Reliance Foundry Co Ltd

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Reliance Foundry is an award-winning supplier of high-quality stock and custom-designed site furnishings

for architectural, traffic management, and industrial applications. Reliance Foundry brings over 90 years of expertise to the design and manufacturing of our products.

Reliance Foundry tree grates and grate frames protect trees and surrounding soil from urban life while adding sophisticated design elements that suit any environment. The grate design means trees have access to moisture, light, and air, helping them thrive in the long run. Tree grates also act as a safe extension of the sidewalk, eliminating tripping hazards for pedestrians.

Specification Coordination: Edit this guide specification to meet project requirements. Coordinate with other specification sections as required. If using more than one tree grate type, use the same designation in both drawings and specifications. Display hidden text to see or print notes to specifier.

Drawing Coordination: Show locations, sizes, layout, and spacing of each type of tree grate. Soft metric conversion is provided for all measurements.

**SECTION 32 94 43**

**TREE GRATES**

1. GENERAL
	* + 1. SUMMARY
				1. Section Includes: Cast Iron Tree Grates Related Requirements:

Section 02750: Concrete Paving

Section 02900 – Plantings

* + - 1. REFERENCE STANDARDS
				1. ASTM International (ASTM)

ASTM A48 - Standard Specification for Gray Iron Castings.

ASTM A536 – Standard Specification for Ductile Iron Castings.

* + - 1. SUBMITTALS
				1. Submit under provision of Section 01300.

Delete the paragraph below if specifying colors in this section or in Drawings.

Reliance's bicycle storage units may contribute to these and other LEED credits. Adjust the list below to reflect credits sought for the project.

Credits below are based on LEED 2009 New Construction, Core and Shell, and Schools rating systems.

* + - * 1. Product Data: Provide for each type of product used, including:

Preparation instructions and recommendations

Storage and handling requirements and recommendations

Installation methods

* + - 1. QUALITY ASSURANCE
				1. Manufacturer Qualifications: Minimum 5-year experience manufacturing similar products
				2. Installer Qualifications: Minimum 2-year experience installing similar products.
				3. Mockups: Verify selections made under sample submittals, demonstrate aesthetic effects, and set quality standards for materials and execution.

Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

* + - 1. DELIVERY, STORAGE, AND HANDLING
				1. Deliver and store products in manufacturer’s unopened packaging bearing the brand name and manufacturer’s identification until ready for installation.
				2. Handle materials to avoid damage.
			2. PROJECT CONDITIONS
				1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
			3. SEQUENCING
				1. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
			4. WARRANTY

See http://www.reliance-foundry.com/site/documents/warranty-bollards-and-bike-parking-products.pdf for warranty information.

* + - * 1. Manufacturer's Warranty: One-year warranty from date of Substantial Completion.
1. PRODUCTS
	* + 1. MANUFACTURERS
				1. Manufacturer: Reliance Foundry Co. Ltd.

Phone: 604-547-0460 or 1-877-789-3245

Fax: 604-590-8875

Website: <https://www.reliance-foundry.com/>

Email: info@reliance-foundry.com

* + - * 1. Substitutions: [Comply with provisions of [Section 01 25 00 "Substitution Procedures"] [\_\_\_\_\_\_\_\_\_] for substitution procedures.] [Not allowed.]
				2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 – Product Requirements.
			1. TREE GRATES
				1. Material:

ASTM A48 - Standard Specification for Gray Iron Castings.

* + - * 1. Finish: Manufactured true to pattern; component parts fit together in satisfactory manner. Uniform quality free of blowholes, porosity, hard spots, shrinkage distortion or other defects. Cleaned by blasting.

Visual warning surface to remain raw/unpainted.

* + - * 1. Metropolitan Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8706-1A.**

Length: 48 inches (122 cm).

Width: 48 inches (122 cm).

Tree Opening: 18 inche (45.7 cm) diameter, expandable.

Slot Openings: 0.25 inches (0.6 cm).

Weight: 330 pounds (150 kg) per set.

Provide with light openings.

