the official to contact.

The Contractor shall also be responsible for informing the following officials in each area that he is assigned to work in as required by the Engineer:

Superintendent, Department of Public Works or Town Engineer
Superintendent, Water Department
Superintendent, Sewer Department
Police and Fire Department
Electric Department

NATIONAL GRID EMERGENCY TELEPHONE NUMBERS**GAS:**

Emergency: 1-800-233-5325

New Service: 1- 877-696-4743

Customer Support: 1-800-732-3400

ELECTRIC:

Outage/ Emergency: 1-800-465-1212

New Service: 1-800-375-7405

Customer Support: 1-800-322-3223

EVERSOURCE EMERGENCY TELEPHONE NUMBERS**GAS:**

Outage/ Emergency: 800-592-2000

New Service: 866-678-2744

Customer Support: 800-592-2000

ELECTRIC:

Outage/ Emergency: 800-592-2000 or 844-726-7562

New Service: 1-888-633-3797 (1-888-need pwr)

Customer Support: 1-800-340-9822

MASSDOT I-91, I-90 and I-291 FIBER OPTIC CABLE NOTIFICATION AND PROTECTION REQUIREMENTS

Prior to the start of any excavation work on I-91, I-90 or I-291, it shall be the responsibility of the Contractor to make their own investigation in order to assure that no damage to existing Fiber Optic Cable (FOC), electrical and signal cables, handholes, ITS cameras, overhead and ground mounted variable message boards, and other appurtenant infrastructure (jointly referred to as the ITS infrastructure) will occur. Extreme care shall be taken when excavating adjacent to or in the vicinity of existing ITS infrastructure. The Contractor may be required to hand dig within 18" either side of the conduit, as directed by the engineer and with no additional compensation, and will be held financially responsible for repairing any damage to the ITS infrastructure. Damage to the ITS infrastructure due to Contractor operations shall be repaired by MassDOT hired and approved Contractors and billed to the Contractor. The Contractor shall be responsible for all costs relating to such repairs.

COMPLIANCE WITH THE NATIONAL DEFENSE AUTHORIZATION ACT
(Supplementing Subsection 7.01)

On all projects, the “Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment” Regulation (2 CFR 200.216) prohibits the Contractor from using or furnishing the following telecommunications equipment or services:

- Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
- For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
- Telecommunications or video surveillance services provided by such entities or using such equipment.
- Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

This prohibition applies to all products manufactured by the aforementioned companies, including any individual components or parts.

By submitting a bid on a project, the Contractor certifies that all work will be in compliance with the terms of 2 CFR 200.216. The Contractor shall submit a COC indicating compliance with the above provisions for all telecommunications equipment or services included in the Contract.

Payment for the item in which the materials are incorporated may be withheld until these COCs are received. Any cost involved in furnishing the certificate(s) shall be borne by the Contractor.

ENVIRONMENTAL PERMITS, CONDITIONS & RESTRICTIONS

No environmental permits have been obtained in advance for this Contract. No work may begin or occur that could affect water, wetlands, banks, land under water bodies, flood-prone areas, or other protected environmental resource areas until all required environmental permits have been secured.

If field conditions or the Contractor's proposed methods require environmental permits, the Contractor must notify the Resident Engineer before starting the proposed activity. The Resident Engineer will coordinate all communication with local, state, and federal environmental agencies through the MassDOT Environmental Section.

Any delays resulting from the filing, obtaining, or modification of permits shall not be grounds for a claim. The Contractor may also be required to provide additional information regarding proposed work subject to environmental regulations.

No debris of any kind shall be allowed to enter water or wetland resource areas, whether temporarily or permanently.

The Contractor shall not enter, disturb, or otherwise impact any existing wetlands, banks, land under water bodies, or land subject to flooding until all required erosion and sediment control measures are fully in place.

Any equipment or machinery found leaking oil, lubricants, or any other pollutant shall be removed immediately from the work site and shall not return until fully repaired.

The Contractor shall take all necessary precautions to prevent pollutants from spreading beyond the limits of the construction activity area and shall implement all required measures to remove pollutants from streams or other affected areas, in accordance with the provisions of the Massachusetts Clean Water Act. For guidance regarding appropriate measures for specific situations, the Massachusetts Department of Environmental Protection, 100 Cambridge Street, Boston, MA 02134, may be contacted.

CONTRACTOR ACTIVITY ADJACENT TO WETLANDS

The Contractor shall not stockpile material or equipment, perform maintenance or refuel equipment in a wetland area, within 100 feet of a wetland, or within 200 feet of a river, stream, pond, or other similar open body of water.

CONTRACTOR ACTIVITY ADJACENT TO CURB AND SIDEWALK

Any curbing and associated pavements removed by the Contractor in order to cut or remove trees or stumps shall be reset or rebuilt, and full compensation for such work shall be included in the contract unit price for the tree and stump removal items involved.

PRECAUTIONS FOR PROTECTION OF THE ENVIRONMENT

During the execution of work under this Contract, the Contractor shall exercise care in the placement and storage of equipment, materials and debris as some areas of the site are in environmentally sensitive areas. No equipment, materials or debris can be placed or stored in or near a resource or drainage area leading to a resource as directed by the Engineer.

