

LATE ITEM VII.B.1.


MOTION


Director Fournier:

The Pease Development Authority Board of Directors approves of issuing a Right of Entry (“ROE”) to CDM Constructors Inc. for the removal of two inactive Defense Logistics Agency fuel pipelines located on PDA property, substantially in accordance with the memorandum of Jared Sheehan, Environmental Compliance Manager, dated June 11, 2024 and draft ROE; attached hereto.

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Memorandum

To: Paul E. Brean, Executive Director 

From: Jared Sheehan, Environmental Compliance Manager 

Date: June 11, 2024

Subject: Defense Fuel Support Point Pipeline Removal - Right of Entry

In April of 2018, the PDA Board of Directors authorized staff to negotiate terms for a right of entry (ROE) with the Department of Defense (DOD) to remove two fuel pipelines from PDA property. The former Pease Air Force Base received jet fuel from an unloading facility on the Piscataqua River in Newington through two cross country fuel pipelines that supplied fuel to the Base storage tanks. The inactive pipelines were closed in 1991 and comprised one 8-inch and one 10-inch diameter pipe running in parallel. These pipes enter PDA property from Arboretum Drive in the vicinity of the traffic circle on the northern edge of the Tradeport and exit PDA property at the northeast corner of the NH Air National Guard (NHANG) property along the North Apron Access Road (Exhibit A – see draft ROE).

The Defense Logistics Agency (DLA), a division of DOD, owns the pipelines and has contracted the Air Force (AF) to oversee the removal of the underground pipelines. The AF has hired CDM Smith (COM) to deconstruct and remove the pipelines from the unloading facility at the Piscataqua River to the NHANG. COM has acquired the appropriate permits to remove the pipelines and NHDES has reviewed and approved the associated work plan submittals. CDM is looking to complete the pipeline removal project before the end of 2024.

The requested ROE would encompass two staging areas and the pipeline corridor from July 1st to December 15, 2024 (Exhibit A – see draft ROE). COM agrees to pay PDA \$9,687 for the six-month term of the ROE with a municipal services fee of \$969 to the City of Portsmouth, for police, fire, and roadway services. The ROE contains insurance and indemnification requirements in favor of the PDA.

At this month's Board of Directors meeting, please ask the Board for authority to enter into a right of entry with CDM to remove the pipelines from PDA property from July 1st through December 15, 2024.

N:\ENGINEER\Board Memos\2024\DFSP Removal ROE.docx

June 14, 2024

Nicole Barry, P.E.
CDM Constructors Inc.
25 Industrial Avenue
Chelmsford, MA 01824

**Re: Right of Entry — Pipeline Removal Project
Pease International Tradeport, Newington, NH**

Ms. Barry:

This Right of Entry (“ROE”), when fully executed, authorizes CDM Constructors Inc. (“CDM”), a Massachusetts corporation registered to transact business in the State of New Hampshire, its employees and subcontractors, to enter upon the premises shown in the attached **Exhibit A** (the “Premises”) for the period July 1, 2024, through December 15, 2024, solely for the purpose of conducting, at its sole risk and on behalf of the United States Air Force, the excavation, removal, and disposal of two (2) underground pipelines and the protective asbestos covering wrapped around the pipelines that were formerly used to carry jet fuel from the former Defense Fuel Support Point in Newington, NH, to the former Pease Air Force Base (“**Pipeline Removal Project**”). This ROE includes access to and use of the temporary laydown and equipment storage areas on the Premises as delineated on **Exhibit A**. This ROE will expire at the end of day on December 15, 2024, unless otherwise extended by written agreement of CDM and the Pease Development Authority (“**PDA**”).

The use, occupation, and maintenance of the Premises pursuant to this ROE shall be: (a) without cost or expense to the PDA; (b) subject to the general supervision and approval of the PDA; and (c) subject to and conditioned upon such rules and requirements as the PDA may prescribe from time to time, including, but not limited to the following:

1. **Non-Exclusive Use of Premises/Revocation of Authorization.** CDM agrees that this ROE does not constitute a grant of an exclusive interest in the Premises, an option to lease the Premises, or an offer to lease the Premises. CDM understands and acknowledges that this ROE (a) allows only temporary use of the Premises; (b) is granted on a non-exclusive basis; (c) is issued based on the understanding and agreement of PDA and CDM that all portions of the pipelines and any asbestos-containing wrap enclosing the pipelines will be completely excavated and removed from the Premises, except as otherwise specifically authorize in this ROE by the PDA in its sole discretion; and (d) may be revoked at will by PDA or terminated at will and that PDA need not state a reason for any such revocation or termination. The use of the Premises shall be orderly and efficient, shall not constitute a nuisance, and shall not cause disruption to other Pease Tradeport activities. Notwithstanding the foregoing, CDM is authorized for the duration of this ROE to secure access to the Premises by adding its padlock to the chain and PDA padlock

securing the travel barrier gate located at the parcel designated 165 Arboretum Drive, provided CDM's connection to the chain barrier and PDA padlock is done in such a way that PDA's separate access through the travel barrier via its own padlock is maintained.

2. **NHDES Work Plans.** All work performed pursuant to this ROE shall be performed in compliance with the work plan(s) approved by the New Hampshire Department of Environmental Services ("NHDES") and attached hereto as **Exhibit B**. In accordance with, but notwithstanding any other contrary or alternate provision of the NHDES-approved work plans, CDM shall undertake and perform a complete removal from the Premises of the two former jet fuel pipelines and any asbestos-containing wrap enclosing the pipelines and pipeline integrity testing and/or closure assessment testing. If releases of jet fuel or other contaminants are documented, they shall be remediated in accordance with the requirements of applicable federal and state law. Any activity undertaken by any of the CDM related parties (defined below) to close in place any portion of the pipelines located within the Premises, except as otherwise specifically authorized by PDA in this ROE or any written amendment to this ROE, shall result in the immediate termination of this ROE, regardless of the receipt of any notice of such termination from the PDA.
3. **Permits and Approvals.** CDM shall be solely responsible at their sole cost and expense for obtaining all permits and authorizations, including without limitation environmental permits and authorizations, filing all notices with the appropriate regulatory authorities, and taking all actions required under applicable federal or state laws or regulations for its operations and activities under this ROE independent of any existing PDA permits, authorizations or notices. By entering into this ROE, CDM certifies that all necessary permits and approvals, including federal, state and local permits or approvals, have been obtained or will be obtained prior to commencement of the activities associated with this ROE.
4. **Additional PDA Environmental, Site and Operational Requirements.** In addition to the requirements of the NHDES work plan(s) set forth in Paragraph 2 above, CDM shall conduct the Pipeline Removal Project in compliance with the following:
 - a. CDM understands and acknowledges that during the Term of this ROE, CDM shall coordinate its work schedule with the PDA Engineering Department to ensure that the ongoing operations at the Pease International Tradeport ("Pease Tradeport") are not disrupted.
 - b. At all times and throughout the duration of this ROE CDM shall ensure full and complete access to all types of vehicles along the North Apron Access Road, except as provided in subparagraph 4.b.i. below. Prior to commencing any excavation or disturbance of the existing roadway, including removal of pavement, roadway shoulders, or any portion of the roadway embankment on, at or under the North Apron Access Road, CDM shall obtain (1) an excavation permit from the City of Portsmouth for the proposed road cut and excavation in accordance with Portsmouth's "Procedures and Specifications for Street Excavations" attached hereto as **Exhibit C**, and (2) an approved dig permit from the PDA Engineering Department following submission of the "Pease Development Authority Dig Permit" application attached hereto as **Exhibit D**.
 - i. In order to excavate and remove the portions of the two pipelines lying beneath the North Apron Access Road, CDM may close that roadway to all through

- traffic, except for emergency vehicles, for any 30 consecutive day period of time between July 1 and August 31, 2024, subject to the following further conditions: (1) CDM notifies Jared Sheehan, PDA Engineering Department, via email at J.Sheehan@peasedev.org no later than the close of business on Monday, June 24, of the 30-day window that CDM has elected to perform the work specified in this subparagraph 4.b.i.; (2) by August 31 CDM shall completely excavate and remove all pipelines from beneath the roadway, complete backfilling and compaction of backfill to the original roadway elevation, and reopen the roadway to all through traffic; (3) CDM shall complete paving of the disturbed portion of the North Apron Access Roadway by November 1, 2024; and (4) if excavation and removal of the pipelines beneath the North Apron Access Road pursuant to this ROE is not commenced by August 20, 2024, CDM shall close in place the portion of the pipelines beneath this roadway in lieu of excavation and removal.
- c. CDM shall limit access to the Premises only to its employees, agents, invitees (representatives of the Air Force and the Defense Logistics Agency), contractors and subcontractors and their respective employees (collectively, “**CDM related parties**”), representatives of PDA, and State and local officials.
 - d. A copy of the final stamped pipeline corridor survey for all portions of the pipelines and pipeline corridor within the boundaries of Pease Tradeport shall be provided to PDA within one hundred twenty (120) days of the completion of the Pipeline Removal Project or the expiration or termination of this ROE, whichever is earlier.
 - e. Following excavation of the pipelines in preparation for, but prior to, pigging, integrity testing and removal of the pipelines, CDM shall provide PDA with a letter, including photographs, describing the observed condition of that portion of the pipelines excavated for the purpose of pigging and integrity testing.
 - f. The PDA Engineering Department shall be notified prior to commencement of any dewatering activity, and CDM shall obtain any permit required under applicable federal or state law required for such activity.
 - g. CDM shall take all steps necessary to ensure that its use of the Premises does not result in the degradation of surface water quality of any surface waters at Pease Tradeport.
 - h. Tracked and wheeled vehicles entering or leaving the Premises shall be inspected and thoroughly cleaned to ensure that soil from the Premises is not transported from the Premises.
 - i. All existing pipelines included in the Pipeline Removal Project located within the boundaries of Pease Tradeport and any asbestos-containing covering surrounding such pipelines shall be excavated and removed from Pease Tradeport. All such excavated pipeline and associated pipeline covering shall be removed as soon as practicable from Pease Tradeport. Disposal of all such removed pipeline and pipeline covering shall be at an authorized waste disposal facility and prior to the expiration or any earlier termination of this ROE. Documentation certifying proper disposal of such materials at an authorized waste disposal facility shall be provided to PDA Engineering Department within ten (10) days of disposal.
 - j. Any soils excavated from areas on the Premises during the Pipeline Removal Project shall be returned to the location from which they were excavated following removal of the pipelines and asbestos-containing covering, unless

