

ADDENDUM B

SPECIFICATIONS FOR REPAIRING FOR EXCAVATION IN CITY STREETS AND SIDEWALKS.

CITY OF LYNN DEPARTMENT OF PUBLIC WORKS

GENERAL

The Applicant will be required to furnish all materials and will be responsible for the job to be done in a workmanlike manner. Before any work will be acceptable to the City, all improvements must be placed in as good condition as, or better than, before the work was started, as determined by the Commissioner, or his designee.

I. BREAKING THROUGH PAVEMENT

Breaking through Pavement in Street

- (a) All excavation on paved street surfaces shall be pre-cut in a straight line with a pavement breaker or saw, or other approved device.
- (b) Heavy duty pavement breakers may be prohibited by the City when the use endangers existing substructures or other property.
- (c) Cutouts of the trench line must be normal or parallel to the trench line.
- (d) Pavement edges shall be trimmed to a vertical face and neatly aligned with the centerline of the trench.
- (e) Unstable pavement shall be removed over cave-ins and over breaks, and the sub-grade shall be treated as the main trench.
- (f) The Applicant shall not be required to pay for repair of pavement damage existing prior to the excavation unless his cut results in small floating sections that may be unstable, in which case the Applicant shall remove the unstable portion and the area shall be treated as part of the excavation.
- (g) The maximum length of open trench permissible, at any time, shall be two hundred (200) feet. No greater length shall be opened for pavement removal, excavation, construction, backfilling, patching, or any other operation without written permission of the City.

If any side of the trench is within five (5) feet of the granite curbing, the cut shall extend to the granite curbing. If any side of the trench is within five (5) feet of the bituminous berm, the cut shall extend one (1) foot out from the berm.

Breaking through Pavement in Sidewalks

- (a) All parts of the above section shall apply to sidewalk excavation.
- (b) On cement concrete sidewalks, all cuts shall be from the nearest joint or score line. On bituminous concrete sidewalks, any cuts will be continued to the full width of the sidewalk.
- (c) Any person or utility damaging bituminous concrete curbing during the course of excavation, or for any other reason, shall be charged for the replacement of the bituminous concrete curbing. Also, no person or utility shall remove, damage, haul away, or cause misalignment of any granite curbing, including radius curb and catch basin stones, or cobblestones, for any reason whatsoever without first receiving permit from the Commissioner of Public Works.

II. BACKFILLING OF AN EXCAVATION

Backfill shall be placed in lifts of eight (8) to ten (10) inches and thoroughly compacted to not less than 95% of maximum density by approved mechanical compactor(s).

Backfill material shall be of a good quality as determined by the inspector. Native material may be utilized if of good quality, and if it will meet State Specification M103.0 Type C. However, the last twelve (12") inches of backfill shall consist of good clean bank gravel, M103.0 Type C.

All backfill material within the street right-of-way must meet State Specification M103.0 Type C. A sieve Analysis and Proctor may be required with a permit application.

CDF (controlled density fill) may be required if proposed excavation is in a street or City Square as listed in Addendum A, the excavation is between November 15th and April 15th or the street has been resurfaced within the last five (5) years.

The City may require soil tests to be furnished by a recognized testing laboratory or registered professional engineer specializing in soil mechanics, when in its opinion, backfill for any excavation is not being adequately compacted. In order for the resurfacing to be permitted, such tests must show that the backfill materials meet the minimum requirements as prescribed by the City. All expense for such tests shall be borne entirely by the Applicant.

III SPECIFICATIONS FOR PATCHING BITUMINOUS CONCRETE ROADWAYS

Temporary Patch: The top surface of backfill shall be covered with four (4) inches of bituminous concrete Type I (Drawing I) immediately following completion of the backfill. The Applicant shall be required to maintain this patch for at least ninety (90) days or until the permanent patch is placed. The patch should be such that all vehicular and pedestrian traffic are able to pass over safely at a legal rate of speed.

Pavement installation to be done in accordance with Section 460 of MHD specification. See Drawing I.

The Applicant is responsible to maintain the temporary patch until placement of the permanent patch. Should it become necessary to correct settlement in temporary patches, the City will notify the Applicant. Should the Applicant not repair the patch within an acceptable timeframe, as designated by the Commissioner, the City will have the patch repaired and bill the Applicant for all costs incurred.

The requirements of a temporary patch may be waived if Control Density Fill (CDF) is used as backfill.

