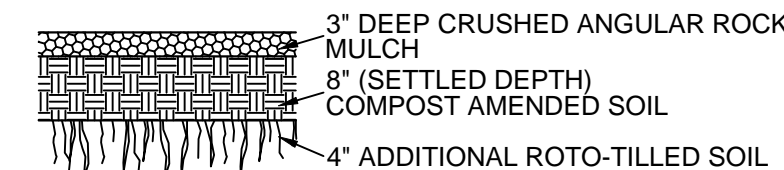


- NOTES:**
- DO NOT SUBSTITUTE ROUNDED RIVER ROCK (AKA PEA GRAVEL)
  - AMENDED PLANTING SOIL SHALL BE MIXED ON-SITE BY THE GRADING CONTRACTOR (NOT LANDSCAPE CONTRACTOR) AND SHALL FOLLOW STEPS 5a THROUGH 5e OF THE CONSTRUCTION SEQUENCE NOTES AND REPEAT AS NECESSARY TO GENERATE VOLUME OF BACKFILL NEEDED PER DETAIL AND PLANS.

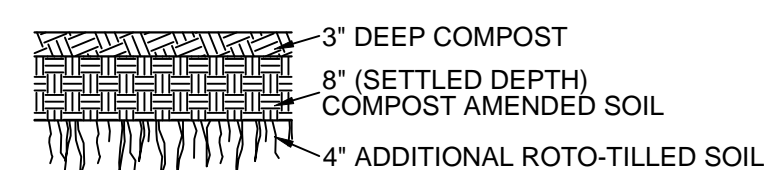
**1 Section A-A': Tree Well without Structural Soil**  
SC2.1 1/2" = 1'

- TREE WELL CONSTRUCTION SEQUENCE**
- EXCAVATE SUBGRADE PER CIVIL SUBGRADE PLAN, CXX.
  - ROTOTILL 4' PLANTER AREA TO A DEPTH OF APPROXIMATELY 11" AND AMEND WITH COMPOST PER DETAIL 4/SC2.1
  - PLACE BASE ROCK OF PERVIOUS PAVEMENT PER SPECIFICATIONS AND CIVIL DWGS AND AS SHOWN ON DETAIL 2/SC2.1
  - USING NATIVE CLAY EXCAVATED FROM AREA SHOWN ON DETAIL 3/SC2.1, ENSURE THAT THE AMENDED PLANTED SOILS HAS THE DESIRED MIX:
    - STOCKPILE NATIVE CLAY SOIL TO A MAXIMUM DEPTH OF 18"
    - PLACE PERMAMATRIX SOIL AMENDMENT FROM SUNMARK ENVIRONMENTAL (503.241.7333) OR EQUIVALENT AT A RATE OF 1-50 LB. BAG PER 500 FEET OF AREA OVER STOCKPILE.
    - PLACE US COMPOSTING COUNCIL SEAL OF TESTING ASSURED (STA) COMPOST TO A DEPTH OF 5". SEE COMPOST SPECIFICATIONS ON DWG L2.1.
    - ROTOTILL NATIVE CLAY SOIL, PERMAMATRIX, AND COMPOST TOGETHER UNTIL MIX IS HOMOGENOUS (I.E. MATERIAL IS CONSISTENT THROUGHOUT)
  - PLACE AMENDED PLANTING SOIL USING LIGHT COMPACTION SUCH AS BOOT TAMPING OR WATER APPLICATION TO SETTLE SOIL TO A DEPTH THAT MATCHES THE TOP OF THE BASE ROCK.
  - MOUND UP AMENDED PLANTING SOIL TO FINISH GRADE AS SHOWN BY ANGLE OF REPOSE ON DETAIL 2/SC2.1
  - TO PREVENT CLOGGING, PLANTING TREES AFTER PERVIOUS CONCRETE INSTALLATION SHALL NOT BE ALLOWED. CONTACT MARIA CAHILL (503.334.8634) AT LEAST 48 HOURS PRIOR TO TREE WELL CONSTRUCTION TO ARRANGE FOR TREE PLANTING BY TUALATIN HILLS PARKS AND RECREATION STAFF.
  - PLACE PERVIOUS CONCRETE PER CIVIL DWGS.
  - AFTER PERVIOUS CONCRETE HAS CURED, COVER THE EDGES OF PERVIOUS CONCRETE WITH SHEETING OR OTHER PROTECTIVE, IMPERMEABLE MATERIAL TO A WIDTH OF AT LEAST 4' ON EITHER SIDE OF 4' PLANTING AREA TO PREVENT CLOGGING, OVERLAPPING 12" AT EDGES AS NEEDED. GEOTEXTILE FABRIC WILL NOT BE ACCEPTED. IF WINDY, ANCHOR SHEETS DOWN WITH SAND BAGS OR CLEAN EQUIVALENT.
  - CAREFULLY BACKFILL THE REST OF THE DEPTH OF AMENDED PLANTING SOIL AS SHOWN IN DETAIL 2/SC2.1
  - CAREFULLY REMOVE SHEETING SO THAT NO EXCESS DIRT FALLS ON PERVIOUS PAVEMENT.



