

From: [kelly hammargren](#)
To: [Burns, Anne M](#); [Charles Kahn](#)
Subject: DRC - Flexi-pav and Rubberway permeable surface for sidewalks, tree wells, patios, pavement
Date: Thursday, September 22, 2022 8:33:23 PM
Attachments: [2000 University-Street Tree in Flexible Paving.pdf](#)
[rubberway vs concrete asphalt pavers.pdf](#)
[KBI Flexi-Pave FAQs \(May 2015\).pdf](#)
[flexi-permeable surface in tree well.jpg](#)

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As per my comment this evening September 22, 2022 at ZAB and included in this email is the information on a flexible porous permeable product that is currently used in Berkeley in tree wells and in one sidewalk replacement pilot.

There is a pilot project at 3120 Eton Avenue to use the flexible pavement as sidewalk to replace damaged concrete. The pilot project was approved by Public Works to preserve a very large redwood without cutting large roots as would have been required to lay a new concrete sidewalk. Click on this link to see the new flexible permeable pavement sidewalk <https://goo.gl/maps/H9G3E1zg6J7iDt7VA>

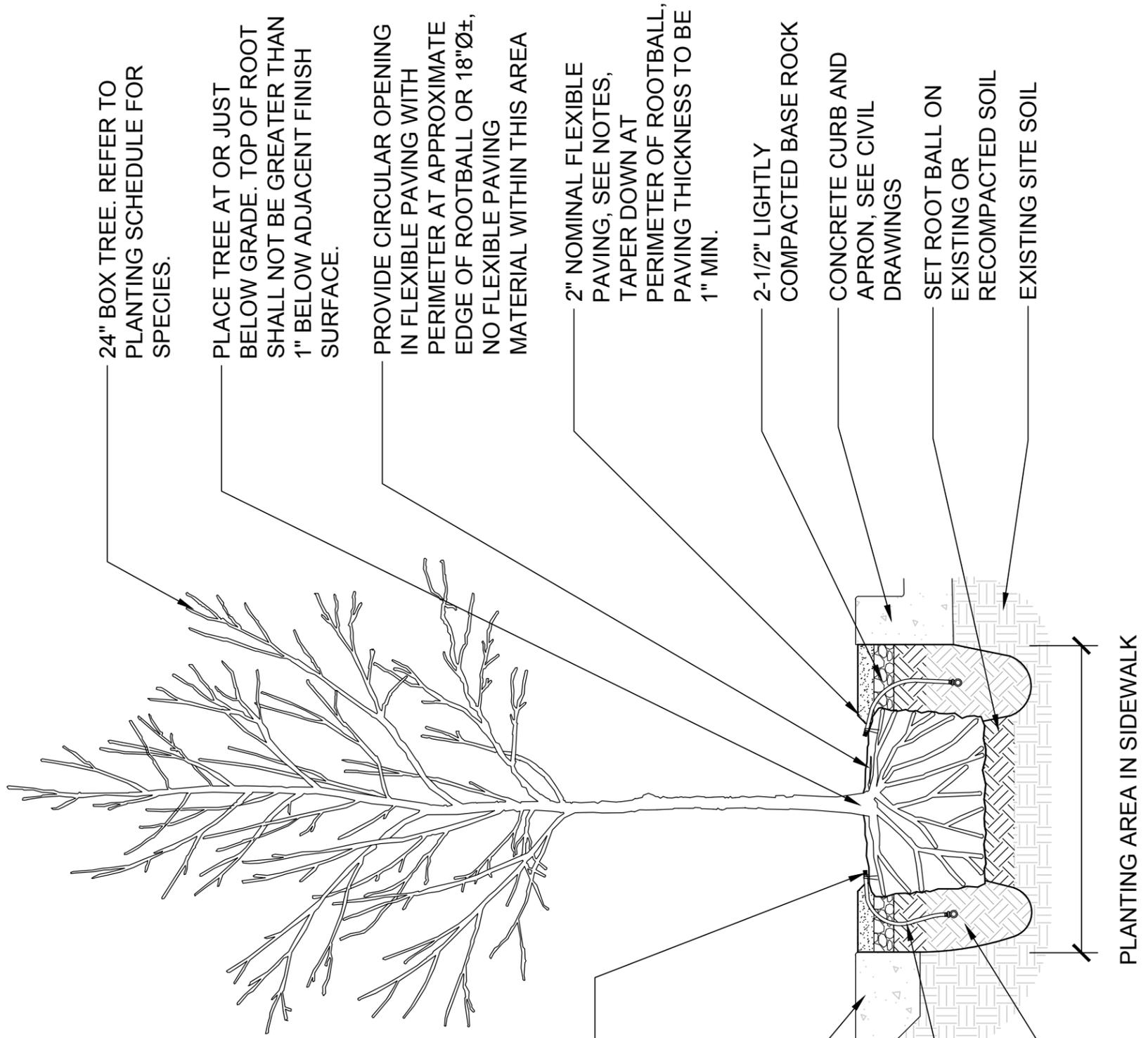
Two manufacturers are Rubberway and Flexi-pave. Attached are informational documents on the product.