- removed from Pease Tradeport for disposal at an authorized waste disposal facility.
- k. No soils excavated from any portion of the pipeline corridor, or any other location, outside of Pease Tradeport shall be brought to, stored at, or used as backfill at any location within Pease Tradeport. Any replacement fill brought to Pease Tradeport that is required to backfill the excavated pipeline trenches or otherwise required to complete performance of the portion of the Pipeline Removal Project located at Pease Tradeport must be certified by testing using EPA method 1633 with DOD table B24 to have no per- and polyfluoroalkyl substances (“**PFAS compounds**”) at concentrations detectable using this EPA analytical method.
 - l. Upon completion of the portion of the Pipeline Removal Project at Pease Tradeport or upon the expiration or termination of this ROE, whichever is earlier, no excavated soils or other excavated materials from any portion of the Premises shall be left on the ground surface of any location at Pease Tradeport, including but not limited to those locations within the Premises used as laydown or equipment storage areas pursuant to this ROE.
 - m. The Premises shall be returned to its condition as existing prior to the commencement of the Pipeline Removal Project, including but not limited to existing roadways and drainage structures, except that: (1) no replanting of trees or other plantings is required for any portion of the Premises beyond what has previously been approved by NHDES as shown on sheet C-113 of the wetlands restoration plan associated with the Standard Dredge and Fill Application File Number 2018-02836; and (2) only the portions of the excavated pipeline corridor located at the parcel designated as 165 Arboretum Drive and at the railroad berm in the vicinity of wetlands A and B must be returned to their original, pre-excavation surface elevations.
 - n. Pipeline excavation in and around the historic building foundation toward the northern end of the pipeline corridor on Pease Tradeport shall be conducted in accordance with the requirements of the New Hampshire Division of Historical Resources.
 - o. Roadway restoration of the North Apron Access Road shall meet or exceed the specifications entitled “Section 32 11 23 Aggregate Base Courses,” “Section 32 12 13 Bituminous Track Coats,” and Section 32 12 17 Hot Mix Bituminous Pavement” attached to this ROE as **Exhibit E**.
5. **Compliance.** CDM shall be responsible for compliance by CDM and the CDM related parties with: (1) all state and federal laws and regulations applicable to the operations and activities undertaken pursuant to this ROE Right of Entry, including without limitation, possessing all required licenses, permits, and approvals required for such activities; (2) all NHDES-approved work plans attached to this ROE as **Exhibit B**; and (3) all provisions of this ROE. By accepting this ROE CDM acknowledges its liability for any failures or omissions by CDM and the CDM related parties to comply or otherwise conduct its operations and activities as set forth in this paragraph.

6. **Plans and Closure Report.** CDM shall provide the PDA Engineering Department with CDM's final closure report at the time such report for the entire project throughout the town of Newington is submitted to NHDES, which, at a minimum, will describe all work performed pursuant to this ROE, as well as an electronic copy, in Autocad.dwg format, of any and all stamped survey plans created as a result of the work performed pursuant to this ROE or within one hundred twenty (120) days of the termination of this ROE, whichever is earlier. Prior to preparing and submitting the foregoing plans and closure report, CDM shall request NHDES to issue a "no further action" determination for those portions of the Pipeline Removal Project located on Pease Tradeport.

7. **Assumption of Risk/Indemnification.**
 - a. CDM and CDM on behalf of the CDM related parties waive, surrender and forever forego any right of recourse against the PDA and the State of New Hampshire and their respective officers, elected and appointed officials, employees, and agents, including without limitation any rights of contribution or indemnification under federal or state law, for any matter arising from, associated with or related to the Pipeline Removal Project, including, but not limited to: (1) the condition of the Premises; (2) the suitability of the Premises for the activities allowed under this ROE; (3) any risk or danger associated with the Premises; or (4) any patent or latent defect associated with the Premises.

 - b. Notwithstanding any other provision of this ROE, CDM shall exonerate, indemnify, pay and protect, defend with counsel approved by the PDA if so requested, save the PDA and the State of New Hampshire and their respective officers, elected and appointed officials, employees, and agents harmless from and against any and all claims (including, without limitation, third party claims for personal injury or real or personal property damage), actions, administrative proceedings (including, without limitation, informal proceedings), judgments, damages, punitive damages, strict liabilities, penalties, fines, costs, taxes, assessments, liabilities (including, without limitation, costs of any removal, remedial or response actions or sums paid in settlements of claims), interest or losses, including reasonable attorneys' fees and expenses (including, without limitation, any such reasonable fees and expenses incurred in enforcing this Agreement or collecting any sums due hereunder), consultant fees, and expert fees, together with all other costs and expenses of any kind or nature (collectively, the "**Costs**") arising from, associated with, or related to CDM's activities under: (1) this ROE; (2) the Pipeline Removal Project; and/or (3) any claim that such Pipeline Removal Project: (a) failed to meet requirements or obligations imposed by or as a result of any applicable federal, state or local law; (b) failed to meet requirements or obligations imposed by or as a result of any Federal Quitclaim Deed conveying the Premises to PDA; (c) resulted in the presence, or suspected presence, discovery, threatened release or suspected release of any Hazardous Material (i) on, in or into the air, soil, ground water, surface water, or improvements at, on, about, under or within the Premises, or (ii) migrating from or to the Premises, or any portion thereof, or elsewhere in connection with the transportation and deposition of Hazardous Material to or from the Premises, and excepting, to the extent permitted by applicable federal or state law, the presence or suspected presence within the Premises, but not the release or suspected release or migration from the Premises resulting CDM activities, of PFAS compounds associated with

the accumulation, management, and placement of soils excavated to remove the jet fuel pipelines on the Premises or returning such soils to the excavated pipeline trenches as backfill consistent with the NHDES-approved work plans; or (d) failed to meet requirements or obligations imposed by or as a result of this ROE.

- c. The indemnification provided in this Paragraph 7 is limited solely to PDA and the State of New Hampshire and their respective officers, elected and appointed officials, employees, and agents and shall specifically apply to, but not be limited to, and include claims or actions against PDA or the State of New Hampshire and their respective officers, elected and appointed officials, employees, and agents brought by or on behalf of CDM or the CDM related parties. The foregoing indemnity shall not apply to Costs to the extent resulting from the gross negligence or willful misconduct of the PDA or the State of New Hampshire, and their respective officers, elected and appointed officials, employees, and agents. If the PDA or the State of New Hampshire, any elected or appointed official, officer, or employee shall suffer or incur any such Costs arising from, associated with, or related to the Pipeline Removal Project, CDM shall pay to the PDA or the State of New Hampshire, any elected or appointed official, officer, or employee, as applicable, the total of all such Costs suffered or incurred by the PDA or such other indemnified party within ten (10) days after demand therefor. Without limiting the generality of the foregoing, the indemnification provided by this Paragraph 7 shall specifically cover Costs, including, without limitation, capital, operating and maintenance costs, arising from, associated with, or related to: (1) any investigation or monitoring of site conditions, any clean-up, containment, remedial, removal or restoration work required or performed by any federal, state or local governmental agency or political subdivision (“**Governmental Agency**”) or performed by any non-governmental entity or person as required by any Governmental Agency because of: (a) the failure of CDM or the CDM related parties to meet requirements or obligations imposed by or as a result of applicable federal state or local law, any NHDES-approved work plan, or this ROE arising from, associated with, or related to the Pipeline Removal Project at the Premises; (b) the failure of CDM or the CDM related parties to meet any covenant or condition contained in an applicable Federal Quitclaim Deed conveying the Premises to PDA; (c) the threatened release, release or suspected release of any Hazardous Material on, in or into the air, soil, groundwater, surface water, or improvements at, on, under or within the Premises or migrating from or to the Premises or any portion thereof, or elsewhere (i) as a result of activities of CDM or the CDM related parties pursuant to this ROE or (ii) in connection with the transportation and deposition of Hazardous Material by CDM or the CDM related parties to, from or about the Premises, Pease Tradeport or any other location; or (d) the failure of CDM or the CDM related parties to meet the requirements or obligations imposed by or as a result of this ROE; and (2) any claims of third parties for loss or damage due to such failure by CDM or the CDM related parties to meet requirements or obligations imposed by applicable federal, state or local laws, this ROE, NHDES-approved work plans or any permit(s), regulation(s), or other applicable requirements arising from, associated with, or related to the Pipeline Removal Project.
- d. “**Hazardous Material**”. As used in this ROE, the term “**Hazardous Material**” shall mean any flammable explosives, radioactive material, hazardous waste,

hazardous material, hazardous or toxic substance, pollutant, contaminant or related materials as defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. § 9601 et seq.), the Hazardous Materials Transportation Act, as amended (49 U.S.C. § 5101 et seq.), the Resource Conservation and Recovery Act, as amended (42 U.S.C. § 6901 et seq.), the Federal Water Pollution Control Act, (33 U.S.C. § 1251 et seq.), petroleum and petroleum derivatives, polychlorinated biphenyls, per- and polyfluoroalkyl substances (PFAS), and materials defined as a hazardous substance, hazardous waste, hazardous material, pollutant, or contaminant under any federal, state or local laws, ordinances, codes, rules, orders, regulations or policies governing the use, storage, treatment, transportation, manufacture, refinement, handling, production, removal, remediation, or disposal thereof as of the date of this ROE or as subsequently amended.