Permanent Patch: After the contractor has placed a temporary patch, he shall allow sixty (60) days for settlement or as directed by the Commissioner before placing a permanent patch (see Permanent Patching Schedule).

PERMANENT PATCHING SCHEDULE

WORK COMPLETED	PERMANENTLY PATCHED
April 1 - May 31	September 1
June 1 - June 30	October 1
July 1 - July 31	November 1
August 1 - August 31	November 15
September 1 - November 15	May 15, following year
November 15 - April 15	July 1

The method of permanent patch shall be directed by the Commissioner. Unless the Applicant requests, in writing, to vary the method of permanent patching, the Applicant will be required to perform a Conventional patch as described within these specifications.

Conventional Permanent Patch (See Drawing II)

The permanent patch shall be extended one foot on all sides of the temporary patch area. The pavement shall be cut in a neat straight line with a pavement saw. The cut shall be square or rectangular with edges parallel and perpendicular to the street line. Cuts shall be straight and vertical. If any side of the trench is within 5 feet of the curb or berm, the cut shall extend to the granite curbing or one (1) foot out from the berm.

A tack coat shall be applied to the vertical faces of the existing pavement before placing the permanent patch. A tack coat will also be applied between layers of pavements.

The permanent patch shall be applied in two (2) layers. The first layer shall be a minimum of two and one half (2 1/2) inches of bituminous concrete base, Type-I. The top layer shall be one and one half (1 1/2) inches of bituminous concrete surface, Type-I. The two layers of bituminous concrete shall be compacted separately. Mechanical compactors will be permitted for patches less than ten (10) square yards; patches

exceeding ten (10) square yards shall be rolled with an appropriately sized power driven, steel wheeled roller. Emulsion and stone dust shall be applied to the seam to seal it.

After one (1) seasonal movement the permanent patch shall either be infrared treated by a firm certified in the infrared process or a grind and overlay method maybe required.

All pavement installation shall be in accordance to Standard Specification, Section 460.

The Contractor shall be required to correct trench settlement and faulty pavement patches, for a period of three (3) years after the permanent patch is placed, at the discretion of the Department of Public Works.

IV. SPECIFICATIONS FOR PATCHING DRIVEWAYS, SIDEWALKS, AND RAMPS

Subgrade: The subgrade for sidewalks and driveways shall be shaped parallel to the proposed surface of the walks and driveways and thoroughly compacted. All depressions occurring shall be filled with suitable material and again compacted until the surface is smooth and hard. The driveway shall be shaped as shown on Drawing III.

Foundation: After the subgrade has been prepared, a foundation of gravel meeting Standard Specification M103.0, Type C, shall be placed upon it. After being thoroughly compacted, the foundation shall be at least eight (8) inches in thickness and parallel to the proposed surface of the driveway and/or sidewalk.

Patching of Bituminous Concrete Driveways and Ramps: Patching of bituminous concrete driveways shall be done in accordance with Sub-section 701.63 of the Standard Specifications for Highways and Bridges of the Massachusetts Department of Public Works. Driveways and ramps shall have a pavement thickness of three and one-half (3-1/2") inches. The bottom course shall be two and one-half (2-1/2") inches of bituminous concrete base Type I. The top layer shall be one (1") of bituminous concrete surface Type-I. The thickness of the layers shall be measured after compaction. The two layers of bituminous concrete shall be compacted separately with a tack coat applied between layers.

Patching of Bituminous Concrete Sidewalks: Patching of bituminous concrete sidewalks shall be done in accordance with Sub-section 701.62 of the Standard Specifications. Sidewalks shall have a pavement thickness of three (3) inches placed in two courses. The bottom course shall be a two (2) inch bituminous concrete base Type I course. The top course shall be one (1) inch of bituminous concrete surface Type I. The thickness of pavement layers shall be measured after compaction. The two layers of bituminous concrete shall be compacted separately.

Unless otherwise directed, the final sidewalk surface shall have a pitch of 3/16 of an inch per foot of width to provide for proper drainage.

The materials and workmanship of all bituminous concrete shall comply with applicable requirements of the Standard Specifications of Section 460 and 701.

Patching of Cement Concrete Driveways, Sidewalks, and Ramps: Patching of cement concrete sidewalks and driveways shall be done in accordance with Sub-section 701.61 and 476 of the Standard Specifications.

