

TOWN OF WEST HARTFORD
ENGINEERING DIVISION
DEPARTMENT OF COMMUNITY DEVELOPMENT

SECTION B-3

TECHNICAL SPECIFICATIONS

FOR STREET EXCAVATION

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In accordance with the Code of Ordinance of the Town of West Hartford, Section 2-230 and Section 20-9, the Director of Public Works may, from time to time, adopt such reasonable general rules, regulations and specifications for such excavation or digging, and may reasonably rule, regulate or specify any said particulars with respect to any particular excavation or digging as aforesaid.

1. **EXCAVATED MATERIAL:** All material excavated from trenches or excavations shall be removed from the site of the work.
2. **CONSTRUCTION MATERIALS:** Construction materials on the site shall be limited in quantity and space occupying area so as to not unduly hinder and block the use of the street. There shall be no piled material left within the street right-of-way overnight without special permission of the Director of Public Works. Materials, such as bank-run gravel, processed stone, etc. trucked to the job site shall be kept on the vehicle and dumped directly in the trench in order to minimize any inconvenience to the public.
3. **DUST AND CLEAN UP:** As the excavation work progresses, all streets shall be thoroughly cleaned of all rubbish, excess earth, rock and other debris. The permittee shall take necessary precautions to prevent and avoid dust and to keep the streets clean each day. All clean-up operations shall be accomplished at the expense of the permittee and shall be carried out to the satisfaction of the Director.
4. **PROTECTION OF GUTTERS AND BASINS:** The permittee 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.

The permittee shall make provisions to take care of all surplus water, muck, silt, slickings, or other run-off pumped from excavations and shall be responsible for any damage resulting from his failure to so provide.

5. **NOISE:** Each permittee shall conduct and carry out excavation work in such manner as to avoid unnecessary inconvenience and annoyance to the general public and occupants of neighboring property (Town of West Hartford, Code of Ordinances, Section 14-52). During the hours of 6:00 P.M. to 7:00 A.M., he shall not use, except with the express written permission of the Director or except in case of an emergency, any tool, appliance

or equipment producing noise of sufficient volume to disturb the sleep or repose of occupants of the neighboring property.

6. TRENCHES: The maximum length of open trench permissible at any time shall be in accordance with existing ordinances or regulations or as may be specified by the Director. No greater length shall be open for pavement removal, excavation, construction, backfilling, patching and all other operations without the written permission of the Director.
7. PROMPT COMPLETION OF WORK: After an excavation is commenced, the permittee shall prosecute with diligence and expedition all excavation work covered by the excavation permit and shall promptly complete such work and restore the street to its original condition or as near as may be, so as not to obstruct the street or travel thereon more than is reasonably necessary.
8. BREAKING THROUGH PAVEMENT
 - a. The use of hydro-hammers or heavy duty pavement breakers for breaking pavement is prohibited on all streets unless written permission is granted by the Director. Saw cutting is preferred. Limited use of hydro-hammers or heavy duty pavement breakers will be considered upon request.
 - b. Approved cutting of bituminous pavement surface ahead of excavations is required to confine pavement damage to the limits of the trench.
 - c. Sections of sidewalks shall be removed to the nearest scoreline or approved saw cut edge.
 - d. Unstable pavement shall be removed over cave-outs and over breaks and the sub-grade shall be treated as the main trench.
 - e. Pavement edges shall be trimmed to a vertical face and neatly aligned with the center line of the trench.
 - f. Cut-outs outside of the trench lines must be normal or parallel to the trench line.
 - g. Excavations shall be made in open cut and no tunneling will be allowed except by special permission of the Director. Trenches and excavations shall be braced and sheeted when necessary.
 - h. Trenches shall have a minimum length or width of two feet.

- i. All excavated material shall be loaded into a truck and removed to a disposal site. There shall be no dumping of any material on public or private property within the boundaries of the Town of West Hartford without the permission of the Director of Public Works.

9. BACKFILLING: Excavated material shall not be used for backfill unless it consists of sand or gravel. Broken pavement, large stones, clay, roots and other debris shall not be used in the backfill.

Backfill material shall consist of sand, bank-run gravel or two-inch size processed gravel as approved by the Director.

Sand or bank-run gravel may be used from the bottom of the trench to a point twelve inches below the surface of the pavement. Only two-inch processed gravel is to be used in the top twelve inches of the excavation.

Backfill material shall be placed in six-inch layers, power tamped and moistened when require to secure maximum compaction of the backfill and to reduce settlement. The material shall be compacted to 95% optimum density, and shall be subject to testing by the municipality at the expense of the utility company or contractor.