Storage and lay-down areas within depot yards must be first approved by the Engineer in concurrence with the Depot Foreman to ensure no adverse impacts to maintenance operations.

EMERALD ASH BORER ADVISORY

To the extent possible, all trees and brush shall be disposed on site, typically chipped and spread in place. When trees or brush must be removed, such as in urban, or otherwise populated areas, Contractor shall identify proposed location for disposal, and provide written notification to the Engineer for approval. Disposal shall be in city or town of project, or at minimum, within county, of construction operations.

Additional information can be found at

<https://www.mass.gov/guides/emerald-ash-borer-in-massachusetts>

NORTHERN LONG-EARED BAT AND TRICOLORED BAT PROTECTION

The northern long-eared bat (*Myotis septentrionalis*; NLEB) and tricolored bat (*Perimyotis subflavus*; TCB) are listed as federally endangered or proposed endangered, respectfully, under the Endangered Species Act (ESA). The U.S. Fish and Wildlife Service (USFWS) developed this guidance to address ESA compliance and promote conservation of NLEB and TCB. As there is no Federal nexus (Federal funding or permits) for this project, Section 7 consultation was not required or conducted. However, Section 9 of the ESA prohibits anyone from “taking” or harming an endangered species, and the below language shall be adhered to in order to maintain compliance with the ESA.

The following Avoidance and Minimization Measures (AMMs) must be strictly adhered to in order to protect NLEB and TCB and to be in compliance with the ESA. Contact MassDOT Environmental Services - Wildlife & Endangered Species Unit Supervisor (David Paulson, david.j.paulson@dot.state.ma.us , 857-262-3378) for questions about project limits, restrictions, or conservation measures.

The Resident Engineer can check on the status of AMM applicability by sending a locus map of the proposed work to MassDOT Highway Division’s Environmental Services Section - Wildlife & Endangered Species Unit Supervisor for review and a determination if some of the AMMs and TOY restriction can be waived.

Required AMM for all projects:

- The Contractor shall ensure all personnel working in on the project site are aware of all environmental commitments related to NLEB and TCB, including all applicable AMMs. NLEB Bat information (<https://www.fws.gov/midwest/endangered/mammals/nleb/> and <https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus>) shall be made available to all personnel.

If temporary lighting is proposed within the project scope, the following AMM is applicable:
Lighting AMM:

- Direct temporary lighting away from suitable habitat during the active season: **April 15 to October 31.**

If the Removal of Trees and/or Woody Vegetation >3-inch in diameter is proposed within the project scope, the following AMMs are applicable:

Tree AMMs:

- If additional cutting is proposed by the Contractor that is outside the scope of this contract, additional review is required by the MassDOT Highway Division’s Environmental Services Section, and additional review and restrictions may be required by the USFWS.
- Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).
- In order to protect northern long-eared bats and their young during their active season, **no tree cutting shall be conducted during the Time of Year (TOY) restriction of April 15 to October 31.**
- Do not remove **documented** or NLEB roosts that are still suitable for roosting, or trees within 0.25 miles of roosts, or **documented** foraging habitat any time of year (<http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-andconservation/rare-mammals/northern-long-eared-bat.html>).
- The Contractor shall ensure all personnel working in on the project site are aware of all environmental commitments related to NLEB and TCB, including the **TOY** restriction.

ASIAN LONGHORNED BEETLE ADVISORY

This project falls within the Asian Longhorned Beetle (ALB) Eradication Program Regulated Boundary. Bidders should familiarize themselves with the ALB Factsheet, Federal Regulations, and the Animal and Plant Health Inspection Service (APHIS)/USDA website www.aphis.usda.gov. All contract bid items involving removal of trees or portions of trees may be affected by this condition. It is possible that certain additional training & certification requirements and special disposal requirements will be required at a minimum. Bidders shall include any additional costs of compliance with city, state and federal regulations within the above bid items at this time.

Working in Massachusetts' ALB Regulated Areas APHIS has partnered with the U.S. Forest Service, the Massachusetts Department of Conservation and Recreation, the Massachusetts Department of Agricultural Resources, and the City of Worcester. Together, these organizations form the ALB Cooperative Eradication Program in Massachusetts. Both Federal and State law establish regulated areas around ALB infestations. The regulated areas assist in beetle eradication by curtailing the movement of materials that could host populations of the ALB. This keeps infestations from spreading. Federal and State laws outline the conditions and requirements for moving regulated articles out of or within the infested area. The Federal regulation can be found at 7 CFR 301.51. Training sessions, workshops, and other outreach tools designed to assist businesses with compliance are offered in the Worcester area to explain the ALB and laws enacted to eradicate it.

The Contractor must be aware of the Regulated Boundary as it may be expanded during the execution of the work under this Contract. A map of this area can be found at:
<https://www.mass.gov/guides/asian-longhorned-beetle-in-massachusetts#-current-detections->

DISPOSAL OF TREE DEBRIS

All materials removed under this contract shall be disposed of by the Contractor outside and away from the limits of the project in accordance with all applicable laws. Debris shall not be permitted to accumulate and all work areas shall be cleaned up to the satisfaction of the Engineer.

Debris shall be removed from the site and disposed of by the Contractor subject to the regulations and requirements of local authorities governing the disposal of such materials, at no additional compensation. The Contractor shall make his/her own arrangements for disposal. No disposal shall be made on property of the Commonwealth.