8. **Insurance.** CDM shall have and maintain throughout the term of the Pipeline Removal Project, and with respect to the pipelines' excavation, removal, disposal, and site restoration, coverages for completed operations, and shall cause each and every one of its contractors and sub-contractors to have and maintain throughout the term of the Pipeline Removal Project and for completed operations, the insurance coverages specified below to protect against claims and judgment for bodily injury (including death), property damage, personal injury and for all other damage or injury which may arise in connection with the performance of the Pipeline Removal Project at Pease Tradeport. Each of these policies shall provide for and maintain insurance as described below, and in the event that coverage extends to other sites not included in this ROE, include provision for a dedicated aggregate of not less than \$1,000,000, except as specified for Contractor's Pollution Liability insurance, for the work performed pursuant to this ROE. CDM and its contractors and subcontractors shall be responsible for payment of all insurance deductibles and self-insured retentions.
 - a. Commercial General Liability Insurance to a limit of not less than Two Million Dollars (\$2,000,000.00) per occurrence, with a Professional Liability coverage endorsement in the amount of One Million Dollars (\$1,000,000) per occurrence, naming the PDA and the State of New Hampshire as additional insureds;
 - b. Automobile Liability Insurance covering owned, non-owned and hired vehicles with policy limits of not less than \$1,000,000 per occurrence and \$2,000,000 in the aggregate for bodily injury, death of any person and property damage arising out of the ownership, maintenance and use of such motor vehicles, naming the PDA and the State of New Hampshire as additional insureds;
 - c. Workers' Compensation in the statutory limit as required by New Hampshire Law and Employer's Liability Insurance with policy limits of not less than \$1,000,000 each occurrence/disease/employee; and,
 - d. Umbrella Liability Insurance coverage in excess of the limits and terms in (a) through (d) above, with a combined single limit for bodily injury, death of any person, and property damage of \$5,000,000 for each occurrence, and which shall not exclude any coverage for hazardous substances, pollutants, contaminants, PFAS compounds, or petroleum products, naming the PDA and the State of New Hampshire as additional insureds.

Each such policy or binder therefor issued by the insurer shall contain: (i) a provision that no act or omission of any employee, officer or agent of CDM or its contractors and subcontractors that would otherwise result in forfeiture or reduction of the insurance therein provided shall affect or limit the obligation of the insurance company to pay the amount of any loss sustained; (ii) an agreement by the insurer that such policy shall not be canceled without at least thirty (30) days prior written notice by registered mail to PDA; (iii) provide that the insurer shall have no right of subrogation against PDA or the State of New Hampshire; and (iv) a provision that any liability insurance coverage required to be carried shall be primary and non-contributory with respect to any insurance carried by PDA.

In addition to the coverages above, CDM and its subcontractor, Strategic Environmental Services, shall also have and maintain Contractor's Pollution Liability Insurance exclusively covering performance of the Pipeline Removal Project at Pease Tradeport, with policy limits of not less than \$1,000,000 per claim and \$2,000,000 in the aggregate; and which shall not exclude from coverage any formulation of PFAS compounds, petroleum products, or underground storage tanks, naming the PDA and the State of New Hampshire as additional insureds. Coverage shall extend to completed operations for a period of two years or until regulatory approval of the work and site conditions associated with the Pipeline Removal Project at Pease Tradeport is obtained in the form of a no further action determination by NHDES, whichever event is later.

9. **Usage Fee/Municipal Services Fee.** CDM shall pay to PDA a fee of \$9,687 for the six (6) month term of this ROE ("**Usage Fee**"). The Usage Fee shall be paid, in full, on or before July 1, 2024. In addition to the Usage Fee required to be paid under the terms of the ROE, CDM shall also pay to PDA, as an additional fee, a municipal services fee in the amount of \$969 in accordance with the Municipal Services Agreement by and between the City of Portsmouth, the Town of Newington, and the PDA effective July 1, 1998. The fee is for fire, police and roadway services provided by or on behalf of PDA at Pease Tradeport. The municipal services fee shall be paid in total with the Usage Fee payment.
10. **Easement Interest.** At the conclusion of the pipeline removal project on Pease Tradeport, CDM shall provide to the United States Air Force all documents within CDM's control, including but not limited to pipeline closure reports and survey plans, that may be necessary or useful to any future action by the United States Air Force to extinguish any easement interest it may have in the pipelines or the Premises on Pease Tradeport.
11. **No Right to ROE Extension.** Notwithstanding any other provision of this ROE, (a) PDA's issuance of this ROE does not entitle CDM to any extension of this ROE, except in the sole discretion of the PDA, or to any future ROE for any purpose, whether or not related to the work performed pursuant to this ROE, and (b) nothing herein, including any reference to the State of New Hampshire, shall constitute a waiver or an intent to waive the sovereign immunity of the State of New Hampshire.

Please indicate by your signature below CDM's agreement and return the same to me with evidence of the required insurance and a certificate of corporate authority regarding CDM's signatory below.

Very truly yours,

Paul E. Brean
Executive Director

Agreed and accepted this ____ day of _____, 2024.

CDM Constructors Inc.

By: _____

Print Name: _____

Its Duly Authorized: _____

DRAFT

EXHIBIT "B"

NHDES-APPROVED WORK PLANS

Date	Report	Prepared By	NHDES Site #	Project #
May 10, 2024	Deconstruction Work Plan Defense Fuel Support Point	CDM Smith	199001012	1406
April 23, 2024	Asbestos Abatement Plan Defense Fuel Support Point	CDM Smith	199001012	1406
April 22, 2024	Environmental Protection Plan Defense Fuel Support Point	CDM Smith	199001012	1406
April 22, 2024	Sampling and Analysis Plan Defense Fuel Support Point	CDM Smith	199001012	1406
April 22, 2024	Waste Management Plan Defense Fuel Support Point	CDM Smith	199001012	1406

Located at NHDES Onestop

<https://www4.des.state.nh.us/DESOnestop/SiteDocuments.aspx?SiteNumber=199001012>



CITY OF PORTSMOUTH
NEW HAMPSHIRE

PUBLIC WORKS
DEPARTMENT

**PROCEDURES AND
SPECIFICATIONS FOR STREET
EXCAVATIONS**

Public Works Department
680 Peverly Hill Road
Portsmouth, NH 03801
603-427-1530

Revised: 6/2022

BE IT RESOLVED:

That in order to implement the recommendations of the Fee Committee adopted by the City Council relative to the street excavations and the fees to be charged; therefore, the following actions are hereby taken by the City Council:

EXCAVATION PERMIT

Applications for street excavation permits shall be made online through the City's online permitting system to the Director of Public Works (to be identified as Director in this document), and shall contain information the Director may require. No work will be started until the Director or his designee has authorized the permit.

EXCAVATION PERMIT FEES

Applications shall be accompanied by payment of the current applicable fee(s). The fee schedule shall be updated yearly.

There shall be no permit fee for work being done by a contractor performing or accommodating a City construction contract.

PROCEDURES AND SPECIFICATIONS FOR STREET EXCAVATIONS

Pursuant to Ordinances of the City of Portsmouth, the following regulations for street excavations are hereby adopted:

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SECTION I – STREET EXCAVATION APPLICATION REQUIREMENTS

EXCAVATION PERMIT APPLICATION REQUIRED

No person shall create any type of excavation in any public way or on City-owned land without first applying for and obtaining a permit from the Department of Public Works, except as otherwise provided in these regulations. Permits must be kept at the job site during the excavation project and must be shown upon request by any City personnel.

FEES

Applications for permits are available online through ViewPoint, the City's online permitting system. <https://portsmouthnh.viewpointcloud.com/>
Permit fees are paid online through the ViewPoint system.