- NOTES:**
- TO AMEND SOILS IN PLACE:
    - ROTOTILL AREAS INDICATED ON PLAN TO A DEPTH OF 12 INCHES OR AS DEEP AS POSSIBLE.
    - SPREAD PERMAMATRIX SOIL AMENDMENT FROM SUNMARK ENVIRONMENTAL (503.241.7333) OR EQUIVALENT AT A RATE OF 1-50 LB. BAG PER 500 SQUARE FEET.
    - SPREAD 3 INCHES OF COMPOST.
    - ROTOTILL AMENDMENTS INTO 5 INCHES OF SOIL (A TOTAL AMENDED DEPTH OF ABOUT 9.5 INCHES, FOR A SETTLED DEPTH OF 8 INCHES.)
  - RAKE BEDS TO SMOOTH AND REMOVE SURFACE ROCKS LARGER THAN 2 INCHES DIAMETER.
  - LIGHTLY COMPACT WITH LIGHT BOOT TAMPING OR WATER APPLICATION TO SPEED UP SETTLING.
  - SEE COMPOST SPECIFICATIONS PER L2.1.

**3 Compost Amended Tree Well**  
SC2.1 NTS



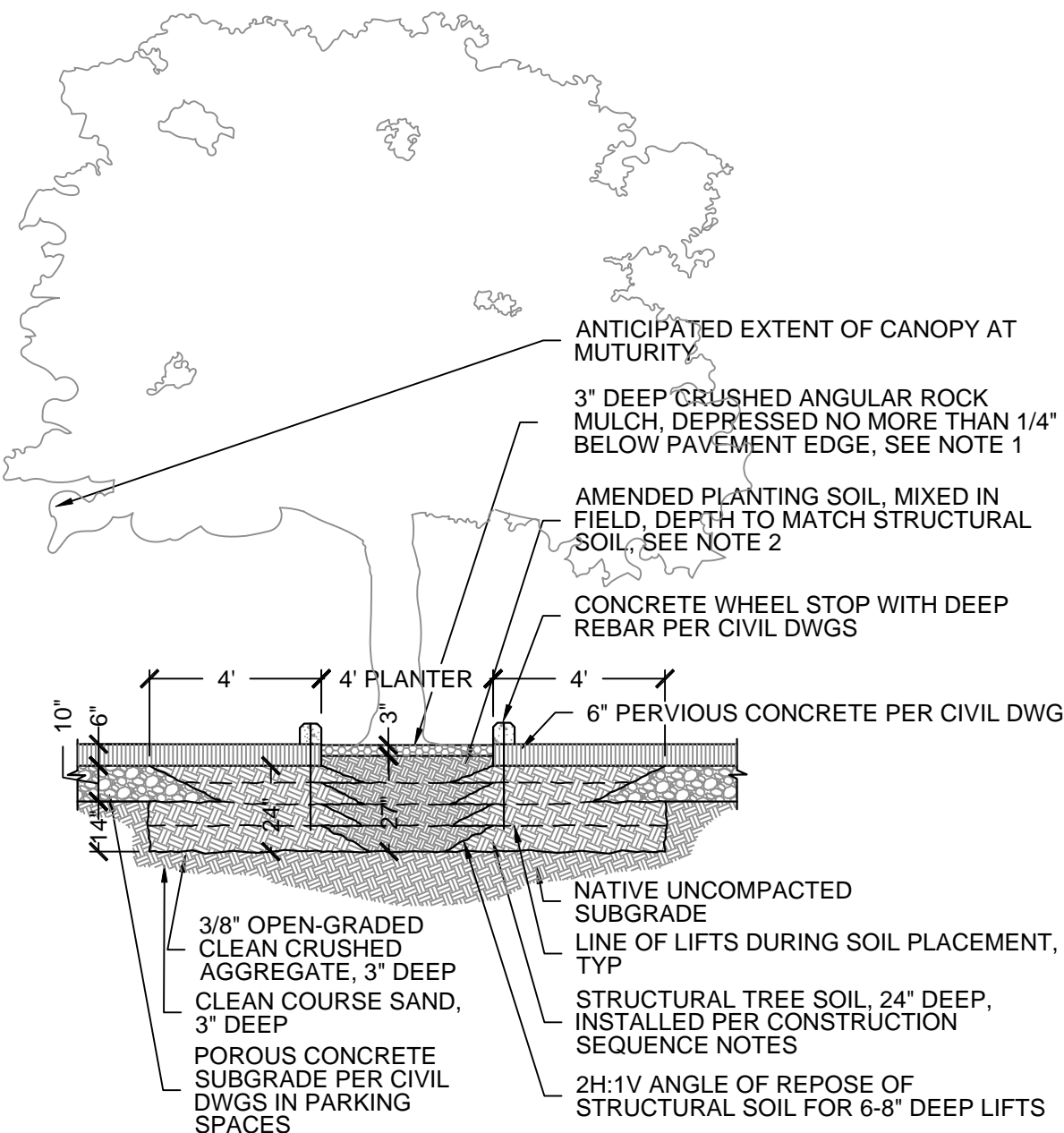
- NOTES:**
- TO AMEND SOILS IN PLACE:
    - ROTOTILL AREAS INDICATED ON PLAN TO A DEPTH OF 12 INCHES OR AS DEEP AS POSSIBLE.
    - SPREAD PERMAMATRIX SOIL AMENDMENT FROM SUNMARK ENVIRONMENTAL (503.241.7333) OR EQUIVALENT AT A RATE OF 1-50 LB. BAG PER 500 SQUARE FEET.
    - SPREAD 3 INCHES OF COMPOST.
    - ROTOTILL AMENDMENTS INTO 5 INCHES OF SOIL (A TOTAL AMENDED DEPTH OF ABOUT 9.5 INCHES, FOR A SETTLED DEPTH OF 8 INCHES.)
  - RAKE BEDS TO SMOOTH AND REMOVE SURFACE ROCKS LARGER THAN 2 INCHES DIAMETER.