CONTAMINATED MATERIALS

The Contractor must be aware of the potential of encountering oil and hazardous materials during clearing and grubbing, tree removal and stump removal operations.

In the event contaminated soil and/or groundwater are encountered, the Contractor must immediately cease the operation, secure the site and notify the Engineer immediately.

DISPOSAL OF EXCAVATION MATERIAL

Surplus materials obtained from any type of work performed by the Contractor, and not needed for further use as determined, shall become the property of the Contractor and shall be disposed of by him outside the limits of the State Highway Layout. This removal will be subject to the regulations and requirements of the authorities governing the disposal of such materials at no additional compensation. Payment for this work shall be included in the bid unit price under the applicable item from which the material was obtained.

MULTIPLE CREWS

Since this contract encompasses all of District <X> the Contractor shall be prepared to provide more than one crew as needed throughout the duration of the contract. If additional crews are requested but not provided the Contractor shall be assessed non-response damages as described within the special provisions.

SOIL STOCKPILING DIRECTIVE P-22-001

Any stockpiling of soil must be performed in compliance with Policy Directive P-22-001, Off-Site Stockpiling of Soil from MassDOT Construction Projects. This directive limits the allowable locations for off-site stockpiling of soil generated during MassDOT projects and includes various requirements that must be satisfied by the contractor prior to off-site stockpiling. The Contractor is responsible for identifying a suitable stockpile location.

TRUCK SAFETY DEVICES

(Supplementing Subsection 7.04: Motor Vehicles)

All motor vehicles subject to section 7 of chapter 90 to be operated under this Contract shall be equipped with safety devices as provided therein and in 540 CMR 4.00.

By December 31, 2025, the contractor shall certify to the Registry of Motor Vehicles, in a manner prescribed by the Registrar, that all applicable vehicles are equipped with Lateral Protective Devices, Convex Mirrors, Cross Over Mirror(s) and Back Up Cameras in accordance with the requirements of 540 CMR 4.00.

The Contractor shall provide evidence satisfactory to the Department to demonstrate compliance with the above certification requirement for all applicable vehicles operated under this contract by the Contractor and its subcontractors and vendors in a manner set forth by the Department. Thereafter, the Contractor shall have an affirmative obligation to continue to provide such evidence of compliance on an ongoing basis and no later than 7 days after certification with the Registry of Motor Vehicles of any additional vehicles operated under this contract by the Contractor and its subcontractors and vendors.

Non-compliance with respect to a vehicle that is subject to 540 CMR 4.00 may subject the Contractor to statutory fines as established in M.G.L. c. 90, § 7 and/or contractual remedies up to and including termination of the contract.

SUBSECTION 8.14 UTILITY COORDINATION, DOCUMENTATION, AND MONITORING RESPONSIBILITIES

A. GENERAL

In accordance with the provisions of Section 8.00 Prosecution and Progress, utility coordination is a critical aspect to this Contract. This section defines the responsibility of the Contractor and MassDOT, with regard to the initial utility relocation plan and changes that occur as the prosecution of the Work progresses. The Engineer, with assistance from the Contractor shall coordinate with Utility companies that are impacted by the Contractor's operations. To support this effort, the Contractor shall provide routine and accurate schedule updates, provide notification of delays, and provide documentation of the steps taken to resolve any conflicts for the temporary and/or permanent relocations of the impacted utilities. The Contractor shall provide copies to the Engineer of the Contractor communication with the Utility companies, including but not limited to:

- Providing advanced notice, for all utility-related meetings initiated by the Contractor.
- Providing meeting minutes for all utility-related meetings that the Contractor attends.
- Providing all test pit records.
- Request for Early Utility work requirements of this section (see below).
- Notification letters for any proposed changes to Utility start dates and/or sequencing.
- Written notification to the Engineer of all apparent utility delays within seven (7) Calendar Days after a recognized delay to actual work in the field – either caused by a Utility or the Contractor.
- Any communication, initiated by the Contractor, associated with additional Right-of-Way needs in support of utility work.
- Submission of completed Utility Completion Forms.

B. PROJECT UTILITY COORDINATION (PUC) FORM

The utility schedule and sequence information provided in the Project Utility Coordination Form (if applicable) is the best available information at the time of the bid and has been considered in setting the contract duration. The Contractor shall use all of this information in developing the bid price and the Baseline Schedule Submission, inclusive of the individual utility durations sequencing requirements, and any work that has been noted as potentially concurrent utility installations.

C. INITIATION OF UTILITY WORK

The Engineer will issue all initial notice-to-proceed dates to each Utility company based on either the:

- 1) Contractor's accepted Baseline Schedule
- 2) An approved Early Utility Request in the form of an Early Utility sub-net schedule (in accordance with the requirements of this Subsection)
- 3) An approved Proposal Schedule

C.1 - BASELINE SCHEDULE – UTILITY BASIS

The Contractor shall provide a Baseline Schedule submission in accordance with the requirements of Subsection 8.02 and inclusive of all of the information provided in the PUC Form that has been issued in the Contract documents. This is to include the utility durations, sequencing of work, allowable concurrent work, and all applicable considerations that have been depicted on the PUC Form.