Temporary surfacing of two inches of bituminous concrete shall be placed on the backfill for a wearing surface. Temporary paving material shall be hot mix except that the permittee may use cold mix during the winter months.

Temporary paving of cuts shall be maintained in safe and satisfactory condition by the permittee.

10. BASE: The base material shall be of processed stone or processed gravel as defined by the State of Connecticut, Form 814, and to the depth it exists in each individual street. In no case shall the base be less than 9" deep.

11. RESTORATION OF PERMANENT PAVING: (Revised February, 1998) Any trench that is to be permanently restored in a road that has been overlaid or reconstructed within 3 years of the issued permit, shall have the surface coarse restored using the infra-red technology, and include (1) one foot beyond the trench limit to match the existing surface coarse.

- a. In pavement restoration, thickness of the individual layers and materials shall conform to the general cross-section of that pavement, but no less than the following:

<u>TYPE</u>	<u>RESTORATION</u>
Finished Concrete	9" thick finished concrete reinforced with wire or rods equal to original reinforcing
Concrete Base	8" thick concrete base reinforced with wire or rods equal to original reinforcing. Minimum acceptable reinforcement shall be 6 X 6 #4 wire mesh
Bituminous Concrete on Concrete Base	Bituminous concrete Class 2
Bituminous Concrete on Gravel Base	3" bituminous concrete Class 2
Penetration Macadam	3" bituminous concrete Class 2

Variation to an existing cross-section of a pavement may be made only with written permission of the Director of Public Works or his representative.

- b. All pavement except macadam patches shall be laid in at least two courses.

The surface course shall be 1 1/2 inches thick after compaction. The remaining thickness shall be binder course. No course shall be more than two inches thick after compaction.
- c. Permanent restoration of paving cuts shall be made within a three-month period except during winter months.
- d. All restoration shall be made by a paving contractor familiar and experienced with paving practices in the Town of West Hartford who has sufficient and proper equipment and is approved by the Director.
- e. Notice of the date and location of restoration work shall be given the Department of Public Works at least forty-eight (48) hours before the work is started.
- f. Restoration of cuts is to be made during the months of April through November 15 so as to have a minimum of unrestored cuts during the winter months.
- g. The cost of completing unrestored cuts encountered by the Town of West Hartford during repaving, and completed by the Town of West Hartford, shall be billed against and paid for by the person making the cut which was not restored.
- h. When there is two feet or less between a curb and the edge of the trench or excavation nearest the curb, the restoration of trench or excavation pavement shall be extended to the curb.

12. METHODS AND MATERIALS: In pavements with concrete base, the original cut shall be cut back at least one foot onto undisturbed sub-grade on each side prior to replacing concrete. If the pavement has steel reinforcement, the reinforcement shall be carried through the cut as directed with at least 12 inches of lap. The top surface shall be cut back straight and square for at least six inches wider than the new concrete base. The top of the concrete patch shall be at the same level as the adjoining concrete.

In pavements without concrete base, the pavement shall be cut back at least six inches on each side from the edges of the original trench.

The edges of the pavement shall be clean and tack coated with asphaltic material before the hot-mix material is placed. The preparation of the hot-mix material and its laying shall meet the standard paving specifications of the Bureau of Engineering of the Town of West Hartford. The paving contractor must use a fire box and a tandem ten-ton roller.

On macadam streets, the edges of the pavement may be coated and sealed with emulsified asphalt.

Concrete for base shall comply with the specifications for 4,000 pound concrete and in accordance with the specifications of the State of Connecticut, Department of Transportation.

The concrete mix shall have an air-entraining agent added with the water to produce 6% + 1% entrained air. The agent shall be the vinsol resin type, "Darex" or equal.

When daytime temperatures are below sixty degrees, an accelerator of calcium chloride shall be added to the concrete mix of two pounds of calcium chloride per bag of cement.

Concrete shall be in place forty-eight hours prior to the placing of the bituminous material thereon, unless permitted or requested to do otherwise by the Director.

In some cases, depending upon location, weather and conditions, the Director may require the use of quick-setting cement in the concrete to allow placing of bituminous material after thirty-six hours.

Restoration of cuts shall be scheduled so as to complete them in minimum time and minimum interference with traffic. If there is delay in obtaining the wearing surface and the cut is in a critical location, the binder shall be placed, barricades removed temporarily and traffic allowed to run on the binder course.