

PART E
SPECIFICATIONS

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS, STANDARD DETAILS AND DRAWINGS

- E1.1 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.1.1 *The City of Winnipeg Standard Construction Specifications* is available in Adobe Acrobat (.pdf) format on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt>.
- E1.1.2 Further to GC:2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.2 The following Drawings are applicable to the Work:

| Drawing Title | Drawing No. | File Name | Size |
|--|--------------------|------------------------------|-------------|
| Ashburn Street: Pavement Reconstruction Plan/Profile - St. Matthews Avenue to Sta. 2+10 | CT01 | 118-2004_Drawing_CT01-R0.pdf | A1 |
| Ashburn Street: Pavement Reconstruction Plan/Profile - Sta. 2+10 to Sta. 3+30 | CT02 | 118-2004_Drawing_CT02-R0.pdf | A1 |
| Ashburn Street: Pavement Reconstruction Plan/Profile - Sta. 3+30 to Ellice Avenue | CT03 | 118-2004_Drawing_CT03-R0.pdf | A1 |
| Spruce Street: Pavement Reconstruction Plan/Profile - Wolever Avenue to Sta. 2+50 | CT04 | 118-2004_Drawing_CT04-R0.pdf | A1 |
| Spruce Street: Pavement Reconstruction Plan/Profile - Sta. 2+50 to Sta. 3+40 | CT05 | 118-2004_Drawing_CT05-R0.pdf | A1 |
| Spruce Street: Pavement Reconstruction Plan/Profile - Sta. 3+40 to St. Matthews Avenue | CT06 | 118-2004_Drawing_CT06-R0.pdf | A1 |
| Harmon Avenue: Pavement Reconstruction Plan/Profile - Mount Royal Road to Sta. 2+80 | CT07 | 118-2004_Drawing_CT07-R0.pdf | A1 |
| Harmon Avenue: Pavement Reconstruction Plan/Profile - Sta. 2+80 to Lodge Avenue | CT08 | 118-2004_Drawing_CT08-R0.pdf | A1 |
| Ashburn Street: First Manhole North of St. Matthews Avenue to Second Manhole South of Ellice Avenue – First Manhole North of St. Matthews Avenue to Sta. 2+85 | CT09 | 118-2004_Drawing_CT09-R0.pdf | A1 |

| Drawing Title | Drawing No. | File Name | Size |
|---|--------------------|------------------------------|-------------|
| Ashburn Street: First Manhole North of St. Matthews Avenue to Second Manhole South of Ellice Avenue – Sta. 2+85 to Second Manhole South of Ellice Avenue | CT10 | 118-2004_Drawing_CT10-R0.pdf | A1 |
| Furby Street: Asphalt Resurfacing Plan - Sargent Avenue to Ellice Avenue | RT01 | 118-2004_Drawing_RT01-R0.pdf | A3 |
| River Road: Concrete Sidewalk | RT02 | 118-2004_Drawing_RT02-R0.pdf | A3 |

E2. OFFICE FACILITIES

- E2.1 The Contractor shall supply office facilities meeting the following requirements:
- (a) The field office shall be for the exclusive use of the Contract Administrator.
 - (b) The building shall be conveniently located near the site of the Work.
 - (c) The building shall have a minimum floor area of 20 square metres, a height of 2.4m with two windows for cross ventilation and a door entrance with a suitable lock.
 - (d) The building shall be suitable for all weather use. It shall be equipped with an electric heater and air conditioner so that the room temperature can be maintained between either 16-18°C or 24-25°C.
 - (e) The building shall be adequately lit with fluorescent light fixtures and have a minimum of three wall outlets.
 - (f) The building shall be furnished with two desks, one drafting table, one table 3 m x 1.2 m, one stool, one four drawer legal size filing cabinet and a minimum of twelve (12) chairs.
 - (g) A portable toilet shall be located near the field office building. The toilet shall have a locking door and be for the exclusive use of the Contract Administrator and other personnel from the City.
 - (h) The field office building and the portable toilet shall be cleaned on a weekly basis immediately prior to each site meeting. The Contract Administrator may request additional cleaning when he deems it necessary.
- E2.2 The Contractor shall be responsible for all installation and removal costs, all operating costs, and the general maintenance of the office facilities.
- E2.3 The office facilities will be provided from the date of the commencement of the Work to the date of August 3, 2004.
- E2.4 On a one time basis, where directed by the Contract Administrator, the Contractor shall relocate the office facilities to a location more convenient for the remaining Work.