Excavation

Excavation Permit Fee: \$250.00 (up to and including the first 100 sq. ft.)
Additional Fee: \$150.00 (for each additional 100 sq. ft. or portion thereof)
Expedited Permit Fee: \$500.00 (within 3 business days)
A Refundable Deposit Fee: \$500.00 (to be refunded upon satisfactory inspection, a \$300 *Crack sealing* fee may be withheld if deemed necessary)

Coring or Shut Off Holes

Up to 5 Holes (coring): \$10.00
6 Holes or Greater (coring): \$25.00
Shut-off Holes (each): \$25.00

There shall be no permit fee for work being done by a contactor performing or accommodating a City construction project.

EXTENDED MAINTENANCE FEES – MORATORIUM ON NEW PAVEMENT

In an effort to protect the City's investment in its infrastructure, excavations in areas under pavement moratorium within the public right-of-way or on City property, are prohibited except as follows:

1. Excavations to remedy a public emergency or a situation that creates an imminent threat to the public safety, health or welfare.
2. Repair or modification to prevent interruption of essential utility services where no reasonable alternatives are available to avoid excavation in new pavement.
3. Relocation work that is mandated by the State or Federal legislation.
4. Utility services for new buildings or parcels without existing utility services where no other reasonable means of providing service exists as determined by the City Engineer.
5. Excavations within protected streets where the City has scheduled the reconstruction within one (1) year due to the failure of the original pavement.

6. Other situations deemed by the Director to be in the best interest of the general public.

When excavations are made in the streets closed by moratorium due to an emergency or the decision of the Department of Public Works, street restoration will be made utilizing methods dictated by the Department. The methods may include, but are not limited to cold-planing and overlay and/or full width overlay. No newly constructed or reconstructed pavement or sidewalk less than four (4) years old will be impacted, except in the case of an emergency. If the situation is deemed an emergency and the pavement or sidewalk is impacted, an extended maintenance fee will be charged as follows:

Fee Schedule:

- a. 12 months or less – 5 times standard cost
- b. 13 to 24 months – 4 times standard cost
- c. 25 to 36 months – 3 times standard cost
- d. 37 to 48 months – 2 times standard cost

LOCATION PLAN

A scaled drawing, plan or a sketch location map, detailing the proposed work, is required at the time of application submission through ViewPoint, the City's online permitting system.

INSURANCE REQUIREMENTS

The contractor shall purchase and maintain insurance of the limits and types specified below and include the following:

The contractor agrees to pay on behalf of and hold harmless the City of Portsmouth for all claims arising in whole or in part from its work in the City.

ADDITIONALLY INSURED

All liability policies shall include the City of Portsmouth, New Hampshire as named additional insured.

1. The contractor's insurance shall be primary in the event of a loss.
2. The additional insured endorsement must include language specifying the entity is to be covered for all activities, performed by or on behalf of the contractor, including the City of Portsmouth's general supervision of the contractor.

EVIDENCE OF INSURANCE

As evidence of insurance coverage, the owner may, in lieu of actual policies, accept official written statements from the insurance company certifying that all the insurance policies specified below are in force for the specified period. The contractor shall submit evidence of insurance to the owner at the time of execution of the excavation permit.

FORMS OF INSURANCE

Insurance shall be in such form as to protect the contractor for all claims and liabilities for damages for bodily injury including accidental death, and for property damage, which may arise from operations under this contract whether such operations were caused by the contractor or by anyone directly employed by the contractor, or by anyone directly or indirectly employed by the contractor.

AMOUNT OF INSURANCE

1. Comprehensive General Liability:
Bodily Injury or Property Damage - \$1,000,000.00
Combined Single Limit, per occurrence
2. Automobile and Truck Liability:
Bodily Injury or Property Damage - \$1,000,000.00
Combined Single Limit, per occurrence

TYPES OF INSURANCE

Purchase and maintain the following types of insurance:

1. Full Workers' Comprehensive Insurance coverage for all people employed by the contractor to perform work on this project. This insurance shall be in strict accordance with the requirements of the most current laws of the State.
2. Bodily Injury and Property Damage Insurance covering the operation of all motor vehicles and equipment, whether owned or not by the contractor, being operated in connection with the execution of the work under this contract.
3. Contractual Liability Insurance coverage in the amounts specified above, under General Liability.
4. Product and Completed Operations coverage to be included in the amounts specified above under Comprehensive General Liability.

AUTHORIZED CONTRACTOR PERMITTING REQUIREMENT

1. Excavation contractors working in the City's public ways and properties shall be licensed with the City.
2. Contractors will need to secure an Excavation Contractor License from the Department of Public Works prior to receiving the Excavation Permit.
3. The contractor, when applying for licensure, will choose the appropriate categories for licensure that they are qualified for.

4. The five categories will be as follows:
 - Water/Sanitary Sewer/Storm Drainage installer
 - Natural Gas installer
 - Conduit/Street Lighting/Traffic Signal installer
 - Electrical or Communication Equipment and Conduit installer
 - Road Construction and/or Sidewalk installer
5. Upon receipt of the permit application, the City will determine if they meet the minimum qualifications for each category. References, job photos, etc., may be required to be submitted for the vetting process.

SECTION II – EMERGENCY WORK

Nothing in these rules shall be construed to prevent the making of such excavations as may be necessary for the preservation of life, or property, or for the location of conduit or pipe, or for making repairs, provided that the person making such excavation shall apply to the Director or designee for such a permit on the first business day after such work is commenced.

The person engaged in emergency action shall notify the Department of Public Works, Police Department and the Fire Department at the start of the emergency work.

If, in the judgment of the Director and/or Transportation Engineer, traffic conditions, the safety or inconvenience of the traveling public or the public interest, require that the excavation work be performed as urgent or emergency work, the Director or designee shall have full power to order contractor to work extended hours and/or on weekends.

SECTION III – WORK AREA SAFETY

ROUTING OF TRAFFIC AND PROTECTIVE SIGNAGE

The contractor shall take appropriate measures to assure that during the performance of the excavation, so far as is feasible, normal traffic conditions shall be maintained so as to cause as little inconvenience as possible, provided the Director and/or Transportation Engineer, may permit the closing of streets and walks to all traffic for a period of time if it is deemed necessary. The use of flaggers or patrolmen does not eliminate the need for warning signs and traffic control devices.

The contractor shall maintain safe crossings for two lanes of traffic at all road intersections where possible and safe crossings for pedestrians at intervals of not more than three hundred (300) feet. If any excavation is made across a public way, it shall be made in sections to assure maximum safe crossing for vehicles and pedestrians. If the way is not wide enough to hold the excavated material for part-time storage, the material shall be immediately removed from the location.

The contractor is responsible for the protection of the public from the construction process and excavation hazards. The site shall be properly lighted, signed and barricaded as determined to be needed. It shall be the duty of the contractor to place and maintain all required signs and traffic devices.

Warning signs, lights and such other precautions as may be necessary shall conform as provided in the "Manual for Uniform Traffic Control Devices" (MUTCD), Current Edition.

CLEARANCE OF VITAL STRUCTURES

The excavation work shall be performed and conducted so as not to interfere with access to fire hydrants, fire stations, fire escapes, water valves, underground vaults, catch basins and all other vital equipment and structures as designated by the DPW.

RELOCATION AND PROTECTION OF UTILITIES

The contractor shall not interfere with any existing utility without the written consent of the Director or designee, and the owner of the utility. If it becomes necessary to relocate an existing utility, this work shall be done by its owner unless the owner authorizes otherwise and the cost of such work will be borne by the contractor. The contractor shall inform itself as to the existence and location of all underground utilities and protect the same against damage. The contractor shall adequately support and protect all pipes, conduit, poles, wires or other apparatus which may be affected by the excavation work and do everything necessary to support, sustain and protect them. In the event of any damage to pipes, conduits, poles, wires or apparatus, and for this purpose pipe coating and other encasement or devices are to be considered as part of sub-structure, such damage shall be repaired by the agent or person owning them and the expense of such borne by the contractor. The contractor shall be responsible for any damage done to any public or private property.

NOTIFICATION TO PUBLIC UTILITY COMPANIES

The contractor shall, in accordance with the General Laws of the State of New Hampshire, give notice to public utility companies before making an excavation.

State Law requires you call Dig Safe before you dig. Dig Safe is a free service, funded solely by its utility members to promote public safety and avoid costly underground utility damage. In New Hampshire, state law requires a minimum notification of 72 business hours (3 business days, excluding holidays and weekends). Call 811 or 1-888-DIG-SAFE (888-344-7233) between the hours of 6:00 AM and 6:00 PM or visit www.digsafe.com.

NOTIFICATION TO THE CITY

The contractor shall notify the Highway Foreman or other applicable city agents prior to any and all permanent patching. Materials shall be as outlined in **Item 5** of the patching standards section.

If the construction ceases for more than one (1) day, the contractor must notify the Department of Public Works in advance of when the work will resume. Failure to do so may cause work to be redone so inspections can be performed.

PROTECTION OF ADJOINING PROPERTY

The contractor shall, at all times and at his/her own expense, preserve and protect from injury any adjoining property by providing proper support and by taking such other precautions as may be necessary for the purpose. The contractor shall, at his/her own expense, shore-up and protect all buildings, pipes, walls, fences or other property likely to be damaged during the progress of the excavation work and shall be responsible for all damage to public or private property or highways resulting from its failure to properly protect and carry out said work. The contractor shall not remove, even temporarily, any trees or shrubs which exist in the excavation area without first obtaining written consent from the Director or designee.