SUBSECTION 8.14 (Continued)

C.2 – EARLY UTILITY REQUEST – (aka SUBNET SCHEDULE) PRIOR TO THE BASELINE
All early utility work is defined as any anticipated/required utility relocations that need to occur prior to the Baseline Schedule acceptance. In all cases of proposed early utility relocation, the Contractor shall present all known information at the pre-construction conference in the form of a ‘sub-net’ schedule showing when each early utility activity needs to be issued a notice-to-proceed. The Contractor shall provide advance notification of this intent to request early utility work in writing at or prior to the Pre-Construction meeting. Prior to officially requesting approval for early utility work, the Contractor shall also coordinate with MassDOT and all utility companies (private, state or municipal) which may be impacted by the Contract. If this request is acceptable to the Utilities and to MassDOT, the Engineer will issue a notice-to-proceed to the affected Utilities, based on these accepted dates.

C.3 – PROPOSAL SCHEDULE - CHANGES TO THE PUC FORM

If the Contractor intends to submit a schedule (in accordance with MassDOT Standard Specifications, Division I, Subsection 8.02) that contains durations or sequencing that vary from those provided in the Project Utility Coordination (PUC) Form, the Contractor must submit this as an intended change, in the form of a Proposal Schedule and in accordance with MassDOT Standard Specifications, Division I, Subsection 8.02. These proposed changes are subject to the approval of the Engineer and the impacted utilities, in the form of this Proposal Schedule and a proposed revision to the PUC form. The Contractor shall not proceed with any changes of this type without written authorization from the Engineer, that references the approved Proposal Schedule and PUC form changes. The submission of the Baseline Schedule should not include any of these types of proposed utility changes and should not delay the submission of the Baseline Schedule. As a prerequisite to the Proposal Schedule submission, and in advance of the utility notification(s) period, the Contractor shall coordinate the proposed utility changes with the Engineer and the utility companies, to develop a mutually agreed upon schedule, prior to the start of construction.

D. UTILITY DELAYS

The Contractor shall notify the Engineer upon becoming aware that a Utility owner is not advancing the work in accordance with the approved utility schedule. Such notice shall be provided to the Engineer no later than seven (7) calendar days after the occurrence of the event that the Contractor believes to be a utility delay. After such notice, the Engineer and the Contractor shall continue to diligently seek the Utility Owner’s cooperation in performing their scope of Work.

In order to demonstrate that a critical path delay has been caused by a third-party Utility, the Contractor must demonstrate, through the requirements of the monthly Progress Schedule submissions and the supporting contract records associated with Subsection 8.02, 8.10 and 8.14, that the delays were beyond the control of the Contractor.

SUBSECTION 8.14 (Continued)

All documentation provided in this section is subject to the review and verification of the Engineer and, if required, the Utility Owner. In accordance with MassDOT Specifications, Division I, Subsection 8.10, a Time Extension will be granted for a delay caused by a Utility, only if the actual duration of the utility work is in excess of that shown on the Project Utility Coordination Form, and only if;

- 1) proper Notification of Delay was provided to MassDOT in accordance with the time requirements that are specified in this Section
- 2) the utility delay is a critical path impact to the Baseline Schedule (or most recently approved Progress Schedule)

E. LOCATION OF UTILITIES

The locations of existing utilities are shown on the Contract drawings as an approximation only. The Contractor shall perform a pre-construction utility survey, including any required test pits, to determine the location of all known utilities no later than thirty (30) calendar days before commencing physical site work in the affected area.

F. POST UTILITY SURVEY – NOTIFICATION

Following completion of a utility survey of existing locations, the Contractor will be responsible to notify the Engineer of any known conflicts associated with the actual location of utilities prior to the start of the work. The Engineer and the Contractor will coordinate with any utility whose assets are to be affected by the Work of this Contract. A partial list of utility contact information is provided in the Project Utility Coordination Form.

G. MEETINGS AND COOPERATION WITH UTILITY OWNERS

The Contractor shall notify the Engineer in advance of any meeting they initiate with a Utility Owner's representative to allow MassDOT to participate in the meeting if needed.

Prior to the Pre-Construction Meeting, the Contractor should meet with all Utility Owners who will be required to perform utility relocations within the first 6 months of the project, to update the affected utilities of the Project Utility Coordination Form and all other applicable Contract requirements that impact the Utilities. The Contractor shall copy the Engineer on any correspondence between the Utility Owner and the Contractor.

H. FORCE ACCOUNT / UTILITY MONITORING REQUIREMENTS

The Engineer will be responsible for recording daily Utility work force reports. The start, suspension, re-start, and completion dates of each of the Utilities, within each phase of the utility relocation work, will be monitored and agreed to by the Engineer and the Contractor as the work progresses.

I. ACCESS AND INSPECTION

The Contractor shall be responsible for allowing Utility owners access to their own utilities to perform the relocations and/or inspections. The Contractor shall schedule their work accordingly so as not to delay or prevent each utility from maintaining their relocation schedule.

SUBSECTION 8.02 SCHEDULE OF OPERATIONS

Replace this subsection with the following:

An integrated cost and schedule controls program shall be implemented by the Contractor to track and document the progress of the Work from Notice to Proceed (NTP) through the Contractor Field Completion (CFC) Milestone. The Contractor's schedules will be used by the Engineer to monitor project progress, plan the level-of-effort required by the Department's work force and consultants and as a critical decision-making tool. Accordingly, the Contractor shall ensure that it complies fully with the requirements specified herein and that its schedules are both accurate and updated as required by the specification throughout the life of the project. Detailed requirements are provided in Division II, Section 722 Construction Scheduling.

