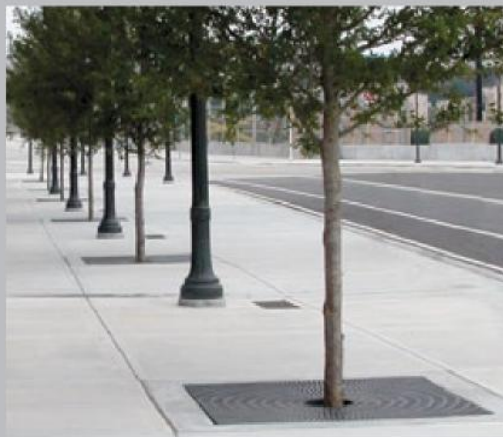




OCC Outdoors, Inc.

Recycled Plastic Tree Grates



PART 1 - GENERAL

1.1 Work Included --

The drawings and installation procedures scope of the work includes labor, materials, equipment and performance of all work required for installation of OCCOutdoors recycled plastic tree grates.

1.2 Work by Others --

Openings to receive grates are to be provided by others in accordance with instructions of tree grate manufacturer and are indicated on drawings and provisions of the specification.

PART 2 - PRODUCT

2.1 Tree Grates

A. Manufacturer

Grates shall be OCCOutdoors recycled plastic tree grates.

B. Material

Grates shall be of high-density polyethylene resins conforming to ASTM D-638.

C. Design

Grate pattern shall comply with A.D.A. requirements for equal access. Color, size, and configuration shall be specified by owner/architect.

D. Finish

Grates shall be manufactured true to pattern, of uniform quality and size, and free from defects. Surface shall be smooth; free of sharp edges.

2.2 Hardware --

Fasteners (included)

Grate halves shall be joined together with tamper-resistant bolt package as provided by OCCOutdoors, Inc. or approved equal. Package to consist of (6) each #16 3/8" x 1-1/4" button head socket-cap screw, stainless; #16 3/8" Tuff Nut, brass; and (12) each 3/8" USS Flat washer, zinc.

PART 3 - EXECUTION

3.1 Inspection --

Proper site preparation and ongoing maintenance will determine performance.

3.2 Surface Conditions --

Examine concrete ledge, and/or existing tree pit to receive grate. Correct condition to comply with manufacturer's recommended installation procedure.

3.3 Installation

A. Opening to Receive Grate

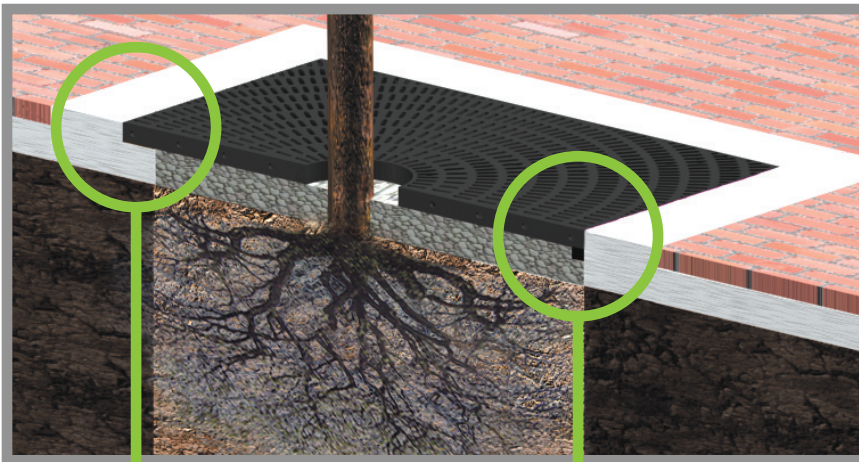
- Concrete Ledge Supported - New Installation (figure 3.3A1)
Concrete ledge shall be cast in size and configuration of specified tree grate model plus 3/8" expansion allotment. Ledge shall be 2 inches below concrete or tiled surface and extend inward 2 to 3 inches. Ledge must be level and free of bulges and slag.
- OCCOutdoors Frame Supported - New or retro-fit Installation (3.3A2) The OCCOutdoors Frame accessories will come complete with (4) 1 1/2" square pre-drilled plastic frames (42" length for use with 48" OCCOutdoors grates or 54" length for use with 60" OCCOutdoors grates. Sidewalk preparation should allow 3/8" additional length per side to provide for grate expansion. Attach OCCOutdoors Frame to sides of poured surface with Tap-Con screws (provided) or other approved concrete fastener (pre-drill pilot holes using a masonry bit). The OCCOutdoors Frame support ledge should be placed 2" below the surface of the concrete.