DUST AND CLEAN-UP

Construction activities will not exceed EPA standards for airborne particulates. All roadways shall be wet swept and cleaned nightly. The contractor shall treat the roadway with calcium chloride if dust is prevailing. All clean-up operations shall be accomplished at the expense of the contractor and shall be carried out to the satisfaction of the Director.

SECTION IV – TRENCHING RULES

DAILY WORK

1. No more than 200 feet measured longitudinally shall be opened in any street at one time, except by special permission of the Director or his designee. No opening or excavation in any street shall extend beyond the centerline of the street before being backfilled and the surface of the street made passable to traffic.
2. A street excavation permit gives the right to encumber a roadway with proper traffic control, as long as a minimum of one properly supported lane of traffic (10 feet wide) is provided on the street at all times. Access shall be provided to all properties at night and on weekends and to all places of business at all times.
3. If an emergency necessitates the complete closing of a street, the closing will be governed by the Emergency Work Section of this document.

4. When the work area encroaches upon a sidewalk, walkway or crosswalk area, protective barriers, together with appropriate warning and guidance devices and signs must be utilized so that the passageway for pedestrians is safe and well defined. Permittee must provide two (2) MUTCD R9-10 "Sidewalk Closed – Use Other Side" signs on either side of the site at the nearest intersecting street corners. Depending on the location, approaching streets may require additional sidewalk closed signs.

MULTIPLE EXCAVATIONS IN THE SAME STREET

1. When street excavations are made by one or more utilities, the Department of Public Works may require an overlay of the street. Utilities must submit plans of proposed work and job scope to the Department of Public Works for review, after which a decision will be made. Determination will be made by the Department and will be based upon the number or size of excavations in the street and/or the percent of the street disturbed.
2. If the utilities can coordinate their work and be in the same street within 3 calendar days, no temporary pavement will be required. If the 3 calendar days are not attainable, the first utility to disturb the pavement must place temporary hot mix by the end of the third day or before 5PM on Friday afternoon. Trenches will be based flush with all structures adjusted to the new grade.

BREAKING THROUGH PAVEMENT

1. All edges of the bituminous surface shall be cut with an asphalt saw for the finished patch.
2. Sections of sidewalks shall be removed to the nearest score line or approved, saw-cut edge.
3. Unstable pavements shall be removed and the sub-grade shall be treated as the main trench.
4. Pavement edges shall be trimmed to a vertical face and neatly aligned with the center line of the trench.
5. Cut outs outside of the trench lines must be perpendicular or parallel to the trench line.
6. Excavations shall be made in open cuts and no tunneling will be allowed except by special permission from the Director. Trenches and excavations shall be braced and sheathed as necessary.

BACKFILLING

Excavated material is not to be used for backfill unless it consists of clean sand, crushed stone, gravel or dry backfill suitable for reuse and proper re-compaction. Broken pavement, large stones, clay, roots and other debris shall not be used in the backfill. If the material cannot be compacted properly it cannot be used. Purchase of suitable additional fill material is the responsibility of the contractor.

All roadbed backfill material must meet or exceed applicable NHDOT specifications. Only crushed gravel types 304.3 or 304.4 are to be used in the top twelve (12) inches of the road bed.

Backfill material shall be thoroughly and mechanically compacted in 6 inch lifts, power tamped and moistened when required to secure maximum compaction of the backfill. A minimum of 95% compaction shall be achieved.

The excavation shall be backfilled and, at a minimum, temporarily patched at the completion of work on a daily basis unless otherwise allowed by the Department; in no case shall an excavation be left open overnight without approval. All temporary patches shall be of an acceptable patch material.

Contractor shall complete the permanent patch within thirty (30) calendar days of the temporary patch. For winter work, permanent patch is expected within thirty (30) days of the opening of the asphalt plants for hot bituminous mix.

Notify the Department of Public Works when the permanent patch is complete for inspection and acceptance of the work. The two (2) year guarantee period will start at the time of this inspection. Work will be re-inspected after one (1) year, at which time the permit will be retired and/or the applicant will be notified of needed repairs.

If the patch fails (i.e., settlement of more than ½" below the road grade), the contractor shall be required to repair the patch using the mill and repave method. The patch will then be re-inspected.

In all areas where the street has been paved within four (4) years of the excavation, the applicant will be required to use cold-planing for the permanent patch. All cold-planing will at a minimum overlay the original patch, plus 6 inches in all directions. All patches must conform to the specifications as outlined under the patching standards section.

EXCAVATED MATERIAL

All excess material excavated from trenches or excavations shall be removed from the site of the work and disposed of legally by the contractor.

ASPHALT PATCHING STANDARDS

1. All materials used and construction performed shall be per the latest NHDOT road and bridge construction standards and as required by the Director or designee.
2. The pavement shall be neatly saw-cut with parallel edges immediately prior to paving, 12 inches back from trench sides after trench has been properly backfilled. The permanent patch shall be flush and even with the surrounding paved surface.

3. Plant mix hot bituminous pavement shall be required for permanent pavement patch. Pavement mixture shall meet NHDOT and City of Portsmouth specifications. Notification must be made to the Public Works Dispatcher DIRECTLY prior to any and all permanent patching. No permanent patching shall be done without prior inspection of compaction base by the Director, *the Highway Foreman*, or *their* designee. **Contact the Public Works Dispatcher at (603-527-1530).**
4. Cold-planing of the pavement to a depth of 1.5” will be required on paved surfaces less than 4 years in age and on other main streets, as specified.
5. All patches shall match the existing pavement thickness of the existing roadway, but in no case shall the patch be <4” thick or as determined by the Director. The patch will consist of a 2 ½ - 3 ½ inches of ¾” “fine” binder, as appropriate, and 1 ½ inches of wearing course. All existing pavement edges must be tack coated before the pavement is applied.
6. All edges must be hot applied crack seal coated after pavement is applied.
Allowable plant mix asphalt types are specified below:

Minimum Asphalt Content in Plant Mix Asphalt		
	Aggregate Size	
50 Gyration		75 Gyration
	3/8 “ (9.5 mm)	6.0%
5.8%	½ “ (12.5 mm)	*
4.9%	¾” (19 mm)	*

*75 Gyration Binder Mix is not suitable for local roads and is not permitted for use.

“Normal” pavements to be used for patching shall be:

- Asphalt Binder Course shall be ¾” ‘fine’ aka ‘winter’ binder, 50 Gyration.
- Asphalt Surface (Wearing or Top) Course shall be ½” 50 Gyration or 3/8” 75 Gyration as appropriate based on existing pavement.

PROTECTION OF GUTTERS AND BASINS

The contractor shall maintain all gutters free and unobstructed for the full depth of the adjacent curb and for at least one foot in width from the face of such curb at the gutter line. Catch basins shall be kept clear and serviceable at all times. The contractor shall make provisions to take care of all surplus water, muck, silt, slicking or other run-off pumped or removed from excavations and shall be responsible for any damage resulting from failure to do so.

UNNECESSARY NOISE

Each contractor shall conduct and carry out excavation work in such manner as to avoid unnecessary inconvenience to the general public and occupants of neighboring properties. During the hours of 6PM to 7AM on weekdays, the contractor shall not use, except with the express written permission of the Director, or in the case of an emergency as herein otherwise provided, any tool, appliance or equipment producing noise of sufficient volume to disturb the sleep or repose of occupants of the neighboring properties. (See Chapter 3: Public Health, Article IV: Noise Control, Section 3-403)

PROMPT COMPLETION OF WORK

After an excavation is commenced, the contractor shall execute, with diligence and speed, all excavation work covered by the excavation permit and shall promptly complete such work and restore the area to its original condition or as near as may be so as not to obstruct the way or travel thereon more than is reasonably necessary.

RESTORATION GUARANTEE

Any person making excavations in streets must guarantee their permanent restoration work for a period of two (2) years from the date of acceptance of the completed work site. The contractor may be required to completely redo the work if it fails within this two (2) year guarantee period. Contractors that fail to return to correct an older patch within 30 days of notification by the City, may lose their Excavation Contractor License until restoration is made.

If at any time it is determined that permanent restoration was not made to City specifications, the contractor shall be responsible for making proper restoration, regardless of how long since the original excavation.

TESTING OF WORK

The Director has the right to order a test of any street restoration in order to determine that work was completed to City specifications. If the test shows the street restoration to be acceptable, the cost of the testing will be borne by the City. If the test shows the restoration was not acceptable, the contractor will be responsible for the cost of the testing in addition to the cost of excavating and repairing to City specifications.

SECTION V – WEATHER, TIME OF YEAR & DAY

Street excavations shall only occur Monday through Friday between 7:00 a.m. and 5:00 p.m., from April 1st through November 15th unless the permittee obtains written consent from the Director to do the work during another time. Such permission shall be granted only in case of an emergency or in the event the work authorized by the permit is to be performed in traffic congested areas. In case of an emergency, the “Emergency Work” section of the regulation shall apply.

SECTION VI – FINES AND PENALTIES

Failure to obtain a permit, as required in these regulations, before commencing the work, or having obtained a permit and failing to comply with these regulations, will result in a fine for each offense, pursuant to City Ordinance (Sec. 8.106). Each day in which violation continues shall constitute a separate offense. For purposes of these regulations, the Director shall be the enforcement officer.