722.82 Payment Items

722.1 SCHEDULE OF OPERATIONS (TYPE A) - FIXED PRICE \$ _____ LUMP SUM

722.2 SCHEDULE OF OPERATIONS (TYPE B) - FIXED PRICE \$ _____ LUMP SUM

722.3 SCHEDULE OF OPERATIONS (TYPE C) - FIXED PRICE \$ _____ LUMP SUM

SCHEDULE OF OPERATIONS - SCHEDULE TYPE

The applicable schedule type for this project is Type D.

ITEM 100.025**STRING TRIMMER CREW****HOUR**

The work under this Item shall conform to the relevant provisions of Section 101 of the Standard Specifications and the following:

Under this Item, the Contractor shall provide a minimum 3-worker crew when grass/weed growth is required trimming under this contract. The crew consists of three (3) workers - two (2) workers with weed wackers and one (1) worker raking and cleaning debris/clippings with a pickup truck with high visibility flashing lights will be required but incidental to the cost of the crew-hour.

Neat trimming will be required around trees, ledges, berm, piers, abutments, headwalls and other structures within the mowing areas. This also will include raking and picking up cuttings when required. Trimming will also be required around delineators, tenth of mile markers, utility poles, sign posts, and under guard rail.

Cut vegetation shall be removed immediately following work activities to avoid obstruction to roadways, streams, and drainage appurtenances.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 100.025 will be measured for payment by the Hour. Payment will be for the time spent at the job site and travel between job sites only.

Item 100.025 will be paid for at the Contract unit price per Hour, which price shall include a crew (as noted above) consisting of three persons, job truck, hand tools, gas powered string trimmer (weed wacker), rakes, backpack blower and all labor and equipment normally associated with this type of work with no additional compensation.

No separate payment will be made for mobilization, travel time to and from the Contractor's base of operations, any standby time, and fuel for equipment, but all costs in connection therewith shall be included in the Contract unit price bid. Item 100.025 will be paid in 0.5 hour increments.

ITEM 102.15**TREE TRIMMING CREW****HOUR**

Work to be done shall conform to the relevant provisions of Section 101 of the Standard Specifications. The work consists of removing all dead, dying, broken and certain other limbs and branches as described hereinafter and the removal of all stubs of limbs and branches from all designated trees located within the limits of the State Highway in this contract and the satisfactory disposal of all such removed debris.

Work consists of mobilizing a tree-trimming crew for trimming roadside areas including but not limited to ramp systems, bridge overpasses, sign sight distance improvement, and as directed by the Engineer. These areas may be smaller than 0.25 acres. This Item will also include clean up after smaller severe weather events as directed by the Engineer.

This Item can also be used to clean up after smaller severe weather events when the cleanup work does not involve sufficient contract items.

All pruning and tree work shall be in conformance with the most current version of the American National Standards Institute (ANSI) Standard Z-133.1 and A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance.

The minimum crew consists of the following: a supervisor and two tree-trimmers/laborers. The crew shall be equipped with all necessary equipment needed to complete the work including, but not limited to bucket trucks, log trucks, pickup trucks, chippers, gas powered chain saws, hand saws, loppers, shears, pruners, branch trimmers, ladders, tree-climbing equipment, etc. Fuel for equipment shall also be considered incidental to this item.

Incidental to this item, the Contractor shall provide to the Engineer one (1) copy of the most current version of the American National Standards Institute (ANSI) Standard Z-133.1 and A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance, Part 1: Pruning. These references shall be kept by the Engineer at his office for the length of the Contract.

DESCRIPTION OF WORK

TREE: Shall be defined as having a diameter of 4 inches or over, measured at a point 3 feet above the average ground.

LIMBS AND BRANCHES: Shall be defined as wood having a diameter of ½ inch or over and wood that has a diameter of less than ½ inch shall be considered a TWIG.

A DYING LIMB OR BRANCH: May have live growth at some point, but shall be removed if found to be in an unhealthy condition.

While it is not the intent that every dead, dying and/or broken twig be removed from trees requiring trimming, the tree worker will be required to remove all such twigs accessible in the areas of the tree in which he/she is working.

ITEM 102.15 Continued)

If directed by the Engineer, specific trees or parts thereof which are so located that damage may result from dropping shall be reduced by rope or cable lowering.

Tree shaping may be required on trees, where up-branching done under this contract has distorted the natural symmetry of the tree. Tree shaping shall consist of the removal of limbs and branches from other locations of the tree where removal is desirable to restore natural symmetry.

All sucker growth on all tree trunks within the limits of the contract shall be removed from the ground level to the beginning of the main branch system.

Any and all branches extending directly below a street luminaire as to limit the light reaching the street or path/sidewalk surfaces shall be removed and all branches shall be cut back to afford a minimum of 5 foot clearance on all sides of the luminaire. The path/sidewalk surface shall be considered as the area from the edge of the roadway surface to the edge of the path/sidewalk surface farthest from the roadway.

