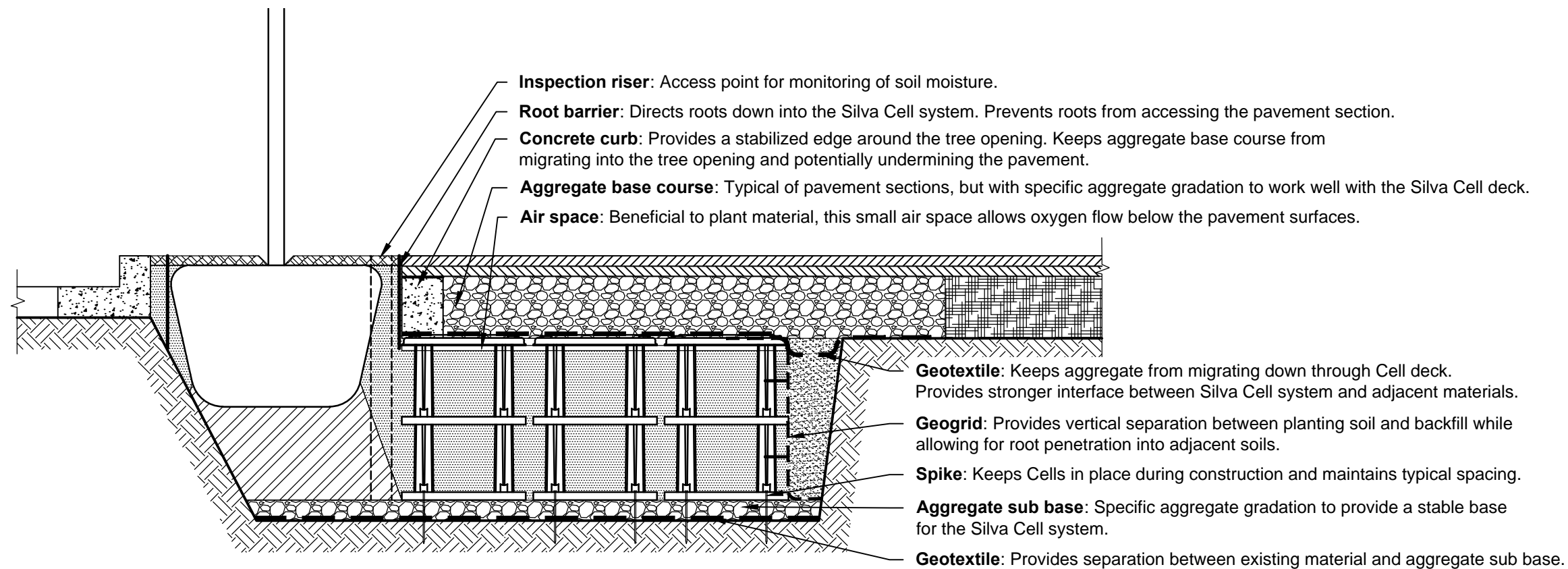## SILVA CELLS FOR PLAZA APPLICATIONS

Numbers in detail titles (1.1, 2.1, 3.2, etc.) denote the number of layers of Silva Cell frames. Basic paving details are all available in one, two, and three layers.

These are a generic representation of a plaza and should be modified to depict actual project conditions.

☐ Concrete 1.0   ☐ Pavers, Asphalt & Porous Pavements 1.0
☐ Concrete 2.0   ☐ Pavers, Asphalt & Porous Pavements 2.0
☐ Concrete 3.0   ☐ Pavers, Asphalt & Porous Pavements 3.0

SILVA CELL SYSTEM COMPONENTS

Inspection riser: Access point for monitoring of soil moisture.

Root barrier: Directs roots down into the Silva Cell system. Prevents roots from accessing the pavement section.

Concrete curb: Provides a stabilized edge around the tree opening. Keeps aggregate base course from migrating into the tree opening and potentially undermining the pavement.

Aggregate base course: Typical of pavement sections, but with specific aggregate gradation to work well with the Silva Cell deck.

Air space: Beneficial to plant material, this small air space allows oxygen flow below the pavement surfaces.

Geotextile: Keeps aggregate from migrating down through Cell deck. Provides stronger interface between Silva Cell system and adjacent materials.

Geogrid: Provides vertical separation between planting soil and backfill while allowing for root penetration into adjacent soils.

Spike: Keeps Cells in place during construction and maintains typical spacing.

Aggregate sub base: Specific aggregate gradation to provide a stable base for the Silva Cell system.