REVOCAION OF PERMITS

The Director may, at any time, cancel or suspend permits for cause. Cancellation or expiration of insurance endorsement shall result in automatic cancellation of permit.

REVOCAION OF EXCAVATION LICENSE

Contractors that fail to return to correct patch work within 30 days of notification by the City, may lose their Excavation Contractor License until restoration is made.

RIGHT TO HEARING

Any person accused of violating these rules or regulations shall be notified of the alleged violation, in writing, via certified mail, return receipt requested, which shall set forth a date and time at which hearing will be held before the Director or his/her designee, in order to afford the person an opportunity to be heard in regard to the alleged violation, with or without council, as the contractor chooses.

PEASE DEVELOPMENT AUTHORITY DIG PERMIT		
A. PROJECT INFORMATION		PDA USE ONLY
Street Address:		Serial No.:
City/Town:		Date Submitted:
Description of Work:		Date/Time approved for Work:
Depth of Excavation:		Date Terminated:
Is Work on the Airfield? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Field marking will be completed by (no later than date submitted):		
Scheduled start date (no earlier than 5 work days following date submitted):		
B. APPLICANT INFORMATION		
Company Name:		Contact:
Address:		
Phone:		Email:
C. INSTRUCTIONS		
<p>Any organization conducting excavation of soils, drilling, probing or any other work disturbing below grade material must first obtain a signed permit authorizing the work. This application form must be completed and submitted to the PDA Director of Engineering. The application must include a plan of the work area either sketched in the space provided or attached separately. If a separate sheet is attached, duplicate copies must be submitted. The applicant must also stake out or otherwise mark the work area. When all required clearances have been obtained, the PDA will notify the applicant. The applicant is responsible for compliance with any remarks listed in the clearance review section. This approved form must be in the possession of the operator performing the excavation If work has not commenced by the specified termination date, the permit will become void and the applicant shall re-apply. If work extends past the date then applicant must call Dig Safe at 1-888-Dig Safe to renew the number.</p>		
D. CLEARANCE REVIEW (PDA USE)		
Area of Special Notice <input type="checkbox"/> *		
Dig Safe #	ORGANIZATION	INITIALS & DATE
PDA - Electric		
Water		
Sewer		
Drains		
Communications		
Air Force		
COP - Water		
NHANG		

*Subject to approval by Air Force, EPA, and NHDES.

E. SKETCH OF WORK AREA SHOWING LOCATION OF STAKES, FLAGGING, ETC. SHOW NEAREST STREETS.

F. Applicant Signature:

Date:

G. Approval:

Approved by:

Date:

SECTION 32 12 13

BITUMINOUS TACK COATS

05/17

PART 1 GENERAL

1.1 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Tack Coat Materials

1.2 QUALITY ASSURANCE

Certificates of compliance for asphalt materials delivered will be obtained and checked to ensure that specification requirements are met. Tack coat materials will not be diluted.

1.3 DELIVERY, STORAGE, AND HANDLING

Inspect the materials delivered to the site for contamination and damage. Unload and store the materials with a minimum of handling.

1.4 EQUIPMENT, TOOLS AND MACHINES

1.4.1 General Requirements

Equipment, tools and machines used in the work are subject to approval. Maintain in a satisfactory working condition at all times. Calibrate equipment such as asphalt distributors, scales, batching equipment, spreaders and similar equipment within 12 months of their use. If the calibration expires during project, recalibrate the equipment before work can continue.

1.4.2 Power Brooms and Power Blowers

Use power brooms and power blowers suitable for cleaning the surfaces to which the bituminous coat is to be applied.

1.5 ENVIRONMENTAL REQUIREMENTS

Apply bituminous coat only when the surface to receive the bituminous coat is dry. Apply bituminous coat only when the atmospheric temperature in the shade is 50 degrees F or above and when the temperature has not been below 35 degrees F for the 12 hours prior to application, unless otherwise directed.

PART 2 PRODUCTS

2.1 TACK COAT

Tack coat shall conform to the NHDOT Standard Specifications for Road and Bridge Construction (NHDOT Specifications) as well as the Supplemental Specification Amendment to Section 410 - Bituminous Surface Treatment (SSA).

2.1.1 Tack Coat Materials

Use Tack Coat Materials or products extracted, harvested, or recovered, as well as manufactured, within a 500 mile radius from the project site, if available from a minimum of three sources. Submit tack coat material product data 30 calendar days before material is required for the work.

PART 3 EXECUTION

3.1 EQUIPMENT

Utilize, as necessary, the machinery and equipment specified in Section 410 of the NHDOT Specifications and the SSA.

3.2 PREPARATION OF SURFACE

Immediately before applying the bituminous coat, remove all loose material, dirt, clay, or other objectionable material from the surface to be treated by means of a power broom or blower supplemented with hand brooms. Apply treatment only when the surface is dry and clean.

3.3 APPLICATION RATE

Apply tack coat at a rate that conforms to Section 410 of the NHDOT Specifications and the SSA.

3.4 APPLICATION TEMPERATURE

3.4.1 Viscosity Relationship

Apply asphalt at a temperature that will provide a viscosity between 10 and 60 seconds, Saybolt Furol, or between 20 and 120 centistokes, kinematic. Furnish the temperature viscosity relation to the Contracting Officer.

3.5 APPLICATION

3.5.1 General

Following preparation and subsequent inspection of the surface, apply the bituminous prime or tack coat with the bituminous distributor in conformance with applicable sections of Section 410 of the NHDOT Specifications. Properly treat all areas and spots, not capable of being sprayed with the distributor, with the hand spray. Until the succeeding layer of pavement is placed, maintain the surface by protecting the surface against damage and by repairing deficient areas at no additional cost to the Government. If required, spread clean dry sand to effectively blot up any excess bituminous material. No smoking, fires, or flames other than those from the heaters that are a part of the equipment are permitted within 25 feet of heating, distributing, and transferring operations of cutback materials. Prevent all

traffic, except for paving equipment used in constructing the surfacing, from using the underlying material until the surfacing is completed. The bituminous coat requirements are described herein.

3.5.2 Tack Coat

- a. A tack coat should be applied to every bound surface that is being overlaid with asphalt mixture and at transverse and longitudinal joints.
- b. Apply the tack coat in accordance with Section 410 of the NHDOT Specifications.
- c. Immediately following the preparation of the surface for treatment, apply the bituminous material by means of the bituminous distributor, within the limits of temperature specified herein and at a rate as specified above in paragraph APPLICATION RATE.
- d. Apply the bituminous material so that uniform distribution is obtained over the entire surface to be treated.
- e. Treat lightly coated areas and spots missed by the distributor by spraying with a hand wand or using other approved method.
- f. Following the application of bituminous material, allow the surface to cure without being disturbed for period of time necessary to permit setting of the tack coat.
- g. Apply the bituminous tack coat only as far in advance of the placing of the overlying layer as required for that day's operation.
- h. Maintain and protect the treated surface from damage until the succeeding course of pavement is placed.

3.6 CURING PERIOD

Following application of the bituminous material and prior to application of the succeeding layer of asphalt mixture allow the bituminous coat to cure and water or volatiles to evaporate prior to overlaying. Maintain the tacked surface in good condition until the succeeding layer of pavement is placed, by protecting the surface against damage and by repairing and recoating deficient areas. Allow the prime coat to cure without being disturbed for a period of at least 48 hours or longer, as may be necessary to attain penetration into the treated course. Furnish and spread enough sand to effectively blot up excess bituminous material.

3.7 FIELD QUALITY CONTROL

Obtain certificates of compliance for all asphalt material delivered to the project. Obtain samples of the bituminous material under the supervision of the Contracting Officer. The sample may be retained and tested by the Government at no cost to the Contractor.

3.8 TRAFFIC CONTROLS

Keep traffic off surfaces freshly treated with bituminous material. Provide sufficient warning signs and barricades so that traffic will not travel over freshly treated surfaces.

-- End of Section --

SECTION 32 12 17

HOT MIX BITUMINOUS PAVEMENT
04/08

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASPHALT INSTITUTE (AI)

AI MS-2 (2015) Asphalt Mix Design Methods

ASTM INTERNATIONAL (ASTM)

ASTM C117 (2017) Standard Test Method for Materials Finer than 75-um (No. 200) Sieve in Mineral Aggregates by Washing

ASTM C131/C131M (2014) Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

ASTM C136/C136M (2014) Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates

ASTM C29/C29M (2017a) Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate

ASTM C88 (2013) Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate

ASTM D2172/D2172M (2017) Standard Test Methods for Quantitative Extraction of Asphalt Binder from Asphalt Mixtures

ASTM D4867/D4867M (2009; R 2014) Effect of Moisture on Asphalt Concrete Paving Mixtures

ASTM D546 (2017) Standard Test Method for Sieve Analysis of Mineral Filler for Asphalt Paving Mixtures

ASTM D75/D75M (2014) Standard Practice for Sampling Aggregates

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Pre-Deconstruction Submittals

Quality Control Plan; G

SD-04 Samples

Bituminous pavement

SD-05 Design Data

Job-Mix Formula

Asphalt Cement Binder

SD-06 Test Reports

Specific Gravity Test of Asphalt

Coarse Aggregate Tests

Aggregates Tests

Bituminous Mix Tests

Pavement Courses

SD-07 Certificates

Laboratory Certification; G

1.3 QUALITY ASSURANCE

1.3.1 Quality Control Plan

The Contractor shall create and operate in accordance with a Quality Control Plan included in the Contractor Quality Control (CQC) Plan described in Section 01 45 00.00 10 QUALITY CONTROL. The plan shall meet the requirements of the NHDOT Standard Specifications for Road and Bridge Construction (NHDOT Specifications), section 106.03.1 and associated special provisions.