Recognized tree surgery practices direct that all limbs and branches which require removal and all stubs regardless of age be cut NEARLY flush, either to a union with the next larger sound limb, or branch, or NEARLY flush to the trunk of the tree.

By cutting NEARLY, but not quite, flush with the trunk, limb or branch, the "collar" is left at the top of the wound (in the crotch of the union). This will permit the callus growth to cover the wound in a shorter period of time.

Method of Measurement and Basis of Payment

Measurement and Payment for item 102.001 is by the Hour, which includes full compensation for all men and equipment. Minimum Pay Limits will be four (4) hours, decimal pay limits will be 0.5 hours thereafter. Work under this item shall not be performed in conjunction with items 102.1 or 102.12. without the authorization of the Engineer. If this item is used in conjunction with other items of work the four hour minimum does not apply.

The compensation is for time spent at the job site and travel between job sites, but shall not include travel time to and from the Contractor's base of operations.

Payment for any work for which there is a contract item will be paid for at the contract unit price and no further payment shall be made under this Item.

ITEM 102.152**STORM RESPONSE CREW****HOURLY**

Under this Item, the Contractor shall respond to emergencies related to storm damage, which includes (but is not limited to) tree removal, clean-up, and improvements as directed by the Engineer.

The Item shall consist of a minimum three (3) worker crew, 1 (one) bucket truck, 1 (one) chipper, and 1 (one) log truck. The bucket truck shall have a minimum reach of 40 feet. The log truck shall have a minimum capacity of 60 cubic yards.

Upon notification, for use of this item, the Contractor shall respond within a minimum of two (2) hours to the storm related emergency. If, after such notification, the Contractor has not responded and started work at the assigned location within two (2) hours, a damages will be assessed in the form of a contract payment reduction of Ten Thousand Dollars (\$10,000) for each time there is a failure to respond or failure to respond with the appropriate equipment described herein.

Item 748.1, Emergency Response is applicable under this item.

MassDOT reserves the right to use this item as needed; however, the item will typically be used during weather related incidents.

Method Of Measurement And Basis Of Payment

Item 102.151 will be measured and paid for at the Contract unit price per Hour. This cost shall include full compensation for a crew as noted above, one bucket truck, one chipper, one log truck, rakes, standard hand tools, and all labor and equipment necessary for the completion of the work.

Price bid for this item shall be reduce by 75% if the above mentioned equipment cannot be obtained for contract work assignments.

Travel time between emergency job sites shall be compensated for under this item. Decimal pay limits will be 0.5 hours. Travel time to and from the emergency site to the Contractor's base of operations is not included in this cost.

<u>ITEM 103.</u>	<u>TREE REMOVED - DIAMETER UNDER 24 INCHES</u>	<u>EACH</u>
<u>ITEM 104.</u>	<u>TREE REMOVED - DIAMETER 24 INCHES AND OVER</u>	<u>EACH</u>

The work to be done under this item shall conform to the relevant provisions of Section 101 of the Standard Specifications, as designated by the Engineer and the following:

Work under these Items includes the removal and satisfactory disposal, of standing, fallen and uprooted trees, as directed by the Engineer.

Method of Measurement and Basis of Payment

Payment for the work done under these Items shall be made at the contract unit bid prices per EACH. The payment shall include all labor, tools, materials, equipment, and other incidental work necessary to complete the work to the satisfaction of the Engineer.

Backfilling with loam borrow and seeding as directed by the Engineer will be paid under Items 751. and 765 respectively.

<u>ITEM 103.11</u>	<u>TREE REMOVED (CUT FLUSH)</u>	<u>EACH</u>
	<u>DIAMETER UNDER 24 INCHES</u>	
<u>ITEM 104.11</u>	<u>TREE REMOVED (CUT FLUSH)</u>	<u>EACH</u>
	<u>DIAMETER 24 INCHES AND OVER</u>	

The work under these Items shall conform to the relevant provisions of Section 101 of the Standard Specifications and the following:

Standing or leaning trees to be removed under these items shall be cut flush as directed by the Engineer.

All cuttings and brush shall be removed from site immediately and shall not be stored on site. Wood chips shall be removed or spread on site at the direction of the Engineer.

Trunks removed by topping under these items must be removed from the work site the same day that it was topped. Topping shall consist of reducing a tree by removal and the satisfactory disposal of all limbs, branches, and the main trunk to a point below the main branching system.

ITEMS 103.11 and 104.11 (Continued)**Method of Measurement and Basis of Payment**

Items 103.11 and 104.11 will be measured for payment by the unit Each for each tree removed, complete and approved.

Items 103.11 and 104.11 will be paid for at the Contract unit prices per Each under the respective items, which price shall include all labor, tools, materials, equipment, and other incidental work necessary to satisfactorily complete the work.

Partial payment in the amount of 75% of the unit bid price for the item will be paid for a tree removed by topping with its stump remaining when, in the judgment of the Engineer, heavy snow cover or other impediment would make complete removal specified under the item impracticable. The remaining 25% of the unit bid price shall be paid upon complete removal of the item at a later date.

ITEM 105.1**STUMP REMOVED (CUT FLUSH)****EACH**

Work under these Items shall conform to the relevant provisions of Section 101 and the following:

Stumps to be removed under these items shall be cut flush as directed by the Engineer.