Geotextile: Provides separation between existing material and aggregate sub base.

NOTES:
1. Installation to be completed in accordance with manufacturer's specifications.
2. Do not scale drawings.

Disclaimer: Conditions that vary from drawings must be evaluated by a qualified Engineer and appropriate adjustments made.

Silva Cells

for
PLAZA
APPLICATIONS

INDEX

Varies

Tree trunk, size varies

1"-2"(25mm-50mm) mulch above tree pit

DeepRoot UB12-2 Root barrier

Inspection riser

4"(100mm) concrete, turn down to deck around tree opening. Position curb over Cell posts.

4"(100mm) aggregate base course

Geotextile, 18"(450mm) minimum overlap past excavation

1"(25mm) air space between Silva Cell deck and planting soil

18"(450mm)

Concrete base course per project specifications

28.5" (719.7mm)

6"(150mm)

1"-3"(25-75mm)

Screw Cell decks to frames after snapping in place (typ.)

Geogrid. 'J' 6"(150mm) minimum below backfill at base. Overlap 12"(300mm) minimum at top of Cells.

3/16" x14"(5mm x 350mm) zip ties, attaching Geogrid to Silva Cells at each level and at Cell deck

Backfill, installed in 8"(200mm) lifts, within 4"-6" (100-150mm) from top of decks, compacted to 95%

Anchor each Silva Cell to ground with (4) 10" (250mm) spike,<10mm dia., see Cell base for spike hole

Tree root package, size varies

Silva Cell base slope to max. 5%

Geotextile on compacted subgrade

Planting soil per Silva Cell specifications, installed in 8"(200mm) lifts (2 lifts per cell)

4"(100mm) aggregate sub base, compacted to 95%

Subgrade below geotextile and aggregate base course, compacted to 95%

Tree

KEY PLAN
(for reference only)

NOTES:
  1. Installation to be completed in accordance with manufacturer's specifications.
  2. Do not scale drawings.
Disclaimer: Conditions that vary from drawings must be evaluated by a qualified Engineer and appropriate adjustments made.

