

## S-29 UTILITY CUTS RESTORATION

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#### 29.01. SCOPE OF WORK

This specification covers the requirements for surface restoration following utility cuts completed under permit or Municipal consent.

#### 29.02. REFERENCES

This specification refers to the following standards, specifications, or publications:

- S-24

#### 29.03. DEFINITIONS

**Hard Surface** – Shall mean a pavement, curb, sidewalk, paved driveway, or any other structure constructed at or near the ground surface elevation.

**Zone of Influence** – Shall mean the area beneath a hard surface and shall include the area enclosed by a plane extending outward at a 1:1 slope, down from the surface edge of a hard surface.

**Utility Cut** – Shall mean any opening or cut into a hard surface to access buried plant in the public right-of-way.

**Road Condition Rating** – Shall mean the road condition rating as assigned by the City Engineer.

#### **29.04. EXCAVATION AND REMOVAL**

Care shall be taken during excavation to limit damage to surrounding surfaces not to be removed and so that the adjacent pavements and/or services are not undermined. Shoring, bracing and sheeting shall be used where required to prevent undermining and for the protection of adjacent services.

All excavated / excess materials shall be removed from the site by the Contractor, prior to leaving the site.

#### **29.05. BACKFILL REQUIREMENTS**

Bedding and cover shall be to the satisfaction of the respective Utility Company for their infrastructure.

Within the zone of influence, unshrinkable fill (City Specification S-24) shall be required as backfill to the highest elevation of:

- 50mm below the surface elevation,
- 300mm below the surface of grassed or other landscaped areas,
- The upper limit of the zone of influence, where it intersects the nearest wall of the utility cut.

Unshrinkable fill shall be allowed a minimum of 24 hours curing time prior to the placement of surface materials. Plating shall be used where required to accommodate traffic during the curing period.

Compacted Granular „A“ may be approved as backfill if it is placed in lifts not exceeding 300mm thick; is compacted to 100% Max.SPD by approved mechanical means; and the compaction level is verified through a written report completed by a Geotechnical Engineer for every utility cut.

Native backfill may be approved for areas outside of the zone of influence and must be properly placed and compacted to City specifications.

#### **29.06. TEMPORARY SURFACE RESTORATION**

Temporary hard surface restoration shall be either hot mix asphalt (HL-3) or cold mix asphalt, properly compacted to a minimum thickness of 50mm. The edges of the existing hard surface shall be tack coated to ensure adherence of the temporary asphalt.

In either case, the Contractor shall be responsible to maintain the temporary restoration until such time as the permanent restoration is completed.

## **29.07. STAMPING / STENCILLING TEMPORARY RESTORATIONS**

A visible identifier directly adjacent to the temporary restoration shall be placed by the Utility responsible for the work (e.g. "Gas", "Water", "Hydro" etc). This will help to easily identify, in the field, the party responsible for the work and its inspection and maintenance until permanent restoration is undertaken.

## **29.08. PERMANENT SURFACE RESTORATION**

Permanent restoration of all hard surfaces and adjacent boulevard / landscaped areas shall be completed by the City, and the cost borne by the Contractor. In the event that only the boulevard / landscaped areas are affected, the Contractor shall be responsible for restoring these areas to City specifications.

The Contractor / utility owner shall be required to enter into an agreement with the City for this restoration.

### **29.08.01 Restoration**

The following minimum restoration shall apply:

#### **29.08.01(a) For Asphalt Pavement**

The minimum restoration area shall be the entire width of the lane, or lanes disturbed by the utility cut and shall be a minimum of 3.0m long, measured along the travel direction of the road. Where this area is greater than the actual utility cut, the additional pavement area shall be milled to a minimum depth of 100mm and completely removed, and repaved in conjunction with the utility cut.

For multiple utility cuts where the remaining pavement would be 1.0m or less between the edges of adjacent restoration limits, the remaining pavement between the utility cuts shall be either milled to a minimum depth of 100mm or completely removed, and repaved in conjunction with the utility cuts.

The depth of the restored pavement shall match the depth of the existing pavement.

#### **29.08.01(b) For Concrete Pavement:**

The minimum restoration shall be a full panel. The minimum panel dimension shall match the size of adjacent panels.

Where the edge of the excavation is within 300mm of the nearest existing joint, the adjacent panel shall also be removed and restored.

The depth of the new concrete pavement shall match the depth of the existing pavement and shall be tied in to the adjacent panels / curb as required to match the existing pavement structure.

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**29.08.01(c) For Composite Pavement**

**29.08.01(c)(i) Concrete Road Base**

The minimum restoration area shall be the limit of the utility cut.

The type of material used for road base restoration shall be based on the current road condition rating.

For arterial and collector roads with a road condition rating of “now deficient” and local roads with a road condition rating of either “now deficient” or “1 – 5”, the concrete road base shall be restored with deep strength asphalt.

For all other roads, the concrete road base shall be restored with a new concrete road base, tied into the existing surrounding road base.

In all cases, the thickness of the new road base material shall match that of the existing concrete road base.

**29.08.01(c)(ii) Asphalt Surface**

The minimum restoration area shall be the entire width of the lane, or lanes disturbed by the utility cut and shall be a minimum of 3.0m long, measured along the travel direction of the road. Where this area is greater than the actual utility cut, the additional pavement area shall be either milled to a minimum depth of 100mm and repaved in conjunction with the utility cut.

For multiple utility cuts where the remaining pavement would be 1.0m or less between the edges of adjacent restoration limits, the remaining pavement between the utility cuts shall be either milled to a minimum depth of 100mm or completely removed, and repaved in conjunction with the utility cuts.

The depth of the restored asphalt surface shall match that of the existing asphalt surface.

**29.08.01(d) For Concrete Curb & Gutter on Asphalt Pavements:**

The minimum length of restoration shall be to the nearest joint beyond the limit of the required pavement restoration. Where the nearest joint is greater than 1.2 metres beyond the edge of the required pavement restoration, the curb shall be neatly sawcut at the edge of the pavement restoration limit.

**29.08.01(e) For Concrete Sidewalks & Driveways:**

The minimum restoration shall be a full panel. The minimum panel dimension shall match the size of adjacent panels.