Cavities left from stumps removed and areas disturbed from stump removal operations shall be backfilled with materials natural to the surrounding area or at the Engineer's discretion with loam borrow and graded to meet the adjacent ground surface.

Stumps and Standing Trunks removed by topping must be removed from the work site the same day that it was topped.

In grass areas, a minimum of four (4) inches of loam borrow shall be placed over the affected area and seeded, as directed by the Engineer.

All cutting and brush shall be removed from site immediately and shall not be stored on site.

Wood chips shall be removed or spread on site at the direction of the Engineer.

Method Of Measurement And Basis Of Payment

Payment for the work done under Item 105.1 shall be made at the contract unit bid prices per EACH. The payment shall include all labor, tools, materials, equipment, and other incidental work necessary to complete the work to the satisfaction of the Engineer.

Backfilling with loam borrow and seeding as directed by the Engineer will be paid under Items 751. and 765 respectively.

<u>ITEM 105.51</u>	<u>STUMP GRINDING DIAM.UNDER 24 INCHES</u>	<u>EACH</u>
<u>ITEM 105.52.</u>	<u>STUMP GRINDING DIAM. 24 INCHES AND OVER</u>	<u>EACH</u>

Work under this Item shall consist of furnishing a truck or trailer mounted or self-powered stump grinder with rubber tires or tracks capable of accessing stumps on flat or sloped locations as needed.

Each stump shall be ground to a minimum depth of 6 inches below the adjacent ground.

The wood chips are to be raked level upon completion of the work.

Method of Measurement and Basis of Payment

Work under Items 105.51 and 105.52 will be measured and paid for by each stump ground.

ITEM 748.1**EMERGENCY RESPONSE****EACH**

Work under this Item shall conform to the relevant provisions of Section 748. of the Standard Specifications, and the following:

Work consists of the movement of personnel, materials, equipment, and incidentals to the project site within a 4 Hours period after notification by the Engineer ready to commence work to address the emergency situation.

This Item is to be used as a means of providing compensation to the Contractor for the costs associated with providing prompt response to emergency situations. Emergency situations, if and when the designation is necessary, will be determined solely by the Engineer.

Method of Measurement and Basis of Payment

Item 748.1 will be measured and paid for at the contract unit price per EACH, which price shall be for each emergency work notification that requires immediate attention. Payment for emergency response shall for emergency response only and is in addition to any other items that may apply toward the completion of each emergency work order. All labor, material and equipment to perform the emergency work will be paid for under the appropriate pay items.

In the event that another emergency occurs at a different location during the period which the contractor's forces have been mobilized these forces shall be redeployed at no additional compensation. The Engineer shall determine if conditions require another crew to be mobilized as a separate emergency response.

In the event that the Contractor does not satisfy the 4 hours response time, payment for Emergency Response will not be made and the Contractor will be subjected to the Non - Response Damages outlined in this contract.

ITEM 853.8**TEMPORARY ILLUMINATION FOR WORK ZONE****DAY**

The work under this Item shall conform to the relevant provisions of Section 850 of the Standard Specification and the following:

The work under this Item shall include furnishing, deploying and maintaining in proper operating condition a LED balloon diffuser lighting system. These portable light towers shall be used throughout the project area for temporary work zone lighting. The use of unshielded high wattage flood lights shall not be permitted.

These towers shall be used, relocated and adjusted to meet the criteria in Section 850 of the Standard Specifications and the following:

The Contractor shall illuminate the following work zone areas:

- Change in direction (i.e., work zone entrances and exits, crossovers, etc.)
- Tapered areas
- Actual area where the construction is being performed

Light measurement shall be based on the illuminance method and the lighting levels shall be based on the classification of construction activity that is taking place. At no time shall the light level be below 5 fc and the uniformity shall not exceed 6:1. Task Classifications and recommended illumination levels is shown in Table 1.

Task Classifications	Illumination Level	Average Minimum Maintained Illuminance
All work operations areas, setup of lane or road closures, lane closure tapers, and flagging stations, such as: Excavation (all types), Embankment Fill and Compaction, Reworking Shoulders, Asphalt Pavement Rolling, Subgrade, Stabilization and Construction, Base Course Rolling, Sweeping, Cleaning and Landscaping.	Level I	5 foot-candles
Areas on or around construction equipment; asphalt paving, milling, and concrete placement and/or removal, such as, Milling, Removal of Pavement, Asphalt Paving and Resurfacing, Concrete Pavement, Waterproofing and Sealing, Sidewalk Construction, Base Course Grading and Shaping, Surface Treatment, Bridge Decks, Drainage Structures and Drainage Piping, Other Concrete Structures, Barrier Wall and Traffic Separators, Guardrails and Fencing, Striping and Pavement Markings, Repair of Concrete Pavement, Highway Signs, Hole Filling and Repair of Guardrails and Fencing.	Level II	10 foot-candles
Pavement or structural crack/ pothole filling; joint repair, pavement patching and/or repairs, installation of signal/electrical/mechanical equipment, such as, Traffic Signals, Highway Lighting Systems and Crack Filling	Level III	20 foot-candles

TABLE 1
TASK CLASSIFICATIONS AND ILLUMINATION LEVELS

ITEM 853.8 (Continued)

Prior to commencement of work the Contractor shall submit to MassDOT for approval a description of illumination equipment that is proposed to be used on this project, and shall include photometrics that detail the light levels that are to be provided for the particular operation for the type of equipment, level of luminance and height to be installed.