Project No.: 07337
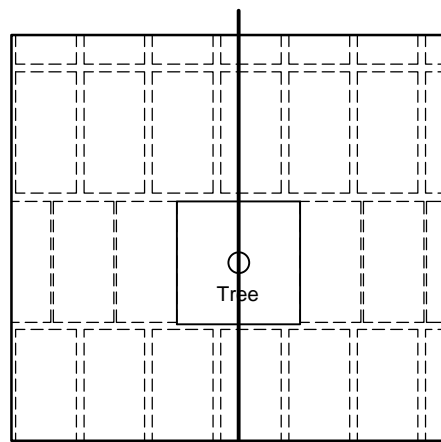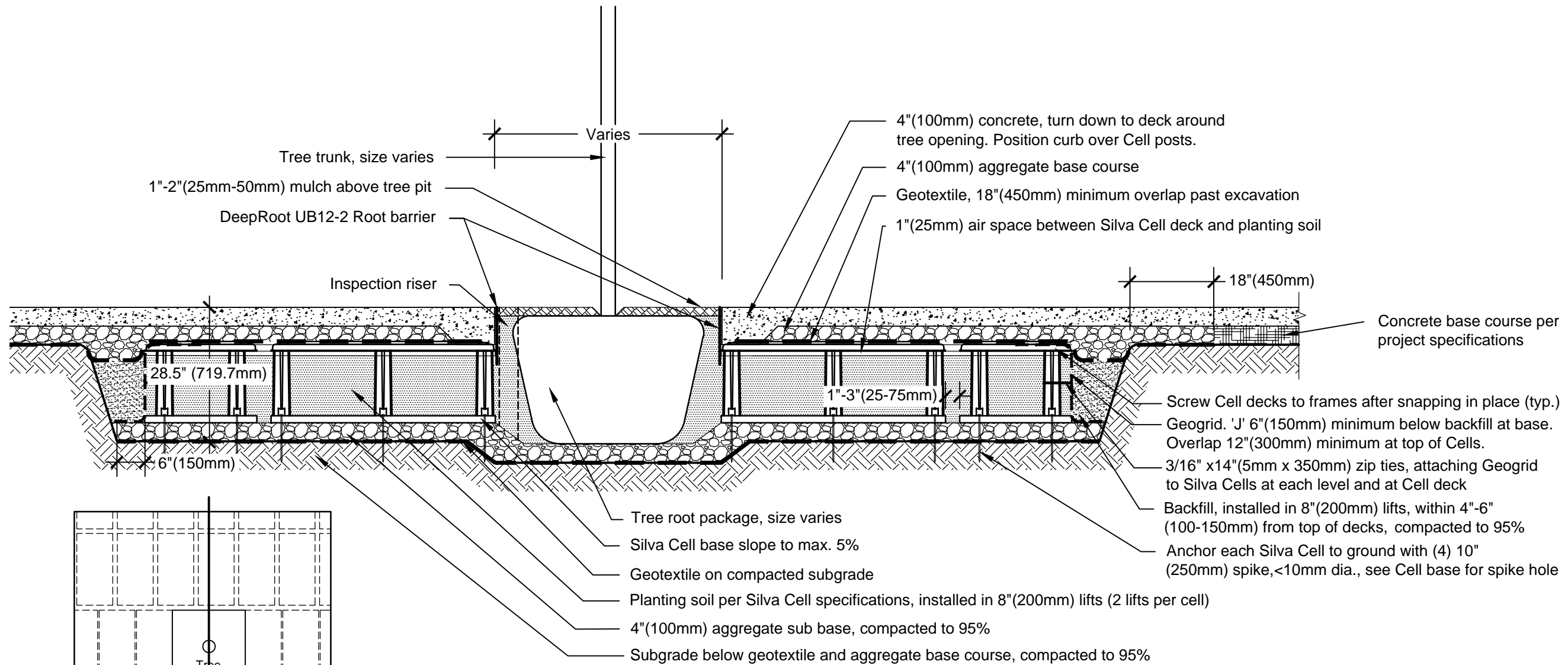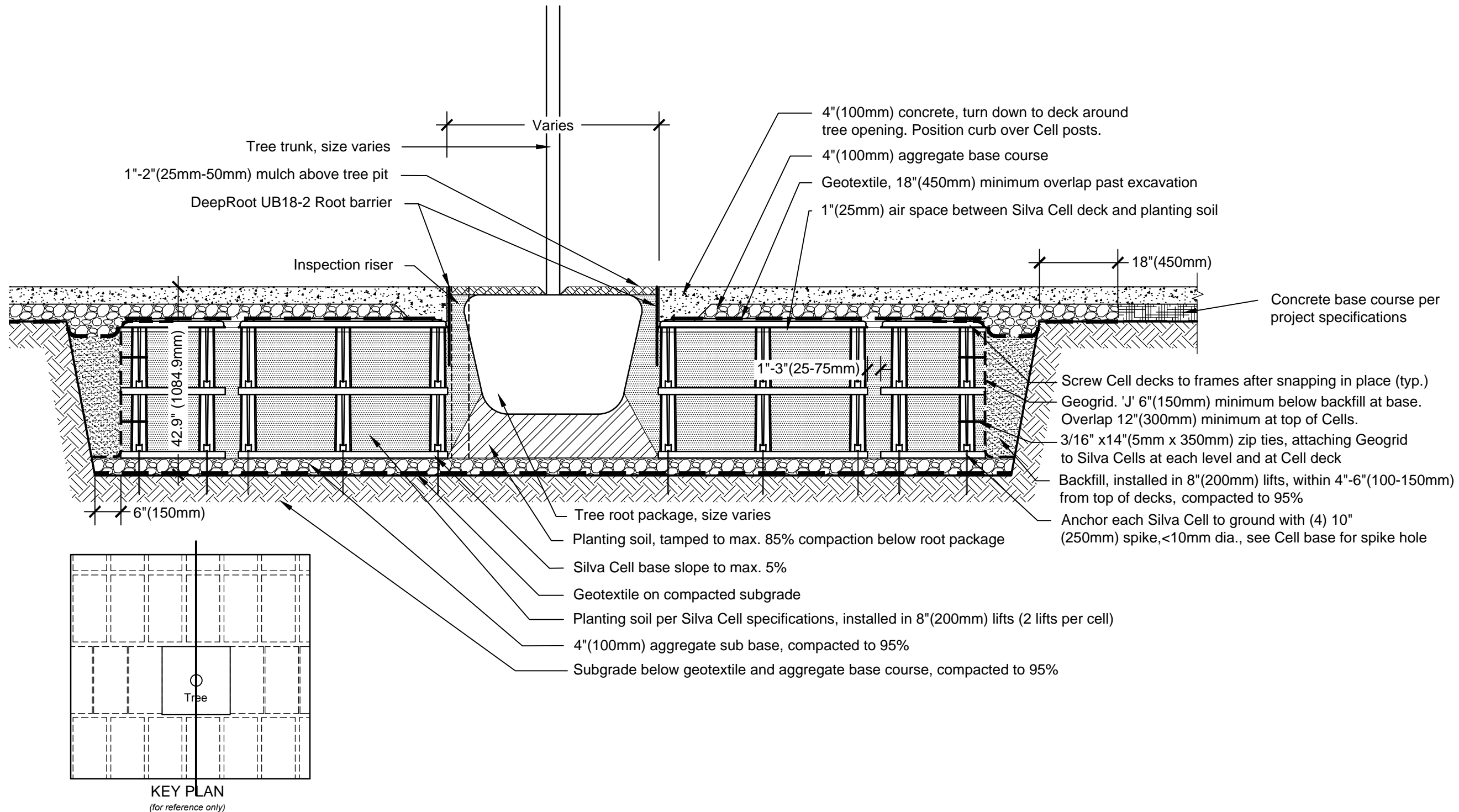Drawn by: MDB
Checked by: DR
Date: 8/1/2012