Country of Origin: USA

Installation: Embed

* + - * 1. Metropolitan Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8707**.

Length: 60 inches (152.4 cm).

Width: 60 inches (152.4 cm).

Tree Opening: 18 inche (45.7 cm) diameter, expandable.

Slot Openings: 0.25 inches (0.6 cm).

Weight: 568 pounds (257.6 kg) per set.

Provide with light openings.

Country of Origin: USA

Installation: Embed

* + - * 1. Boulevard Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8708**.

Length: 48 inches (122 cm).

Width: 48 inches (122 cm).

Tree Opening: 16 inch (40.6 cm) diameter, expandable.

Slot Openings: 0.25 inches (0.6 cm).

Weight: 416 pounds (188.7 kg) per set.

Provide with light openings.

Country of Origin: USA

Installation: Embed

* + - * 1. Boulevard Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8713**

Length: 60 inches (152.4 cm).

Width: 60 inches (152.4 cm).

Tree Opening: 16 inch (40.6 cm) diameter.

Slot Openings: 0.25 inches (0.6 cm).

Weight: 382 pounds (173.2 kg) per set.

Country of Origin: USA

Installation: Embed

* + - * 1. Greenwich Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8754-1**

Length: 60 inches (152.4 cm).

Width: 60 inches (152.4 cm).

Tree Opening: 14 inch (35.6 cm) diameter.

Slot Openings: 0.375 inches (1 cm).

Weight: 410 pounds (186 kg) per set.

Country of Origin: USA

Installation: Embed

* + - * 1. Greenwich Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8757**

Length: 48 inches (122 cm).

Width: 48 inches (122 cm).

Tree Opening: 14 inch (35.6 cm) diameter.

Slot Openings: 0.375 inches (1 cm).

Weight: 306 pounds (138.8 kg) per set.

Country of Origin: USA

Installation: Embed

* + - * 1. River Walk Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8781**

Length: 48 inches (122 cm).

Width: 48 inches (122 cm).

Tree Opening: 18 inch (45.7 cm) diameter.

Slot Openings: 0.375 inches (1 cm).

Weight: 254 pounds (115.2 kg) per set.

Country of Origin: USA

Installation: Embed

* + - * 1. Boulevard Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8811**

Length: 48 inches (122 cm).

Width: 72 inches (183 cm).

Tree Opening: 16 inch (40.6 cm) diameter.

Slot Openings: 0.25 inches (0.6 cm).

Weight: 394 pounds (178.7 kg) per set.

Country of Origin: USA

Installation: Embed

* + - * 1. Metropolitan Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8815-1**

Length: 48 inches (122 cm).

Width: 72 inches (183 cm).

Tree Opening: 18 inch (45.7 cm) diameter.

Slot Openings: 0.25 inches (0.6 cm).

Weight: 480 pounds (218 kg) per set.

Country of Origin: USA

Installation: Embed

* + - * 1. Greenwich Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8819**

Length: 48 inches (122 cm).

Width: 72 inches (183 cm).

Tree Opening: 30 inch (76.2 cm) diameter.

Slot Openings: 0.375 inches (1 cm).

Weight: 390 pounds (177 kg) per set.

Country of Origin: USA

Installation: Embed

* + - * 1. River Walk Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8850**

Length: 48 inches (122 cm).

Width: 72 inches (183 cm).

Tree Opening: 18 inch (45.7 cm) diameter.

Slot Openings: 0.375 inches (1 cm).

Weight: 442 pounds (200 kg) per set.

Country of Origin: USA

Installation: Embed

* + - * 1. River Walk Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8852**

Size: 60 inches (152.4 cm).

Width: 60 inches (152.4 cm).

Tree Opening: 18 inch (45.7 cm) diameter.

Slot Openings: 0.375 inches (1 cm).

Weight: 436 pounds (198 kg) per set.

Country of Origin: USA

Installation: Embed

* + - * 1. Cosmopolitan Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8870**

Size: 48 inches (121.9 cm).

Width: 48 inches (121.9 cm).

Tree Opening: 18 inch (45.7 cm) diameter.

