

1 General

**1.1 WORK INCLUDED**

- .1 Tree grates as shown on drawings and specified herein.
- .2 Protection of trees, shrubs and surrounding areas.
- .3 Cleaning and reinstatement of the area of Work.
- .4 Warranty of tree grates.

**1.2 CONDITIONS**

- .1 The general provisions of the Contract, including General and Supplementary Conditions and General Requirements apply to the work specified in this Section.

**1.3 RELATED SECTIONS**

- .1 Section 02 90 60– Planting.
- .2 Section 02 78 50– Unit Pavers
- .3 Section 02 97 00- Maintenance
- .4 Section 03 30 50– Cast-in-Place Concrete

**1.4 REFERENCES**

- .1 ASTM A 48 – Standard Specification for Gray Iron Castings.

**1.5 SUBMITTALS**

- .1 Submit under provisions of Section 01 33 00
- .2 Contractor shall submit three (3) sets of shop drawings of tree grates and frames, illustrating details of layout and assembly, showing member sizes and part identification, fasteners, anchors, and fittings for review and approval by the Department Representative prior to purchase and installation.
- .3 Product Data: Manufacturer's data sheets on each product to be used, including:
  - .1 Preparation instructions and recommendations.
  - .2 Storage and handling requirements and recommendations.
  - .3 Installation methods.

**1.6 DELIVERY, STORAGE AND HANDLING**

- .1 Store products in manufacturer's unopened packaging until ready for installation.

**1.7 ACCEPTANCE**

- .1 All tree grates are installed properly, at the correct level relative to the finish grade, and the finishes are not chipped or damaged.

**1.8 WARRANTY**

- .1 Tree grates and frames shall be warranted by the Manufacturer against defects in materials and workmanship for a minimum of five (5) years.

**2 Products**

**2.1 TREE GRATES AND FRAMES**

- .1 Tree Grates: shall be 1500mm x 1500mm square with 600mm tree opening. Slot openings shall be 6.35mm (1/4 inch). Pattern: as illustrated on the drawings.
- .2 Tree Grate material: shall be cast gray iron from 100% recycled material. All tree grate castings shall be manufactured true to pattern and component parts, and shall fit together in a satisfactory manner. The castings shall be of uniform pattern and quality, free from blowholes, hard spots, shrinkage, distortion or other defects. Castings shall be cleaned by shot blasting.
- .3 Finish: Grates are to be supplied in powder coat texture, low gloss or satin black colour, with black corrosion-resistant primer
- .4 Matching steel frames: shall be provided by the tree grate manufacturer, finish shall match finish the tree grate, and installed per manufacturers recommendations.
- .5 Fasteners: shall be tamper-proof bolts, with grates bolted to the frame at the factory.
- .6 Total quantity: five (5).

**3 Execution**

**3.1 EXAMINATION**

- .1 Verify field conditions are ready to receive work.
- .2 If substrate, tree installation, and paver preparation is the responsibility of another installer, notify the Department Representative of unsatisfactory preparation before proceeding.
- .3 Beginning of installation implies acceptance of existing conditions.

### **3.2 PREPARATION**

- .1 Clean surfaces thoroughly prior to installation.
- .2 Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under project conditions.

### **3.3 INSTALLATION**

- .1 Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.
- .2 Install tree grates and frames where indicated on plans flush with surrounding pavement surface.
- .3 Steel frame:
  - .1 Install flush and leveled with surrounding paving surface, maintain flush and leveled at all times. Frames **MUST NOT** slope in more than one direction.
  - .2 Use spreaders or stakes to keep frame from being distorted by concrete pressure.
  - .3 Position tree grates to meet in the centre of the tree well and have uniform spacing around outside edges of castings.
  - .4 Install frames per manufacture's recommendations.
- .4 Clean concrete unit pavers and debris from frame prior to tree grate installation.
- .5 If required, grind pads on underside of tree grates to level and prevent rocking in frame.

### **3.4 TAMPER-PROOF FASTENERS**

- .1 Ensure tree grates to meet in the centre of the tree well and have uniform spacing around outside edges of castings. Drill through counter bored holes in the tree grates and install tamper-proof bolts per manufacturer's instructions.
- .2 Use 25.4mm (1") thick wood or foam block out under the frame to allow tamper-proof fasteners to extend below angle.

### **3.5 CLEAN UP AND PROTECTION**

- .1 Protect installed product until completion of project.

- .2 DO NOT ALLOW water from new concrete to run off or wash onto tree grates to prevent damage from concrete exudates, lime, and efflorescence.
- .3 Touch up, repair or replace damaged products as directed by the Department Representative.

**END OF SECTION**