Revisions:

2012 Release

07337 Deeproot\CAD\DR-TreeDetails.dwg

Silva Cells

for
PLAZA
APPLICATIONS

Concrete 1.0

Varies

Tree trunk, size varies

1"-2"(25mm-50mm) mulch above tree pit

DeepRoot UB18-2 Root barrier

Inspection riser

42.9" (1084.9mm)

6"(150mm)

4"(100mm) concrete, turn down to deck around
tree opening. Position curb over Cell posts.

4"(100mm) aggregate base course

Geotextile, 18"(450mm) minimum overlap past excavation

1"(25mm) air space between Silva Cell deck and planting soil

18"(450mm)

Concrete base course per
project specifications

1"-3"(25-75mm)

Screw Cell decks to frames after snapping in place (typ.)

Geogrid. 'J' 6"(150mm) minimum below backfill at base.
Overlap 12"(300mm) minimum at top of Cells.

3/16" x14"(5mm x 350mm) zip ties, attaching Geogrid
to Silva Cells at each level and at Cell deck

Backfill, installed in 8"(200mm) lifts, within 4"-6"(100-150mm)
from top of decks, compacted to 95%

Anchor each Silva Cell to ground with (4) 10"
(250mm) spike,<10mm dia., see Cell base for spike hole

Tree root package, size varies

Planting soil, tamped to max. 85% compaction below root package

Silva Cell base slope to max. 5%

Geotextile on compacted subgrade

Planting soil per Silva Cell specifications, installed in 8"(200mm) lifts (2 lifts per cell)