E3. PROTECTION OF EXISTING TREES

- E3.1 The Contractor shall take the following precautionary steps to prevent damage from construction activities to existing boulevard trees within the limits of the construction area:
- (a) The Contractor shall not stockpile materials and soil or park vehicles and equipment on boulevards within 2 metres of trees.

- (b) Trees identified to be at risk by the Contract Administrator are to be strapped with 25 x 100 x 2400mm wood planks, or suitably protected as approved by the Contract Administrator.
- (c) Excavation shall be performed in a manner that minimizes damage to the existing root systems. Where possible, excavation shall be carried out such that the edge of the excavation shall be a minimum of 1.5 times the diameter (measured in inches), with the outcome read in feet, from the closest edge of the trunk. Where roots must be cut to facilitate excavation, they shall be pruned neatly at the face of excavation.
- (d) Operation of equipment within the dripline of the trees shall be kept to the minimum required to perform the work required. Equipment shall not be parked, repaired, refuelled; construction materials shall not be stored, and earth materials shall not be stockpiled within the driplines of trees. The dripline of a tree shall be considered to be the ground surface directly beneath the tips of its outermost branches. The Contractor shall ensure that the operations do not cause flooding or sediment deposition on areas where trees are located.
- (e) Work on-site shall be carried out in such a manner so as to minimize damage to existing tree branches. Where damage to branches does occur, they shall be neatly pruned.

E3.2 All damage to existing trees caused by the Contractor's activities shall be repaired to the requirements and satisfaction of the Contract Administrator and the City Forester or his designate.

E3.3 No separate measurement or payment will be made for the protection of trees.

E3.4 Elm trees cannot be trimmed between April 1 and July 31, inclusive.

E4. TRAFFIC CONTROL

E4.1 Further to clauses 3.6 and 3.7 of CW 1130-R1:

- (a) Where directed, the Contractor shall construct and maintain temporary asphalt ramps to alleviate vertical pavement obstructions such as manholes and planing drop-offs to the satisfaction of the Contract Administrator. No measurement for payment will be made for this work.
- (b) In accordance with the Manual of Temporary Traffic Control, the Contractor ("Agency" in the manual) shall make arrangements with the Traffic Services Section of the City of Winnipeg to place all temporary regulatory signs. The Contractor shall bear all costs associated with the placement of temporary traffic control devices by the Traffic Services Section of the City of Winnipeg in connection with the works undertaken by the Contractor.

E5. TRAFFIC MANAGEMENT

E5.1 Further to clause 3.7 of CW 1130-R1:

E5.1.1 The Contractor shall schedule construction activities to meet the following:

- (a) Ashburn Street, Spruce Street and Harmon Avenue will be closed to all traffic. The Contractor shall sign the street "Road Closed" in accordance with the Manual of Temporary Traffic Control
- (b) Furby Street will be closed to through traffic. Local access traffic shall be maintained. The Contractor shall sign the street "Road Closed Local Access Only" in accordance with the Manual of Temporary Traffic Control
- (c) River Road will remain open to traffic. The Contractor shall be allowed to close the northbound gutter lane between the hours of 9 AM and 3 PM in order to complete his work. The lane adjacent to the construction area shall be re-opened to traffic at the completion of each days activities

E6. WATER USED BY CONTRACTOR

- E6.1 Further to clause 3.7 of CW 1120-R1, the Contractor shall pay for all costs associated with obtaining water in accordance with the Waterworks By-law. Sewer charges will not be assessed for water obtained from a hydrant.

E7. SURFACE RESTORATIONS

- E7.1 Further to clause 3.3 of CW 1130-R1, when Total Performance is not achieved in the year the Contract is commenced, the Contractor shall temporarily repair any Work commenced and not completed to the satisfaction of the Contract Administrator. The Contractor shall maintain the temporary repairs in a safe condition as determined by the Contract Administrator until permanent repairs are completed. The Contractor shall bear all costs associated with temporary repairs and their maintenance.

E8. INFRASTRUCTURE SIGNS

- E8.1 The Contractor shall obtain infrastructure signs from the Traffic Services Sign Shop at 421 Osborne Street. The Contractor shall mount each sign securely to a rigid backing material approved by the Contract Administrator. The Contractor shall fasten each sign to a suitable support and erect and maintain one sign at both ends of each street as directed by the Contract Administrator. When the Contract Administrator considers the Work on the street complete, the Contractor shall remove and dispose of the signs and supports. No measurement for payment will be made for the performing all operations herein described and all other items incidental to the work described

E9. PAVEMENT PATCHING

DESCRIPTION

E9.1 General

- E9.1.1 This specification covers patching of existing concrete pavement in preparation for an asphalt overlay.
- E9.1.2 Referenced Standard Construction Specifications
- (a) CW 3110 – Sub-Grade, Sub-Base and Base Course Construction.
 - (b) CW 3130 – Supply and Installation of Geotextile Fabrics.
 - (c) CW 3410 – Asphaltic Concrete Pavement Works.