Slot Openings: 1/2 inch (1.3 cm).

Weight: 273 pounds (123.8 kg) per set.

Country of Origin: India

Material: ASTM A48 - Cast Gray Iron

Installation: Embed

* + - * 1. Solana Tree Grate [Designer’s Designation]:

Model: Reliance Foundry; **R-8871**

Size: 48 inches (121.9 cm).

Width: 48 inches (121.9 cm).

Tree Opening: 18 inch (45.7 cm) diameter.

Slot Openings: 1/2 inch (1.3 cm).

Weight: 311.2 pounds (141.1 kg) per set.

Country of Origin: India

Material: ASTM A48 - Cast Gray Iron

Installation: Embed

* + - 1. TREE GRATE FRAME
				1. R-8500-4848 Tree Grate Frame

Material: ASTM A48 - Standard Specification for Gray Iron Castings.

Model: Reliance Foundry, R-8500-4848

Compatible Models: For 4' – 0" Square Tree Grate

Length: 36 5/8" (93 cm).

Width: 12 1/2" (31.8 cm)

Seat Depth: 1 1/2"(3.8 cm)

Weight: 20 pounds (9 kg)

Country of Origin: USA

Installation: Embed

* + - * 1. R-8500-4872 Tree Grate Frame

Material: ASTM A48 - Standard Specification for Gray Iron Castings.

Model: Reliance Foundry, R-8500-4872

Compatible Models: For 4' – 0" Square Tree Grate

Length: 36 5/8" (93 cm).

Width: 12 1/2" (31.8 cm)

Seat Depth: 1 1/2"(3.8 cm)

Weight: 20 pounds (9 kg)

Country of Origin: USA

Installation: Embed

* + - * 1. R-8500-6060 Tree Grate Frame

Material: ASTM A48 - Standard Specification for Gray Iron Castings.

Model: Reliance Foundry, R-8500-6060

Compatible Models: For 4' – 0" Square Tree Grate

Length: 36 5/8" (93 cm).

Width: 24 1/2" (62.2 cm)

Seat Depth: 1 1/2"(3.8 cm)

Weight: 32 pounds (14.5 kg)

Country of Origin: USA

Installation: Embed

* + - * 1. R-8505 Tree Grate Frame

Material: Steel.

Model: Reliance Foundry, R-8505

Compatible Models: For 4.0’ Square Tree Grate (R-8870-Cosmopolitan and R8871-Solana)

Length: 49" (124.6 cm).

Width: 49" (124.6 cm)

Seat Depth: 1 1/2"(3.8 cm)

Weight: 50.5 pounds (22.9 kg) per pc, 101 pounds (45.8 kg) per set (2 pcs)

Country of Origin: India

Installation: Embed

1. EXECUTION
	* + 1. EXAMINATION
				1. Examine paving or other substrates for compliance with manufacturer’s requirements for placement and location of embedded items, condition of substrate, and other conditions affecting installation.
				2. Proceed with installation only after unsatisfactory conditions have been corrected.
				3. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
			2. PREPARATION
				1. Clean and prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
			3. INSTALLATION

Drawing Coordination: Ensure that bicycle lockers, when in use, do not impede required paths of egress and accessible travel. Allow adequate clearance for bicycle storage and removal.

* + - * 1. General: Comply with manufacturer’s installation requirements and setting drawings.
				2. Comply with installation requirements in Section 02750 - Concrete Paving.
			1. Surface of tree grate to be flush with surrounding finish surface. Variation from flush not to exceed plus or minus 1/8 inch (0.3 cm).
			2. CLEANING & PROTECTION
				1. Immediately prior to Substantial Completion, clean products in accordance with manufacturer’s instructions to remove dust, dirt, adhesives, and other foreign materials.
				2. Protect installed products until completion of project.
				3. Touch-up, repair or replace damaged products before Substantial Completion.
			3. CLOSEOUT ACTIVITIES
				1. Provide executed warranty.

END OF SECTION

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Issued July 2016. Subject to change.