4"(100mm) aggregate sub base, compacted to 95%

Subgrade below geotextile and aggregate base course, compacted to 95%

Tree

KEY PLAN
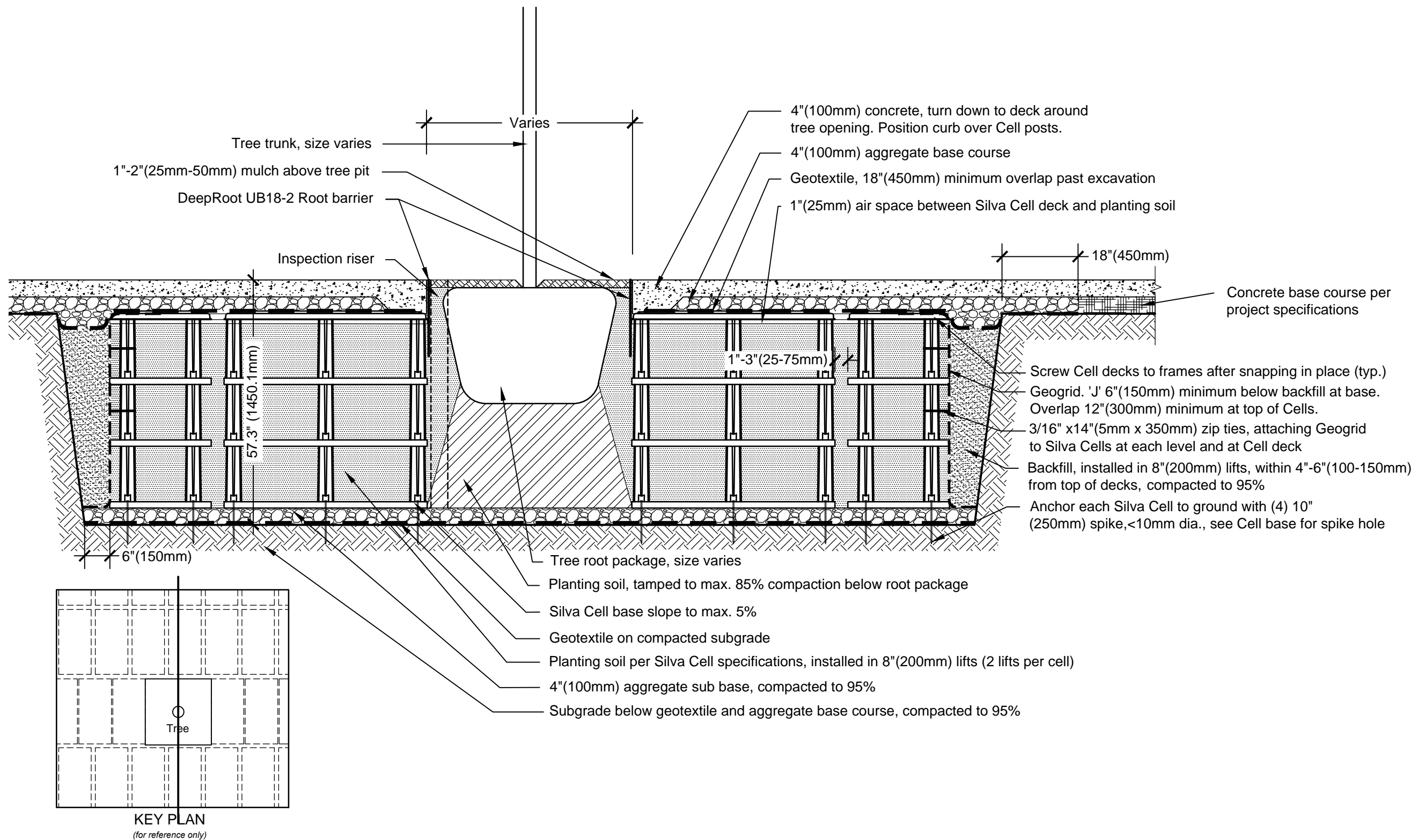*(for reference only)*

Silva Cells

for
PLAZA
APPLICATIONS

Concrete 2.0

NOTES:
1. Installation to be completed in accordance with manufacturer's
   specifications.
2. Do not scale drawings.
Disclaimer: Conditions that vary from drawings must be evaluated by a qualified
Engineer and appropriate adjustments made.

Varies

Tree trunk, size varies

1"-2"(25mm-50mm) mulch above tree pit

DeepRoot UB18-2 Root barrier

Inspection riser

4"(100mm) concrete, turn down to deck around tree opening. Position curb over Cell posts.

4"(100mm) aggregate base course

Geotextile, 18"(450mm) minimum overlap past excavation

1"(25mm) air space between Silva Cell deck and planting soil

18"(450mm)

Concrete base course per project specifications

57.3" (1450.1mm)

1"-3"(25-75mm)

Screw Cell decks to frames after snapping in place (typ.)

Geogrid. 'J' 6"(150mm) minimum below backfill at base. Overlap 12"(300mm) minimum at top of Cells.

3/16" x14"(5mm x 350mm) zip ties, attaching Geogrid to Silva Cells at each level and at Cell deck

Backfill, installed in 8"(200mm) lifts, within 4"-6"(100-150mm) from top of decks, compacted to 95%

Anchor each Silva Cell to ground with (4) 10" (250mm) spike,<10mm dia., see Cell base for spike hole

6"(150mm)

Tree root package, size varies

Planting soil, tamped to max. 85% compaction below root package

Silva Cell base slope to max. 5%

Geotextile on compacted subgrade

Planting soil per Silva Cell specifications, installed in 8"(200mm) lifts (2 lifts per cell)