B. Support and Litter Prevention

Fill space from bottom of tree pit flush to bottom of tree grate with crushed shale or other self-compacting aggregate.

C. Join Grate Halves

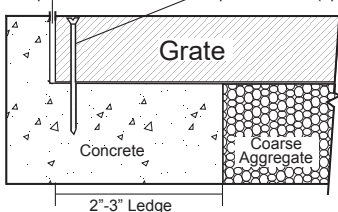
Bring tree grate halves together around a tree at a height that allows easy access to underside. Join section at pre-formed holes using tamper-resistant bolt package provided by manufacturer, or approved equal. Lower grate into place.



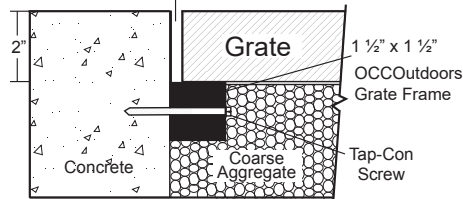
INSTALLATION WITH CONCRETE SURROUND (3.3A1)

INSTALLATION WITH OCCOutdoors FRAME (3.3A2)

3/16" Expansion Allotment Tap-Con Screw (optional)



3/16" Expansion Allotment



TEST DATA

	ASTM TEST	UNITS	TYPICAL VALUES
RESIN PROPERTIES			
Density	D-1505	g/cc	0.957
Melt Index	D-1238	g/10 min	7
MOLDED PROPERTIES			
Tensile Modulus (1% Secant)	D-638	psi	166000
Tensile at Yield	D-638	psi	4300
Elongation at Break	D-638	%	1400
Flexural Modulus	D-790	psi	194000

The key to any successful landscape project is to budget for ongoing maintenance expenditures, such as grate expansion as your trees mature. For best results and longevity, OCCOutdoors requires that the space between the ground and tree grate bottom be filled with coarse aggregate for all installation applications. This will properly support the grate, prevent accumulation of debris under grate and protect close-to-surface root systems.



troubleshooting guide

PROBLEM

CAUSE

SOLUTION

1. Tree grate is sagging.

- A. Mulch used instead of stone beneath the tree grate.
- B. Tree, soil, or aggregate have settled.

- A. Remove mulch and replace with course aggregate level to the ledge.
- B. Add additional course aggregate level to the ledge.

2. Corners of tree grate are sticking up (trip hazard).

- A. Concrete ledge or excess cement slag does not provide for a 2" thick grate.
- B. Angle iron ledge does not provide for 2" thick grate.
- C. See cause for problem #1 - a and b.

- A. Cut concrete ledge in a manner in which 2" thick grate will sit smoothly in relation to sidewalk; or chip away excess slag until smooth finish.
- B. Re-position angle iron so that 2" thick grate will sit smoothly in relation to sidewalk.
- C. See solution for problem #1 - a and b.

3. Tree grates are bulging in the shape of a dome.

- A. Concrete opening is too tight for the tree grate. Three-sixteenth (3/16") expansion gap around the tree grate was not provided for during installation.
- B. Angle iron opening is too tight for tree grate. Three-sixteenth (3/16") expansion gap around the tree was not provided for during installation.