  - LIGHTLY COMPACT WITH LIGHT BOOT TAMPING OR WATER APPLICATION TO SPEED UP SETTLING.
  - SEE COMPOST SPECIFICATIONS PER L2.1.

**4 Compost Amendment Outside Tree Well**  
SC2.1 NTS

**Compost Specification**

- COMPOST SHALL BE SUPPLIED BY A U.S. COMPOST COUNCIL SEAL OF TESTING ASSURED (STA) PROGRAM SUPPLIER (CLACKAMAS COMPOST PRODUCTS "PREMIUM GARDEN MULCH" 503.557.1028 OR EQUIVALENT FROM PARTICIPATING COMPOST SUPPLIERS LIST AT: <http://compostingcouncil.org/participants#OR>). REVIEW THE MOST RECENT TESTING RESULTS TO CONFIRM THAT THE COMPOST BEING SUPPLIED MEETS THE FOLLOWING SPECIFICATIONS:
  - ORGANIC MATTER CONTENT BETWEEN 45% AND 65% AS DETERMINED BY LOSS OF IGNITION TEST METHOD.
  - PH BETWEEN 5.5 AND 8.0.
  - CARBON-NITROGEN RATIO BETWEEN 20:1 AND 25:1 FOR MOST LANDSCAPES EXCEPT A CN RATIO OF 30:1 TO 35:1 IS PREFERRED FOR NATIVE WOODY PLANTINGS.
  - MAXIMUM ELECTRICAL CONDUCTIVITY OF 6 MMHOS/CM.
  - MOISTURE CONTENT RANGE BETWEEN 35 AND 50%.
  - NO VIABLE WEED SEEDS.
  - MANUFACTURED INERT MATERIAL (PLASTIC, CONCRETE, CERAMICS, ETC.) SHOULD BE LESS THAN 1% ON A DRY WEIGHT OR VOLUME BASIS (AS REQUIRED BY WAC 173-350-220).
  - METALS SHOULD NOT BE IN EXCESS OF LIMITS IN THE FOLLOWING TABLE:

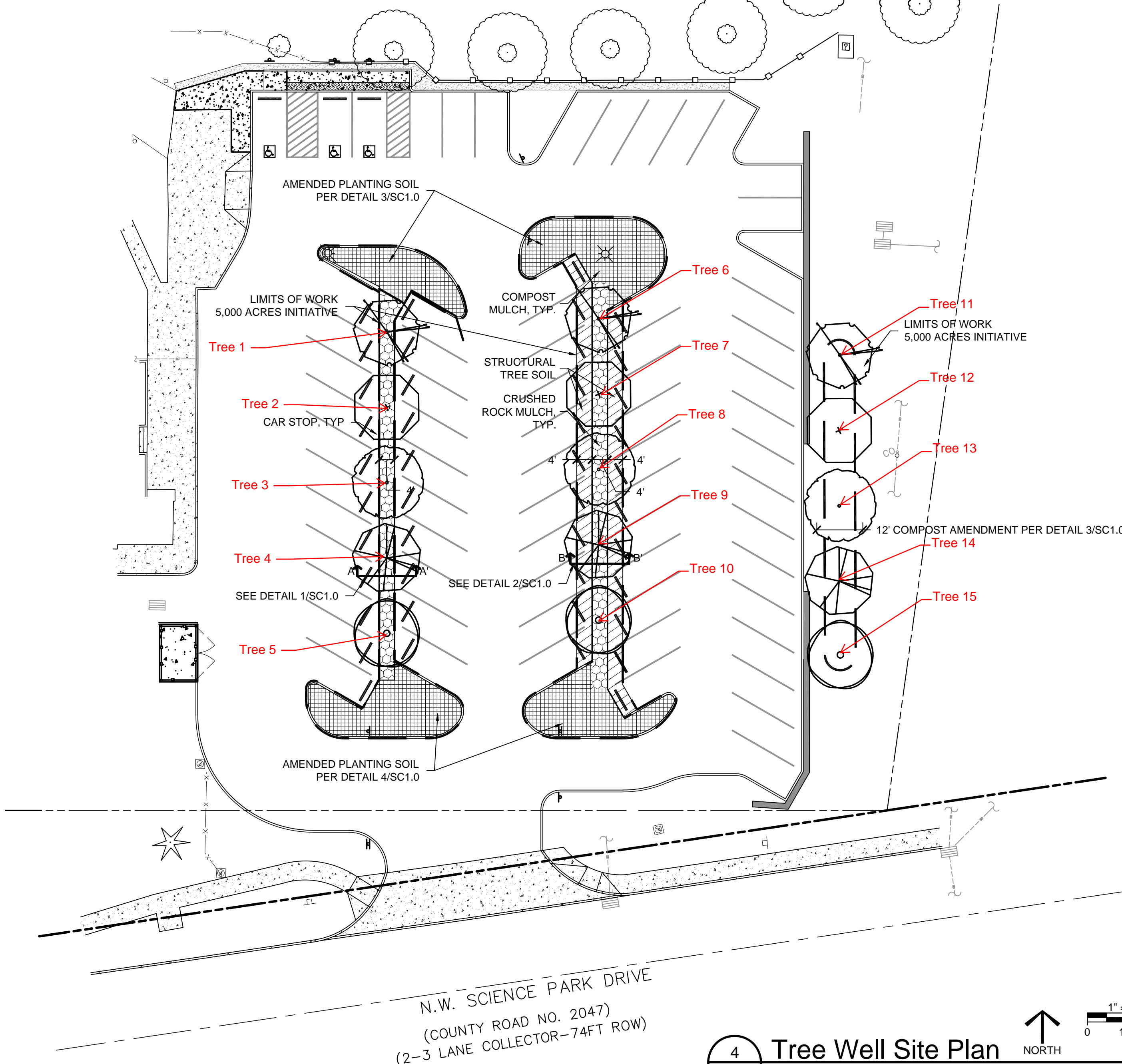
METAL	LIMIT (MG/KG DRY WEIGHT)
ARSENIC	≤ 20 PPM
CADMIUM	≤ 10 PPM
COPPER	≤ 750 PPM
LEAD	≤ 150 PPM
MERCURY	≤ 8 PPM
MOLYBDENUM	≤ 9 PPM
NICKEL	≤ 210 PPM
SELENIUM	≤ 18 PPM
ZINC	≤ 1400 PPM