4"(100mm) aggregate sub base, compacted to 95%

Subgrade below geotextile and aggregate base course, compacted to 95%

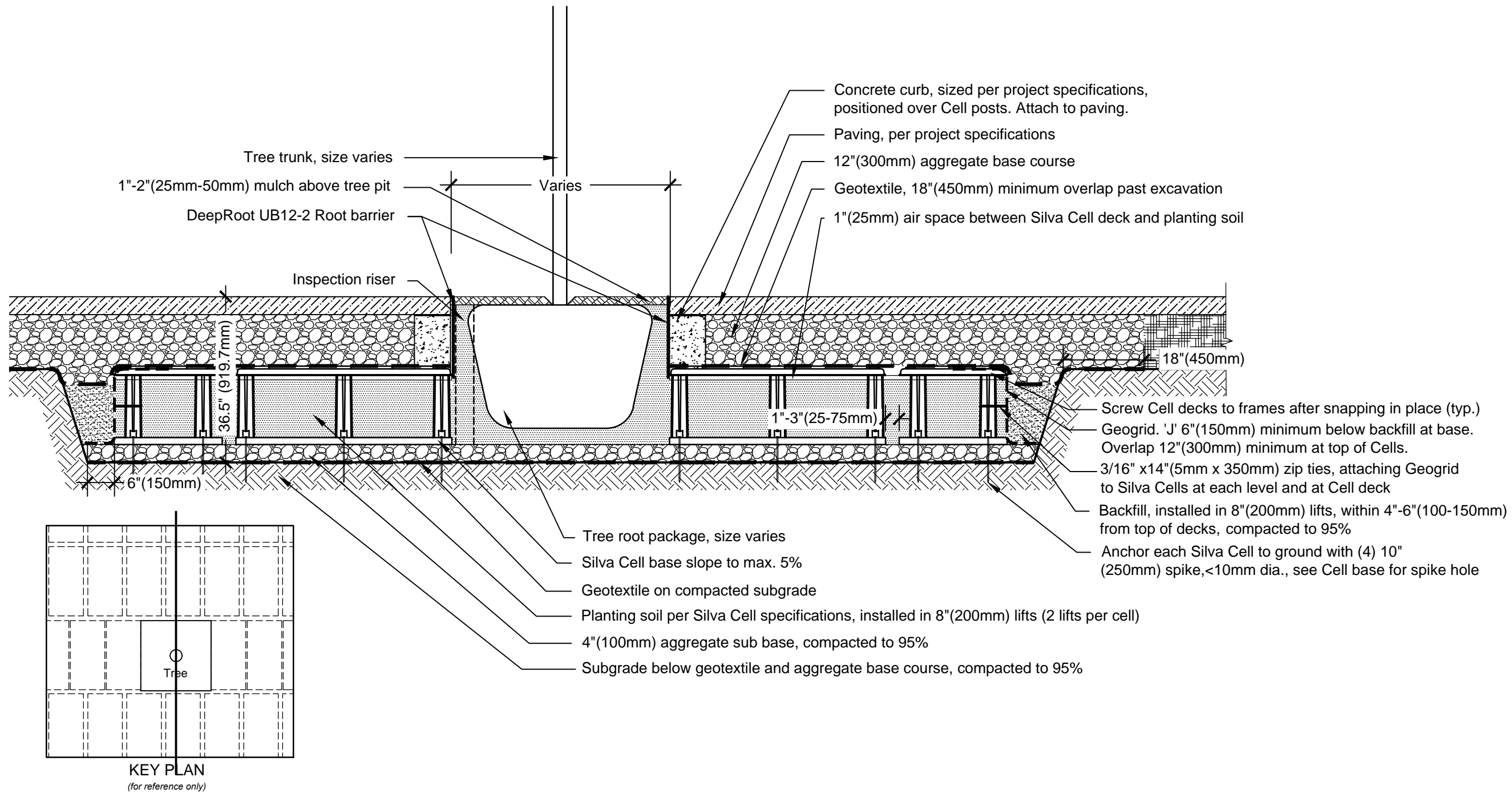KEY PLAN
(for reference only)

Tree

Silva Cells

for
PLAZA
APPLICATIONS

Concrete 3.0

NOTES:
1. Installation to be completed in accordance with manufacturer's specifications.
2. Do not scale drawings.
Disclaimer: Conditions that vary from drawings must be evaluated by a qualified Engineer and appropriate adjustments made.

Concrete curb, sized per project specifications, positioned over Cell posts. Attach to paving.

Paving, per project specifications

12"(300mm) aggregate base course

Geotextile, 18"(450mm) minimum overlap past excavation

1"(25mm) air space between Silva Cell deck and planting soil

Tree trunk, size varies

1"-2"(25mm-50mm) mulch above tree pit

DeepRoot UB12-2 Root barrier

Inspection riser

Varies

36.5" (919.7mm)

18"(450mm)

1"-3"(25-75mm)

6"(150mm)

Screw Cell decks to frames after snapping in place (typ.)

Geogrid. 'J' 6"(150mm) minimum below backfill at base. Overlap 12"(300mm) minimum at top of Cells.