MATERIALS

E9.2 Crushed Sub-Base Material

- E9.2.1 Crushed Sub-base material will have a maximum aggregate size of 50 millimetre and be supplied in accordance with Section 2.1 of CW 3110.

E9.3 Geotextile Fabric

- E9.3.1 Geotextile fabric will be supplied in accordance with Section 2 of CW 3130.

E9.4 Asphalt Material

- E9.4.1 Asphalt material will be Type 1A and will be supplied in accordance with Sections 5 and 6 of CW 3410.

CONSTRUCTION METHODS

E9.5 General

- E9.5.1 Remove existing concrete pavement to a minimum width of 1.5 metres at locations as shown on the Drawings or as directed by the Contract Administrator in accordance with Section 3.1 of Specification CW 3110.
- E9.5.2 Excavate to a depth of 350 millimetres below the top of the existing pavement.
- E9.5.3 Compact existing sub-grade to a minimum of 95% Standard Proctor Density.
- E9.5.4 Place separation/reinforcement geotextile fabric in accordance with Specification CW 3130.
- E9.5.5 Place and compact crushed sub-base material in accordance with CW 3110 to a 300 millimetres compacted depth. Compact to a minimum of 100% Standard Proctor Density.
- E9.5.6 Place and compact asphalt material to a 50 millimetres compacted depth matching the top of the existing concrete pavement. Compact to an average of 95% percent of the 75 Blow Marshall Density of the paving mixture with no individual test being less than 90% percent.
- E9.5.7 Each layer must be levelled and accepted by the Contract Administrator before the succeeding layer may be placed.
- E9.5.8 Additional excavation and placement of sub-base material beyond the identified pavement structure will be completed in accordance with CW 3110 as directed by the Contract Administrator.

MEASUREMENT AND PAYMENT

E9.6 Pavement Patching

- E9.6.1 Pavement patching will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Pavement Patching". The area to be paid for will be the total number of square metres of pavement patched in accordance with this specification, accepted and measured by the Contract Administrator.

E10. PAVEMENT REPAIR FABRIC

DESCRIPTION

E10.1 General

- E10.1.1 This specification covers the supply and installation of pavement repair fabric.
- E10.1.2 Referenced Standard Construction
 - (a) CW 3130 – Supply and Installation of Geotextile Fabrics.

MATERIALS

E10.2 Storage and Handling

- E10.2.1 Store and handle material in accordance with Section 2 of CW 3130.

E10.3 Pavement Repair Fabric

- E10.3.1 Pavement repair fabric will be Glass Grid Road Reinforcement Mesh - Style 8501 or approved equal.

CONSTRUCTION METHODS

E10.4 General

- E10.4.1 Install pavement repair fabric at random locations as directed by the Contract Administrator.
- E10.4.2 The extent of the placement limits and quantities required will be determined by the Contract Administrator and provided 48 hours prior to the placement of asphalt.
- E10.4.3 Proceed with installation upon completion and acceptance of the asphalt levelling course.
- E10.4.4 Install fabric in accordance with the manufacturer's specifications and recommendations.
- E10.4.5 Only construction equipment required to place the final asphalt surface course will be allowed to travel on the exposed fabric.
- E10.4.6 Replace damaged or improperly placed fabric.
- E10.4.7 Ensure temperature of the asphalt material does not exceed the melting point of the fabric.

MEASUREMENT AND PAYMENT

E10.5 Pavement Repair Fabric

- E10.5.1 The supply and installation of the pavement repair fabric will be measured on an area basis and paid for at the Contract Unit Price per square metre for "Pavement Repair Fabric". The area to be paid for will be the total number of square metres of pavement repair fabric supplied and installed in accordance with this specification, accepted and measured by the Contract Administrator.

E11. **ASPHALT PLANING**

- E11.1 Further to CW 3450-R3 the Contractor is advised that the asphalt planing on Furby Street shall not be undertaken until 48 hours prior to placement of the asphalt overlay in order to minimize damage to the existing street from construction traffic.
- E11.2 The Contractor shall employ lightweight equipment, as approved by the Contract Administrator, in the completion of his planing operations.