Driveways and ramps to have a pavement thickness of six (6) inches. Sidewalks to have a pavement thickness of four (4) inches. Sidewalk surface to pitch at 3/16 of an inch per foot to provide proper drainage. All sidewalks to be removed and replaced to the nearest joint. Replacement of less than whole squares is not allowed.

Wheelchair Ramps: Wheelchair ramps damaged or removed during construction are to be replaced. Replacement of ramps for location, layout, and grade is to conform with "Mass Highway - Wheelchair Ramp Standards", revised 4/4/97, as amended, as well as the most recently amended Architectural Access Board, Standards, and the Americans with Disabilities Act.

V. CURBING

Granite Curbing and Edging: Granite curbing or edging removed or misaligned during work must be removed and reset in accordance with Standard Specifications Section 580. Curbing or edging chipped or cracked shall be replaced with new curbing or edging as per Standard Specification Section 500. New curbing or edging will meet Standard Specification Section M9.04.1, M9.04.2, M9.04.5, and M9.04.6. All mortar used in curb/edging work to conform to Standard Specification M4.02.15 (See Drawing V and VI). All joints to be mortared prior to construction of sidewalk or street patch.

Concrete Curb: Concrete curbing damaged or misaligned during work must be removed and reset in accordance with Standard Specification Section 580. Damaged concrete curb to be replaced with new precast concrete curbing meeting Standard Specification M4.02.00.

Concrete curbing integral with the existing concrete sidewalk shall be replaced in kind. Concrete to conform to material Specification M4.02.00 (see Drawing VII). Any integral curbing damaged shall be replaced along with all associated sidewalk.

Bituminous Concrete Berm: Bituminous concrete berm shall consist of Class I Bituminous Concrete, Type I-1 and workmanship to conform to Standard Specification Section MN.312.0 and Section 500.

The berm shall be placed on a Class I Bituminous Concrete shelf with a minimum rolled thickness of two (2) inches. The berm shall be placed and compacted with a machine and form acceptable to the Commissioner or his designee. The berm is to be placed to line and grade of adjacent berm or as directed by the City Engineer.

VI REPAIR OF LANDSCAPED AREAS

Existing landscaped or grassed areas disturbed by work shall be replaced in kind. New loam, fertilizer, and seed shall be placed in the disturbed areas. Materials and workmanship to conform to Standard Specification Sections 751, 765, 766, 767, and 770. Any plantings disturbed by work shall be replaced as per Standard Specification Section 771.

Loam shall be compacted to a depth of six (6) inches, rolled, and uniformly graded. Loam shall conform to Material Specification M1.05.0. At the discretion of the Commissioner, seeding may require the placement of hay mulch over heavily trafficked areas. Grass seed shall conform to Standard Specification M6.03.0

VII CLEANUP AND SITE RESTORATION

During its progress, the work and the adjacent areas affected thereby shall be kept clean and all rubbish, surplus materials, and needed construction equipment shall be removed and all damage repaired so that the public and property owners will be inconvenienced as little as possible.

Stockpiling of materials within the street layout is not allowed without the permission of the Commissioner or his designee.

Where material or debris has washed or flowed into or been placed in existing watercourses, ditches, gutters, drains, pipes, or structures, work done under this contract, or elsewhere during the course of the Contractor's operations, such material or debris shall be entirely removed and satisfactorily disposed of during the progress of the work, and the ditches, channels, drains, pipe, structures, and work, etc., shall, upon completion of the work, be kept in a clean and neat condition.

During work, the Contractor is responsible for maintaining a clean street. Should it become necessary, the contractor will sweep the streets in the area of the work with a mechanical sweeper as directed by the Commissioner or his designee. Should the Applicant not respond to this request in a timely fashion, as determined by the Commissioner, the City will have the affected area swept, and the Contractor will be responsible for all changes incurred therein.

On or before the completion of the work, the Contractor shall, unless otherwise especially directed or permitted in writing, remove all temporary works, tools, and machinery or other construction equipment furnished by him; shall remove all rubbish from any grounds which he has occupied; and shall leave the roads and all part of the premises and adjacent property affected by his operations in a neat and satisfactory conditions.

The Contractor shall restore or replace, when and as directed, any public or private property damaged by his work, equipment, or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end, the Contractor shall do as required all necessary highway or driveway, walks, and landscaping work. Suitable materials, equipment, and methods shall be used for such restoration.

The Contractor shall thoroughly clean all areas disturbed by him and his subcontractors, and on completion of the work shall deliver it in as good or better than existing conditions.