3/16" x14"(5mm x 350mm) zip ties, attaching Geogrid to Silva Cells at each level and at Cell deck

Backfill, installed in 8"(200mm) lifts, within 4"-6"(100-150mm) from top of decks, compacted to 95%

Anchor each Silva Cell to ground with (4) 10" (250mm) spike,<10mm dia., see Cell base for spike hole

Tree root package, size varies

Silva Cell base slope to max. 5%

Geotextile on compacted subgrade

Planting soil per Silva Cell specifications, installed in 8"(200mm) lifts (2 lifts per cell)

4"(100mm) aggregate sub base, compacted to 95%

Subgrade below geotextile and aggregate base course, compacted to 95%

Tree

KEY PLAN
(for reference only)

Silva Cells

for
PLAZA
APPLICATIONS

Pavers, Asphalt, &
Porous Pavements
1.0

NOTES:
1. Installation to be completed in accordance with manufacturer's specifications.
2. Do not scale drawings.
Disclaimer: Conditions that vary from drawings must be evaluated by a qualified Engineer and appropriate adjustments made.

Concrete curb, sized per project specifications, positioned over Cell posts. Attach to paving.

Paving, per project specifications

12"(300mm) aggregate base course

Geotextile, 18"(450mm) minimum overlap past excavation

1"(25mm) air space between Silva Cell deck and planting soil

Tree trunk, size varies

1"-2"(25mm-50mm) mulch above tree pit

Varies

DeepRoot UB18-2 Root barrier

Inspection riser

18"(450mm)

Paving base course per project specifications

50.9" (1284.9mm)

1"-3"(25-75mm)

Screw Cell decks to frames after snapping in place (typ.)

Geogrid. 'J' 6"(150mm) minimum below backfill at base. Overlap 12"(300mm) minimum at top of Cells.

3/16" x14"(5mm x 350mm) zip ties, attaching Geogrid to Silva Cells at each level and at Cell deck

Backfill, installed in 8"(200mm) lifts, within 4"-6"(100-150mm) from top of decks, compacted to 95%

Anchor each Silva Cell to ground with (4) 10" (250mm) spike,<10mm dia., see Cell base for spike hole

6"(150mm)

Tree root package, size varies

Planting soil, tamped to max. 85% compaction below root package

Silva Cell base slope to max. 5%

Geotextile on compacted subgrade

Planting soil per Silva Cell specifications, installed in 8"(200mm) lifts (2 lifts per cell)