- NOTES:**
- DO NOT SUBSTITUTE ROUNDED RIVER ROCK (AKA PEA GRAVEL)
  - AMENDED PLANTING SOIL SHALL BE MIXED ON-SITE BY THE GRADING CONTRACTOR (NOT LANDSCAPE CONTRACTOR) AND SHALL FOLLOW STEPS 5a THROUGH 5e OF THE CONSTRUCTION SEQUENCE NOTES AND REPEAT AS NECESSARY TO GENERATE VOLUME OF BACKFILL NEEDED PER DETAIL AND PLANS.

**2 Section B-B': Tree Well with Structural Soil**  
SC2.1 1/2" = 1'

- EXCAVATE SUBGRADE PER CIVIL SUBGRADE PLAN, CXX.
- EXCAVATE ADDITIONAL DEPTH OF 14" FOR A WIDTH OF 12" IN VICINITY OF TREE WELL AS SHOWN ON PLAN AND BY DETAIL 2/SC2.1.
- STOCKPILE NATIVE SOIL MATERIALS AWAY FROM STORM DRAINS AND PERVIOUS PAVEMENT SUBGRADE OR SURFACE USING APPROPRIATE EROSION PREVENTION & SEDIMENT CONTROL MEASURES SUCH AS COMPOST SOCK OR WATTLE AT THE BASE. COVER WITH JUTE FABRIC AS NEEDED TO PROTECT AGAINST WIND EROSION. DO NOT SUBSTITUTE PLASTIC SHEETING.
- TO ENSURE THE DESIRED SOIL MIX:
  - STOCKPILE NATIVE CLAY SOIL EXCAVATED FROM SITE PER PLAN TO A MAXIMUM DEPTH OF 18"
  - PLACE PERMAMATRIX SOIL AMENDMENT FROM SUNMARK ENVIRONMENTAL (503.241.7333) OR EQUIVALENT AT A RATE OF 1-50 LB. BAG PER 500 FEET OF AREA OVER STOCKPILE.
  - PLACE US COMPOSTING COUNCIL SEAL OF TESTING ASSURED (STA) COMPOST TO A DEPTH OF 5". SEE COMPOST SPECIFICATIONS ON DWG L2.1.
  - ROTOTILL NATIVE CLAY SOIL, PERMAMATRIX, AND COMPOST TOGETHER UNTIL MIX IS HOMOGENOUS (I.E. MATERIAL IS CONSISTENT THROUGHOUT)
- PLACE FIRST 6" TO 8" LIFT OF STRUCTURAL SOIL.
- PLACE FIRST LIFT OF AMENDED NATIVE SOIL AT DEPTH THAT MEETS AND MATCHES FIRST LIFT OF STRUCTURAL SOIL.
- PLACE SECOND 6" TO 8" LIFT OF STRUCTURAL SOIL SO THAT IT MEETS AND MATCHES THE ELEVATION OF THE BOTTOM OF THE PERVIOUS CONCRETE BASE ROCK.
- PLACE SECOND LIFT OF AMENDED NATIVE SOIL AT DEPTH THAT MEETS AND MATCHES SECOND LIFT OF STRUCTURAL SOIL.
- COMPACT STRUCTURAL SOIL PER SPECIFICATIONS. DO NOT OVERCOMPACT.
- PLACE BASE ROCK OF PERVIOUS PAVEMENT PER SPECIFICATIONS AND CIVIL DWGS AND AS SHOWN ON DETAIL 2/SC2.1.
- PLACE THIRD 6" TO 8" LIFT OF STRUCTURAL SOIL.
- PLACE THIRD LIFT OF AMENDED NATIVE SOIL AT DEPTH THAT MEETS AND MATCHES THIRD LIFT OF STRUCTURAL SOIL.
- PLACE FINAL 6" TO 8" LIFT OF STRUCTURAL SOIL SO THAT IT MEETS AND MATCHES THE ELEVATION OF THE TOP OF THE PERVIOUS CONCRETE BASE ROCK.
- PLACE FINAL LIFT OF AMENDED NATIVE SOIL AT DEPTH THAT MEETS AND MATCHES FINAL LIFT OF STRUCTURAL SOIL.
- COMPACT STRUCTURAL SOIL PER SPECIFICATIONS. DO NOT OVERCOMPACT.
- TO PREVENT CLOGGING, PLANTING TREES AFTER PERVIOUS CONCRETE INSTALLATION SHALL NOT BE ALLOWED. CONTACT MARIA CAHILL (503.334.8634) AT LEAST 48 HOURS PRIOR TO TREE WELL CONSTRUCTION TO ARRANGE FOR TREE PLANTING BY TUALATIN HILLS PARKS AND RECREATION STAFF.
- PLACE BASE ROCK OF PERVIOUS PAVEMENT PER SPECIFICATIONS AND CIVIL DWGS AND AS SHOWN ON DETAIL 2/SC2.1.
- PLACE PERVIOUS CONCRETE PER CIVIL DWGS.