Any potential glare from the lighting system should be considered from each direction and on all approaching roadways and opposing lanes of traffic. Glare from the illumination system should be minimized as much as possible for both workers and motorists in adjacent active travel lanes. If necessary, the Contractor shall provide supplemental hardware, such as, visors, louvers, shields, glare screen and barrier to reduce glare in adjacent active travel lanes.

Equipment mounted lighting may be used to supplement light towers to achieve the required lighting levels for the activity involved per Table 1.

Method of Measurement and Basis of Payment

Item 853.8 will be measured and paid for at the contract unit price per DAY. The cost shall include all labor, materials, equipment, tools and all incidentals required for the design and installation of the work zone lighting system. This shall include, but not be limited to lighting submission preparation, wiring connections, equipment relocations, and include all material and labor incidental for a complete, functional and operational work zone illumination system.

The price of this item shall include the material and labor necessary to install any supplemental hardware required to reduce glare on all adjacent active travel lanes.

The per day price shall be full compensation for all “Temporary Illumination for Work Zone” regardless of the number of concurrent work areas, amount of equipment concurrently in use or the durations of or changes of the work shifts per day.

Furnishing, Installing, resetting, modifying and removing equipment for work zone illumination shall be incidental to Item 853.8.

ITEM 856**ARROW BOARD****DAY**

The work under these Items shall conform to the relevant provisions of Section 856 of the Standard Specifications and the following:

Furnish and install Arrow Boards as directed by the Engineer. Arrow Boards shall comply with the requirements of the current MassDOT Standard Specifications for Highways and Bridges, applicable Supplemental Specifications, the Massachusetts Amendments to the MUTCD, and the approved Temporary Traffic Control Plan (TTCP).

The Arrow Board shall be capable of displaying the operating mode specified in the Plans and shall be maintained in proper working condition throughout the period of use.

The Contractor shall ensure that the Arrow Board is visible to approaching traffic and is properly located, oriented, secured, and maintained for the duration of its use.

The Contractor shall maintain the Arrow Board in continuous operating condition during the required period of use. Any Arrow Board that fails to operate as specified shall be repaired or replaced immediately at no additional cost to the Department.

The Contractor shall be responsible for positioning, repositioning, removing, and returning the Arrow Board to service as required by the sequence of construction.

Arrow Boards shall not be used in a manner inconsistent with the approved TTCP, the Plans, the MUTCD, or the Massachusetts Amendments to the MUTCD.

Method of Measurement and Basis of Payment

Arrow Boards will be measured by the Day. Each period of up to 24 hours during which an Arrow Board is in use will be measured as one Day.

Arrow Boards will be paid for at the contract unit price per Day, which shall include full compensation for furnishing, labor, materials, equipment, positioning, repositioning, operation, maintenance, removal, and returning the Arrow Board to service.

The contract unit price shall also include all incidental work necessary to provide a complete and operational Arrow Board in accordance with the Contract Documents.

ITEM 859.1**REFLECTORIZED DRUMS WITH SEQUENTIAL
FLASHING WARNING LIGHTS**

DAY

DESCRIPTION

Work under this Section consists of furnishing, installing, maintaining in proper operating conditions, and removing reflectorized drums, and any necessary ballast, equipped with sequential flashing warning lights.

MATERIALS

Reflectorized drums shall be listed on the MassDOT Qualified Traffic Control Equipment List.

Reflective sheeting on drums shall meet or exceed ASTM D4956 Type VIII. All drums shall be maintained in a satisfactory manner including the removal of oils, dirt, and debris that may cause reduced retroreflectivity.

The Contractor shall use one of the following sequential flashing warning light systems unless otherwise approved by the Engineer:

1. Empco-Lite LWCS.
2. pi-Lit® Sequential Barricade-Style Lamp; or
3. Unipart Dorman SynchroGUIDE.

Sequential flashing warning lights shall be secured to reflectorized drums per the light manufacturer's specifications.

CONSTRUCTION METHODS

The first ten drums in any merging or shifting taper as designated in the Temporary Traffic Control Plan shall be equipped with sequential flashing warning lights. These lights shall be operating, at a minimum, between dusk and dawn when the taper is deployed.

The successive flashing of the sequential warning lights shall occur from the upstream end of the merging or shifting taper to the downstream end of the taper in order to identify the desired vehicle path. Each warning light in the sequence shall be flashed at a rate of not less than 55, nor more than 75 times per minute.

Warning lights shall be powered off when drums are not deployed in a taper.

ITEM 859.1 (Continued)**Method of Measurement**

A group of ten (10) reflectorized drums with sequential flashing warning lights is considered one (1) unit and will be measured by the day. Each period of up to 24 hours during which this unit is in use will be measured as one day regardless of the number of times that the drums are positioned, repositioned, removed, or returned to service.

Basis of Payment

Reflectorized Drums with Sequential Flashing Warning Lights will be paid for at the contract unit price per day, which shall include full compensation for furnishing, positioning, repositioning, and removing the group of ten (10) drums as directed by the Engineer.

END OF DOCUMENT