4"(100mm) aggregate sub base, compacted to 95%

Subgrade below geotextile and aggregate base course, compacted to 95%
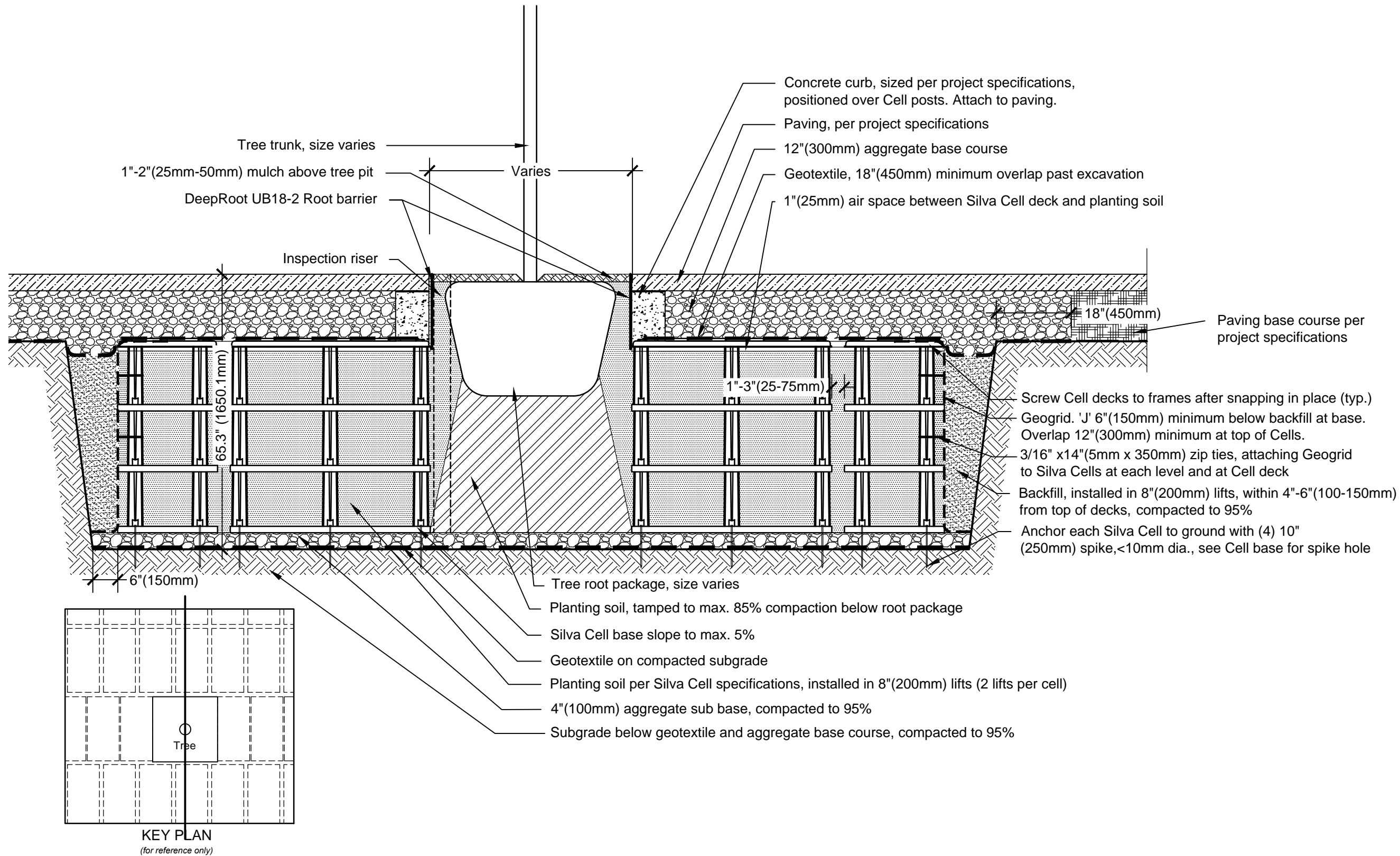
KEY PLAN
(for reference only)

Tree

Silva Cells

for
PLAZA
APPLICATIONS

Pavers, Asphalt, &
Porous Pavements
2.0

NOTES:
1. Installation to be completed in accordance with manufacturer's specifications.
2. Do not scale drawings.
Disclaimer: Conditions that vary from drawings must be evaluated by a qualified Engineer and appropriate adjustments made.

Tree trunk, size varies

1"-2"(25mm-50mm) mulch above tree pit

DeepRoot UB18-2 Root barrier

Inspection riser

Varies

Concrete curb, sized per project specifications, positioned over Cell posts. Attach to paving.

Paving, per project specifications

12"(300mm) aggregate base course

Geotextile, 18"(450mm) minimum overlap past excavation

1"(25mm) air space between Silva Cell deck and planting soil

18"(450mm)

Paving base course per project specifications

65.3" (1650.1mm)

1"-3"(25-75mm)

Screw Cell decks to frames after snapping in place (typ.)

Geogrid. 'J' 6"(150mm) minimum below backfill at base. Overlap 12"(300mm) minimum at top of Cells.

3/16" x14"(5mm x 350mm) zip ties, attaching Geogrid to Silva Cells at each level and at Cell deck

Backfill, installed in 8"(200mm) lifts, within 4"-6"(100-150mm) from top of decks, compacted to 95%

Anchor each Silva Cell to ground with (4) 10" (250mm) spike,<10mm dia., see Cell base for spike hole

6"(150mm)

Tree root package, size varies

Planting soil, tamped to max. 85% compaction below root package

Silva Cell base slope to max. 5%

Geotextile on compacted subgrade

Planting soil per Silva Cell specifications, installed in 8"(200mm) lifts (2 lifts per cell)

4"(100mm) aggregate sub base, compacted to 95%

Subgrade below geotextile and aggregate base course, compacted to 95%

KEY PLAN
Tree
(for reference only)

NOTES:
1. Installation to be completed in accordance with manufacturer's specifications.
2. Do not scale drawings.
Disclaimer: Conditions that vary from drawings must be evaluated by a qualified Engineer and appropriate adjustments made.

Project No.: 07337
Drawn by: MDB
Checked by: DR
Date: 8/1/2012

Revisions:

2012 Release

07337 Deeproot\CAD\DR-TreeDetails.dwg

Silva Cells

for
PLAZA
APPLICATIONS

Pavers, Asphalt, & Porous Pavements
3.0