Per Scott Ferris similar products have been used extensively in other cities including Seattle and Washington D.C. Oakland installed this material on round tree wells on the 900 block of Washington street, behind the Marriott Convention Center. It is planned that this product will be used in Berkeley with the planting of new trees on Shattuck.

The flexible porous product has incredible potential to provide a permeable surface for sidewalks, patios, driveways and as an alternative or replacement for pavement. Permeable surfaces are exactly what is needed to decrease runoff and recharge groundwater.

kelly hammargren

1. TREE STRUCTURE, TRUNK CALIPER AND CONDITION OF ROOT BALL SHALL CONFORM TO URBAN TREE FOUNDATION GUIDE SPECIFICATIONS FOR NURSERY TREE QUALITY.
2. PROVIDE STAKING AT ALL TREES. REFER TO STAKING DETAILS.
3. FLEXIBLE PAVING SHALL BE INSTALLED BY A QUALIFIED CONTRACTOR. SUBMIT CONTRACTOR QUALIFICATIONS TO LANDSCAPE ARCHITECT FOR APPROVAL.
4. FLEXIBLE PAVING TO CONFORM AT ADJACENT CONCRETE FINISH SURFACE, TRANSITION AT FINISH SURFACE SHALL NOT EXCEED 1/4"



24" BOX TREE. REFER TO PLANTING SCHEDULE FOR SPECIES.

PLACE TREE AT OR JUST BELOW GRADE. TOP OF ROOT SHALL NOT BE GREATER THAN 1" BELOW ADJACENT FINISH SURFACE.

PROVIDE CIRCULAR OPENING IN FLEXIBLE PAVING WITH PERIMETER AT APPROXIMATE EDGE OF ROOTBALL OR 18"Ø±, NO FLEXIBLE PAVING MATERIAL WITHIN THIS AREA

2" NOMINAL FLEXIBLE PAVING, SEE NOTES, TAPER DOWN AT PERIMETER OF ROOTBALL, PAVING THICKNESS TO BE 1" MIN.

2-1/2" LIGHTLY COMPACTED BASE ROCK

CONCRETE CURB AND APRON, SEE CIVIL DRAWINGS

SET ROOT BALL ON EXISTING OR RECOMPACTED SOIL

EXISTING SITE SOIL

IRRIGATION BUBBLER, TYP. OF (2) AT EACH TREE, REFER TO IRRIGATION DRAWINGS, LOCATE BUBBLERS WITHIN PAVING OPENING, DO NOT COVER WITH FLEXIBLE PAVING MATERIAL

CONCRETE SIDEWALK PAVING, SEE CIVIL DRAWINGS

LIGHTLY COMPACT TOP 4" OF SOIL AROUND TREE ROOTBALL

LOOSENED SOIL. DIG AND TURN SOIL TO REDUCE COMPACTION TO AREA AND DEPTH SHOWN

PLANTING AREA IN SIDEWALK

2000 UNIVERSITY AVENUE
 STREET TREE PLANTING IN FLEXIBLE PAVING
 SCALE: 3/4" = 1' - 0"



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Rubberway Competitive Analysis



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Competitive Analysis

Benefits	RubberWay®	Rubbersidewalks®	Pavers	Concrete	Asphalt
Estimated Life Cycle	12 Years	3 Years		2-5 Years	2 Years
Installed Material Cost	With Pigment \$4.95 Color Coat \$7.00	\$16.00 sq ft		\$12.00 sq ft	\$5-8.00 sq ft
Crew Needed	3 man crew	2 man crew		4 man crew	4 man crew
Completion Time	2000 sq ft/day	500 sq ft/day		2000 sq ft/day	2000 sq ft/day
Recycled Material Content	100%	100%		Low	Low
ADA Compliance	Very low vibration	Low Vibration		High Vibration	High Vibration
Size	Unlimited	2' x 2.5' x1.875"		Unlimited	Unlimited
Weight	9 lbs/sq ft	10.8 lbs/ sq ft		93.75/sq ft	24.5 lbs/sq ft
Appearance Changes	None	Darkens, Lifts, and Buckles at edges over time		Cracking, Staining	Chipping, Holes
Mass Changes	None	Some Settling		Lifting, Breaking	Deterioration
Trip Hazard	None	High at lifted seams		High a seams, cracks	Medium when cracked
Maintainability	Very Low	Moderate		Low	Low
Walking Comfort	Highest	Moderate		Low	Low
Porosity	Highest	Only at Seams		None (0"/hr)	Low (.2"/hr)
Follow Curves, Obstacles	Yes	No		Yes	Yes
Re-Topping	Easy	No		Difficult	Moderate
Patch Repairing	Almost Invisible	Difficult (variable density)		Poor	Poor

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Rubberway Supplies
PolyStar Supplies

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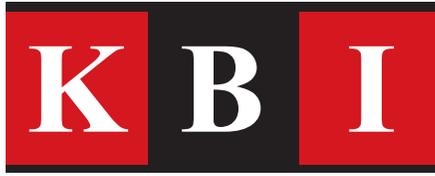
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Sustainable Porous Paving Solutions

KBI Flexi®-Pave FAQ

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