**4 Tree Well Site Plan**  
SC1.0 1" = 20'

**PERMIT REVIEW**

DATE	3/1/13
BY	
REVISION SUMMARY	

TREE WELL SITE PLAN  
**SUNSET SWIM CENTER**  
**PARKING LOT RENOVATION**  
 TUALATIN HILLS PARK & RECREATION DISTRICT  
 BEAVERTON, OR



3/ JOB ID # | 11050  
 LAND USE # | DR2012-0047  
 TAX LOT # | 1M1328D 9300  
 DESIGNED BY | M. CAHILL  
 CHECKED BY | JDH

SHEET TITLE  
**T.W. SITE PLAN**  
 SHEET NUMBER  
**SC2.0**





Todd Prager & Associates LLC

Project: Sunset Swim Center Parking Forest  
 Inspector: Todd Prager  
 9/11/2013

No.	Common Name	Species Name	DBH <sup>1</sup>	C-Rad <sup>2</sup>	Cond <sup>3</sup>	Comments
1	Zelkova	<i>Zelkova serrata</i>	1.25	3	3	
2	Red oak	<i>Quercus rubra</i>	2.5	4	3	
3	Upright european hornbeam	<i>Carpinus betulus</i> 'Fastigiata'	2	2	3	
4	Red maple	<i>Acer rubrum</i>	1.75	3	3	
5	Red alder	<i>Alnus rubra</i>	2	3	1	transplant shock
6	Zelkova	<i>Zelkova serrata</i>	1.5	3	2	
7	Red oak	<i>Quercus rubra</i>	2.75	4	3	
8	Upright european hornbeam	<i>Carpinus betulus</i> 'Fastigiata'	2	3	3	
9	Red maple	<i>Acer rubrum</i>	2	2	3	
10	Red alder	<i>Alnus rubra</i>	2	4	2	
11	Zelkova	<i>Zelkova serrata</i>	1.75	4	3	
12	Red oak	<i>Quercus rubra</i>	3	4	3	
13	Upright european hornbeam	<i>Carpinus betulus</i> 'Fastigiata'	2	3	3	
14	Red maple	<i>Acer rubrum</i>	1.75	2	3	
15	Red alder	<i>Alnus rubra</i>	1.75	4	2	

<sup>1</sup>DBH is tree diameter measured at 4.5-feet above the ground level, in inches

<sup>2</sup>C-Rad is the average crown radius measured in feet

<sup>3</sup>Cond is the numerical condition rating (0-3) as defined as follows:

RATING	VIGOR	CANOPY DENSITY	DEADWOOD	FAILURE HISTORY	PESTS	DECAY
0	dead to severe decline	<30%	major scaffold branches	>1 scaffold	Infested	major conks and cavities
1	declining	30-60%	twig and branch dieback	scaffold branches	Infested	one to a few conks; small cavities
2	average	60-90%	small twigs	small branches	Minor	present only at pruning wounds
3	good to excellent	90-100%	little or none	none	None	absent to present only at pruning wounds

**Todd Prager & Associates, LLC**

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 todd@toddprager.com | 971.295.4835