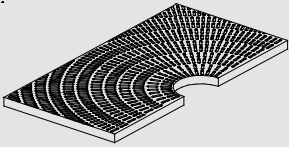
- A. Cut concrete in a manner in which 3/16" expansion gap around the tree grate will provide room for the tree grate to expand and contract with changing temperatures.
- B. Cut concrete and reposition angle iron in a manner in which 3/16" expansion gap around the tree grate will provide room for the tree grate to expand and contract with changing temperatures.



assembly instructions

4' x 4' TREE GRATE · TSB44

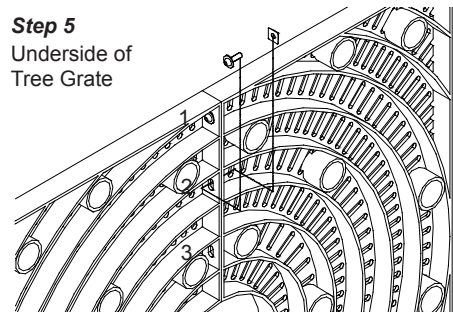
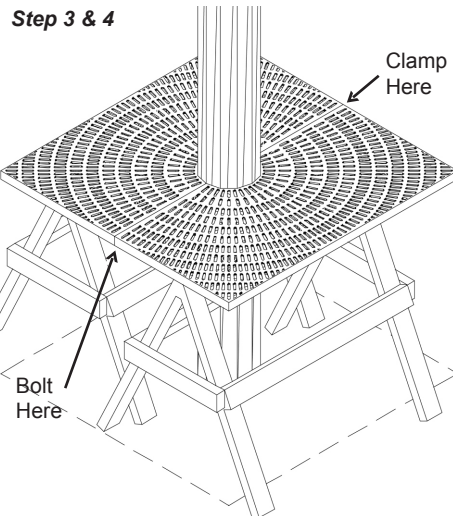
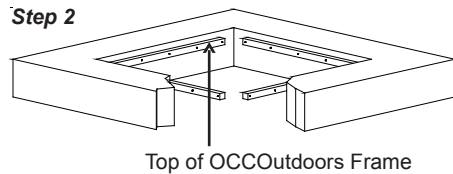
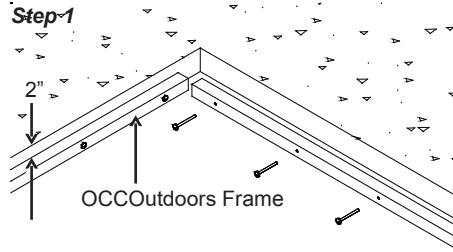
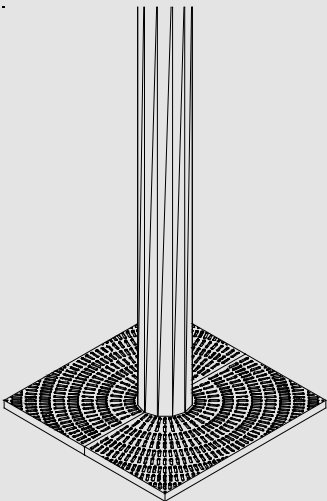
COMPONENTS



- (2) 48" x 24" Tree Grate Panels
- (6) Bolts
- (6) Washers
- (6) Tamper-resistant Nuts
- (4) OCCOutdoors Frame* 1-1/2" x 1-1/2" Support
- (5) OCCOutdoors Frame Bolts

*OCCOutdoors Frame is Optional

FULLY ASSEMBLED



STEP 1 (OCCOutdoors Frame is Optional)

OCCOutdoors Frame Installation
To install OCCOutdoors Frame, bolt each 1-1/2" x 1-1/2" plastic support 2" from the top of side-walk where tree grate will be placed.

STEP 2

Coarse Aggregate
After planting tree, fill pit with coarse aggregate until it is even with top of OCCOutdoors Frame.

STEP 3

Set-Up
To aid in suspending the tree grate, place (2) 4' x 4' half tree grate panels on two saw horses with centers going around the tree. (Other methods of suspension may be used as an alternative.)

STEP 4

Begin Bolting
Using the allen wrench provided, bolt half of the tree grate together starting from the outside edge and continuing toward the tree using three of the bolts from the bolt kit. Make sure all edges are lined up as the bolts are tightened.

STEP 5

Finish Bolting
Place a clamp or vise-grip on the outside edge of the tree grate opposite the end that was bolted in Step 4. Start bolting the second half of the tree grate starting from the outside edge and continuing toward the tree using the remaining bolts from the bolt kit. Make sure all edges are lined up as bolts are tightened.