1.3.2 Safety Requirements

Provide adequate and safe stairways with handrails to the mixer platform, and safe and protected ladders or other means for accessibility to plant operations. Guard equipment and exposed steam or other high temperature lines or cover with a suitable type of insulation.

1.3.3 Required Data

Job-mix formula (JMF) design shall be prepared in accordance with the NHDOT Specifications and shall be submitted to the Contracting Officer a minimum

of 20 working days before placement for approval. The Contractor will also be required to post a copy of the JMF in the DOT testing laboratory.

1.3.4 Selection of Optimum Asphalt Content

Base selection on percent of total mix and the average of values at the following points on the curves for each mix:

- a. Stability: Peak
- b. Unit Weight: Peak
- c. Percent Air Voids: Median

1.4 DELIVERY, STORAGE, AND HANDLING

Inspect materials delivered to the site for damage and store with a minimum of handling. Store aggregates in such a manner as to prevent segregation, contamination, or intermixing of the different aggregate sizes.

1.5 ENVIRONMENTAL CONDITIONS

Place bituminous mixture only during dry weather and on dry surfaces. Place courses only when the surface temperature of the underlying course is greater than 45 degrees F for course thicknesses greater than one inch and 55 degrees F for course thicknesses one inch or less.

1.6 CONSTRUCTION EQUIPMENT

Calibrated equipment, such as scales, batching equipment, spreaders and similar equipment, shall have been recalibrated by a calibration laboratory approved by the Contracting Officer within 12 months of commencing work.

1.6.1 Mixing Plant

The Mixing Plant shall conform to the requirements of Section 401 of the NHDOT Specifications.

1.6.2 Paving Equipment

Paving equipment shall conform to the requirements of Section 401 of the NHDOT Specifications.

PART 2 PRODUCTS

2.1 AGGREGATES

Grade and proportion aggregates and filler so that combined mineral aggregate conforms to specified grading. Provide aggregate and filler materials as specified in the NHDOT Specifications, Section 401.

Aggregates shall be uniform quality durable pebbles or fragments of rock, with or without sand or other inert finely divided mineral aggregate. All material shall be free from clay balls, organic matter, deleterious substances, and an excess of flat or elongated pieces as specified in ASTM D 4791. Washing will not be required, except when aggregate plants do not produce clean material by the dry process method. In order to obtain

uniformity of color and appearance of the pavement throughout the project, the aggregate for all the wearing courses shall be obtained from the same material source. Sufficient material shall be on hand prior to starting daily operations to ensure uninterrupted processing for the working day

2.2 ASPHALT CEMENT BINDER

Bituminous materials used for asphalt cement binder shall meet the properties specified in the NHDOT Specifications, Section 401.

Test data indicating grade certification shall be provided by the supplier at the time of delivery of each load to the mix plant. Copies of these certifications shall be submitted to the Contracting Officer. The supplier is defined as the last source of any modification to the binder. The Contracting Officer may sample and test the binder at the mix plant at any time before or during mix production. Samples for this verification testing shall be obtained by the Contractor in accordance with the NHDOT Specifications, Section 401 in the presence of the Contracting Officer. These samples shall be furnished to the Contracting Officer for the verification testing, which shall be at no cost to the Contractor. Samples of the asphalt cement specified shall be submitted for approval not less than 14 calendar days before start of the test section.

2.3 MIX DESIGN

The Contractor shall develop the mix design that adheres to the requirements of the NHDOT Specifications, Section 401. All mix designs shall be submitted to the New Hampshire Department of Transportation for verification and approval. Representative samples of all materials proposed for use shall be made available for testing by the Bureau of Materials & Research (M&R) at least 5 working days in advance of the date of starting operations. Submit 2 quarts of the designated asphalt binder, 4 preblended aggregate specimens for gyratory and 2 preblended aggregate specimens, suitable for AASHTO T 209 when mixed with the appropriate asphalt, in order to verify the design. Once accepted, the approved mix design is the job mix formula (JMF). If the voids are outside the aforementioned range or the VMA or VFA are outside the specified limits, the design will be rejected. M&R may elect to verify the design again.

2.3.1 JMF Requirements

The proposed mix designs and materials shall be submitted to the Engineer a minimum of 20 working days before placement for approval. It shall be the responsibility of the Contractor to ensure all approved mix designs have been entered into the plant automation system before production begins. The Contractor will also be required to post a copy of the JMF in the DOT testing laboratory and shall include as a minimum, the design mix requirements listed in section 401 of the NHDOT Specifications, as well as the following:

- a. Percent passing each sieve size.
- b. Percent of asphalt cement.
- c. Percent of each aggregate and mineral filler to be used.
- d. Asphalt viscosity grade, penetration grade, or performance grade.

- e. Number of blows of hammer per side of molded specimen.
- f. Laboratory mixing temperature.
- g. Lab compaction temperature.
- h. Temperature-viscosity relationship of the asphalt cement.
- i. Plot of the combined gradation on the 0.45 power gradation chart, stating the nominal maximum size.
- j. Graphical plots of stability, flow, air voids, voids in the mineral aggregate, and unit weight versus asphalt content as shown in AI MS-2.
- k. Specific gravity and absorption of each aggregate.
- l. Percent natural sand.
- m. Percent particles with two or more fractured faces (in coarse aggregate).
- n. Fine aggregate angularity.
- o. Percent flat or elongated particles (in coarse aggregate).
- p. Tensile Strength Ratio.
- q. Antistrip agent (if required) and amount.
- r. List of all modifiers and amount.

2.3.2 Adjustments to JMF

The JMF for each mixture shall be in effect until a new formula is approved in writing by the Contracting Officer. Should a change in sources of any materials be made, a new mix design shall be performed and a new JMF approved before the new material is used. Adjustments to the JMF will be conducted following the NHDOT Specifications.

2.4 RECYCLED HOT MIX ASPHALT

Recycled HMA shall consist of reclaimed asphalt pavement (RAP), coarse aggregate, fine aggregate, mineral filler, and asphalt cement. The RAP shall be of a consistent gradation and asphalt content and properties. When RAP is fed into the plant, the maximum RAP chunk size shall not exceed 2 inches. The recycled HMA mix shall be designed using procedures contained in AI MS-2. The RAP materials and job mix shall meet the requirements of section 401 of the NHDOT Specifications.

2.5 SOURCE QUALITY CONTROL

Employ a commercial laboratory approved by the Contracting Officer to perform testing. The laboratory used to develop the JMF and the laboratory used to perform all sampling and testing shall meet the requirements of the NHDOT Specifications. A certification signed by the manager of the laboratory stating that it meets these requirements or clearly listing all

deficiencies shall be submitted to the Contracting Officer prior to the start of construction. The certification shall contain as a minimum:

- a. Qualifications of personnel; laboratory manager, supervising technician, and testing technicians.
- b. A listing of equipment to be used in developing the job mix.
- c. A copy of the laboratory's quality control system.
- d. Evidence of participation in the AASHTO Materials Reference Laboratory (AMRL) program.

2.5.1 Tests

Perform testing according to the following designated testing methods. Refer to methods defined in the NHDOT Specifications for methods designated with "NHDOT."

- a. Specific Gravity Test of Asphalt
- b. Coarse Aggregate Tests:
 1. Bulk Specific Gravity: NHDOT
 2. Abrasion Loss: ASTM C131/C131M
 3. Soundness Loss: ASTM C88
- c. Weight of Slag Test: ASTM C29/C29M
- d. Percent of Crushed Pieces in Gravel: Count by observation and weight
- e. Fine Aggregate Tests:
 1. Bulk Specific Gravity: NHDOT
 2. Soundness Loss: ASTM C88
- f. Specific Gravity of Mineral Filler: NHDOT
- g. Bituminous Mixture Tests:
 1. Bulk Specific Gravity: NHDOT
 2. Theoretical Maximum Specific Gravity: NHDOT
 3. Tensile Strength Ratio: ASTM D4867/D4867M

PART 3 EXECUTION

3.1 PREPARATION

3.1.1 Preparation Materials

Prepare asphalt binder material, mineral aggregates, and bituminous mixtures in accordance with section 401 of the NHDOT Specifications.

3.1.2 Transportation of Bituminous Mixtures

Transport bituminous material from the mixing plant to the paving site in accordance with section 401 of the NHDOT Specifications in trucks having tight, clean, smooth beds that have been coated with a minimum amount of concentrated solution of hydrated lime and water or other approved coating to prevent adhesion of the mixture to the truck. Petroleum products will not be permitted for coating truck. If air temperature is less than 60 degrees F or if haul time is greater than 30 minutes, cover each load with canvas or other approved material of ample size to protect the mixture from the loss of heat. Make deliveries so that the spreading and rolling of all the mixture prepared for one day's run can be completed during daylight, unless adequate approved artificial lighting is provided. Deliver mixture to area to be paved so that the temperature at the time of dumping into the spreader is within the range specified herein. Reject loads that are below minimum temperature, that have crusts of cold unworkable material, or that have been wet excessively by rain. Hauling over freshly laid material is prohibited.

3.1.3 Surface Preparation of Underlying Course

Prepare surface of underlying course in accordance with section 401 of the NHDOT Specifications.

3.1.4 Spraying of Contact Surfaces

Spray contact surfaces of previously constructed pavement with a thin coat of bituminous materials to act as an anti-stripping agent conforming to Section 32 12 13 BITUMINOUS TACK COATS. Paint contact surfaces of structures with a thin coat of emulsion or other approved bituminous material prior to placing the bituminous mixture. Tack coat the previously placed primed coats on base courses when surface has become excessively dirty and cannot be cleaned or when primed surface has cured to the extent that it has lost all bonding effect.

3.2 PLACEMENT

3.2.1 Machine Spreading

Machine spreading equipment and procedures shall be in accordance with section 401 of the NHDOT Specifications. The range of temperatures of the mixtures at the time of spreading shall be between 260 degrees F and 300 degrees F. Bituminous concrete having temperatures less than minimum spreading temperature when dumped into the spreader will be rejected. Adjust spreader and regulate speed so that the surface of the course is smooth and continuous without tears and pulling, and of such depth that, when compacted, the surface conforms with the cross section, grade, and contour indicated. Unless otherwise directed, begin the placing along the centerline of areas to be paved on a crowned section or on the high side of areas with a one-way slope. Place mixture in consecutive adjacent strips having a minimum width of 10 feet, except where the edge lanes require strips less than 10 feet to complete the area. Construct longitudinal joints and edges to true line markings. Establish lines parallel to the centerline of the area to be paved, and place string lines coinciding with the established lines for the spreading machine to follow. Provide the number and location of the lines needed to accomplish proper grade control. When specified grade and smoothness requirements can be met for initial lane

construction by use of an approved long ski-type device of not less than 30 feet in length and for subsequent lane construction by use of a short ski or shoe, in-place string lines for grade control may be omitted. Place mixture as nearly continuous as possible and adjust the speed of placing as needed to permit proper rolling.

3.2.2 Shoveling, Raking, and Tamping After Machine-Spreading

Shovelers and rakers shall follow the spreading machine. Add or remove hot mixture and rake the mixture as required to obtain a course that when completed will conform to requirements specified herein. Broadcasting or fanning of mixture over areas being compacted is prohibited. When segregation occurs in the mixture during placing, suspend spreading operation until the cause is determined and corrected. Correct irregularities in alignment left by the spreader by trimming directly behind the machine. Immediately after trimming, compact edges of the course by tamping laterally with a metal lute or by other approved methods. Distortion of the course during tamping is prohibited.

3.3 COMPACTION OF MIXTURE

Compact mixture in accordance with section 401 of the NHDOT Specifications by rolling. Begin rolling as soon as placement of mixture will bear rollers. Delays in rolling freshly spread mixture shall not be permitted. Operation of rollers shall be by competent and experienced operators. Provide sufficient rollers for each spreading machine in operation on the job and to handle plant output. In places not accessible to the rollers, compact mixture thoroughly with hot hand tampers. Skin patching of an area after compaction is prohibited.

3.4 JOINTS

Construct joints in accordance with section 401 of the NHDOT Specifications. Joints shall present the same texture and smoothness as other portions of the course, except permissible density at the joint may be up to 2 percent less than the specified course density. Carefully make joints between old and new pavement or within new pavements in a manner to ensure a thorough and continuous bond between old and new sections of the course.

3.4.1 Transverse

Roller shall pass over unprotected end of freshly laid mixture only when laying of course is to be discontinued. Except when an approved bulkhead is used, cut back the edge of previously laid course to expose an even, vertical surface for the full thickness of the course. When required, rake fresh mixture against joints, thoroughly tamp with hot tampers, smooth with hot smoothers, and roll. Transverse joints in adjacent lanes shall be offset a minimum of 2 feet.

3.4.2 Longitudinal Joints

Construct longitudinal joints in accordance with section 401 of the NHDOT Specifications.

3.5 FIELD QUALITY CONTROL

3.5.1 Sampling

3.5.1.1 Aggregates at Source

Prior to production and delivery of aggregates, collect aggregate samples in accordance with section 401 of the NHDOT Specifications. Repeat the sampling when the material source changes or when testing reveals unacceptable deficiencies or variations from the specified grading of materials.

3.5.1.2 Cold Feed Aggregate Sampling

Take two samples daily from the belt conveying materials from the cold feed. Collect materials in three increments at random to make a representative composite sample of not less than 50 pounds. Take samples in accordance with ASTM D75/D75M.

3.5.1.3 Coarse and Fine Aggregates

Take a 50 pound sample from the cold feed at least once daily for sieve analyses and specific gravity tests. Additional samples may be required to perform more frequent tests when analyses show deficiencies, or unacceptable variances or deviations. The method of sampling is as specified herein for aggregates.

3.5.1.4 Mineral Filler

ASTM D546. Take samples large enough to provide ample material for testing.

3.5.1.5 Pavement and Mixture

Take plant samples for the determination of mix properties and field samples in accordance with section 401 of the NHDOT Specifications for thickness and density of the completed pavements. Furnish tools, labor and material for samples, and satisfactory replacement of pavement. Take samples and tests at not less than frequency specified hereinafter and at the beginning of plant operations; for each day's work as a minimum; each change in the mix or equipment; and as often as directed.

3.5.2 Testing

Conduct all applicable field testing in accordance with the NHDOT Specifications.

3.5.2.1 Aggregates Tests

- a. Gradation: AASHTO T 30/NHDOT B-1.
- b. Mineral Filler Content: ASTM D546.
- c. Abrasion: ASTM C131/C131M for wear (Los Angeles test). Perform one test initially prior to incorporation into the work and each time the source is changed.

3.5.2.2 Bituminous Mix Tests

Test one sample for each 500 tons, or fraction thereof, of the uncompacted mix for extraction in accordance with ASTM D2172/D2172M; perform a sieve analysis on each extraction sample in accordance with ASTM C136/C136M and ASTM C117. Test for stability and flow in accordance with section 401 of the NHDOT Specifications. Test one sample for each material blend for Tensile Strength Ratio in accordance with ASTM D4867/D4867M.

3.5.2.3 Pavement Courses

Perform the following tests:

- a. Density: For each 500 tons of bituminous mixture placed, determine the representative laboratory density in accordance with section 401 of the NHDOT Standard Specifications for Road and Bridge Construction. Samples for laboratory specimens shall be taken from trucks delivering mixture to the site; record in a manner approved by the Contracting Officer the project areas represented by the laboratory densities. Maximum allowable deficiency at any point, excluding joints, shall not be more than 2 percent less than the specified density for any course. The average density of each course, excluding joints, shall be not less than the specified density. Joint densities shall not be more than 2 percent less than specified course densities and are not included when calculating average course densities. When the deficiency exceeds the specified tolerances, correct each such representative area or areas by removing the deficient pavement and replacing with new pavement.
- b. Thickness: Determine thickness of binder and wearing courses from samples taken for the field density test. The maximum allowable deficiency at any point shall not be more than 1/4 inch less than the thickness for the indicated course. Average thickness of course or of combined courses shall be not less than the indicated thickness. Where a deficiency exceeds the specified tolerances, correct each such representative area or areas by removing the deficient pavement and replacing with new pavement.
- b. Smoothness: Perform smoothness tests in accordance with section 401 of the NHDOT Standard Specifications for Road and Bridge Construction. Correct each portion of the pavement showing irregularities greater than that specified.
- d. Finished Grades: Finish grades of each course placed shall not vary from the finish elevations, profiles, and cross sections indicated by more than 1/2 inch. Finished surface of the final wearing course will be tested by the Contracting Officer by running lines of levels at intervals of 25 feet longitudinally and transversely to determine elevations of completed pavement. Within calendar 45 days after completion of final placement, perform a level survey at the specified grid spacing and plot the results on a plan drawn to the same scale as the drawings. Elevations not in conformance with the specified tolerance shall be noted on the plan in an approved manner. The survey shall be performed by a registered land surveyor. The Contracting Officer will inform the Contractor in writing of paved areas that fail to meet the final grades indicated within the specified tolerances. Correct deficient paved areas by removing existing work and replacing

with new materials that meet the specifications. Skin patching for correcting low areas is prohibited.

- e. Finish Surface Texture of Wearing Course: Visually check final surface texture for uniformity and reasonable compactness and tightness. Final wearing course with a surface texture having undesirable irregularities such as segregation, cavities, pulls or tears, checking, excessive exposure of coarse aggregates, sand streaks, indentations, ripples, or lack of uniformity shall be removed and replaced with new materials.

3.6 PROTECTION

Do not permit vehicular traffic, including heavy equipment, on pavement until surface temperature has cooled to at least 120 degrees F. Measure surface temperature by approved surface thermometers or other satisfactory methods.

-- End of Section --