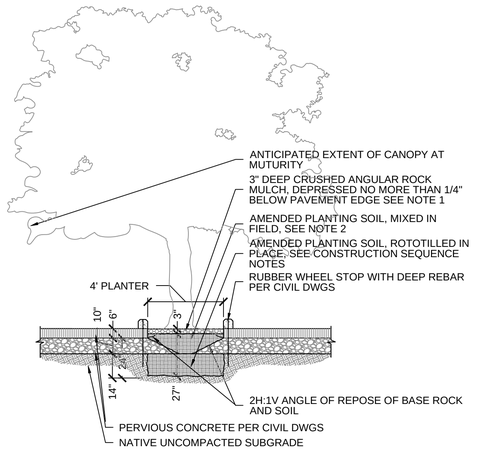


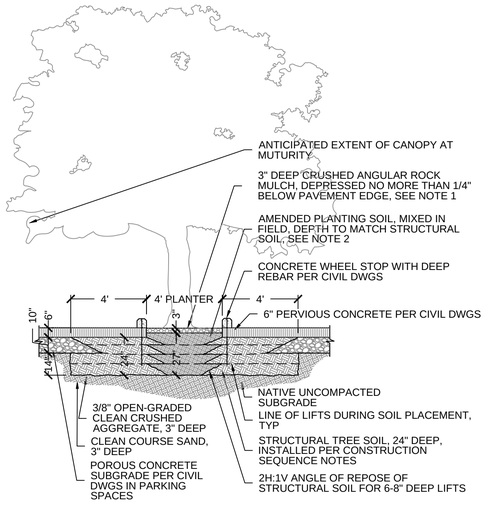

**NOTES:**
1. DO NOT SUBSTITUTE ROUNDED RIVER ROCK (AKA PEA GRAVEL)
2. AMENDED PLANTING SOIL SHALL BE MIXED ON-SITE BY THE GRADING CONTRACTOR (NOT LANDSCAPE CONTRACTOR) AND SHALL FOLLOW STEPS 5a THROUGH 5e OF THE CONSTRUCTION SEQUENCE NOTES AND REPEAT AS NECESSARY TO GENERATE VOLUME OF BACKFILL NEEDED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

## TREE WELL CONSTRUCTION SEQUENCE

1. EXCAVATE SUBGRADE PER CIVIL SUBGRADE PLAN, CXX.
2. ROTOTILL 4' PLANTER AREA TO A DEPTH OF APPROXIMATELY 11" AND AMEND WITH COMPOST PER DETAIL 4/SC2.1
3. PLACE BASE ROCK OF PERVIOUS PAVEMENT PER SPECIFICATIONS AND CIVIL DWGS AND AS SHOWN ON DETAIL 2/SC2.1.
4. USING NATIVE CLAY EXCAVATED FROM AREA SHOWN ON DETAIL 3/SC2, ENSURE THAT THE AMENDED PLANTED SOILS HAS THE DESIRED MIX:
   a. STOCKPILE NATIVE CLAY SOIL TO A MAXIMUM DEPTH OF 18".
   b. 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.
   c. PLACE US COMPOSTING COUNCIL SEAL OF TESTING ASSURED (STA) COMPOST TO A DEPTH OF 5". SEE COMPOST SPECIFICATIONS ON DWG L2.1.
   d. ROTOTILL NATIVE CLAY SOIL, PERMAMATRIX, AND COMPOST TOGETHER UNTIL MIX IS HOMOGENOUS (I.E. MATERIAL IS CONSISTENT THROUGHOUT)
5. PLACE FIRST 6" TO 8" LIFT OF STRUCTURAL SOIL.
6. PLACE FIRST LIFT OF AMENDED NATIVE SOIL AT DEPTH THAT MEETS AND MATCHES FIRST LIFT OF STRUCTURAL SOIL.
7. 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.
8. PLACE SECOND LIFT OF AMENDED NATIVE SOIL AT DEPTH THAT MEETS AND MATCHES SECOND LIFT OF STRUCTURAL SOIL.
9. COMPACT STRUCTURAL SOIL PER SPECIFICATIONS. DO NOT OVERCOMPACT.
10. PLACE BASE ROCK OF PERVIOUS PAVEMENT PER SPECIFICATIONS AND CIVIL DWGS AND AS SHOWN ON DETAIL 2/SC2.1.
11. PLACE THIRD 6" TO 8" LIFT OF STRUCTURAL SOIL..
12. PLACE THIRD LIFT OF AMENDED NATIVE SOIL AT DEPTH THAT MEETS AND MATCHES THIRD LIFT OF STRUCTURAL SOIL.
13. 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.
14. PLACE FINAL LIFT OF AMENDED NATIVE SOIL AT DEPTH THAT MEETS AND MATCHES FINAL LIFT OF STRUCTURAL SOIL.
15. COMPACT STRUCTURAL SOIL PER SPECIFICATIONS. DO NOT OVERCOMPACT.
17. 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.
18. PLACE BASE ROCK OF PERVIOUS PAVEMENT PER SPECIFICATIONS AND CIVIL DWGS AND AS SHOWN ON DETAIL 2/SC2.1.
19. PLACE PERVIOUS CONCRETE PER CIVIL DWGS.

## 1 SC2.1 Section A-A': Tree Well without Structural Soil

1/2" = 1'

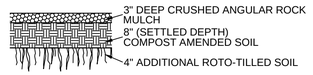



**NOTES:**
1. DO NOT SUBSTITUTE ROUNDED RIVER ROCK (AKA PEA GRAVEL)
2. AMENDED PLANTING SOIL SHALL BE MIXED ON-SITE BY THE GRADING CONTRACTOR (NOT LANDSCAPE CONTRACTOR) AND SHALL FOLLOW STEPS 5a THROUGH 5e OF THE CONSTRUCTION SEQUENCE NOTES AND REPEAT AS NECESSARY TO GENERATE VOLUME OF BACKFILL NEEDED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

## 2 SC2.1 Section B-B': Tree Well with Structural Soil

1/2" = 1'

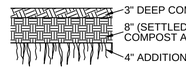
1. EXCAVATE SUBGRADE PER CIVIL SUBGRADE PLAN, CXX.
2. EXCAVATE ADDITIONAL DEPTH OF 14" FOR A WIDTH OF 12' IN VICINITY OF TREE WELL AS SHOWN ON PLAN AND BY DETAIL 2/SC2.1.
3. STOCKPILE NATIVE SOIL MATERIALS AWAY FROM STORM DRAINS AND PERVIOUS PAVEMENT SUBGRADE OR SURFACE USING APPROPRIATE EROSION PREVENTION & 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.
4. TO ENSURE THE DESIRED SOIL MIX:
   a. STOCKPILE NATIVE CLAY SOIL EXCAVATED FROM SITE PER PLAN TO A MAXIMUM DEPTH OF 18".
   b. 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
   c. PLACE US COMPOSTING COUNCIL SEAL OF TESTING ASSURED (STA) COMPOST TO A DEPTH OF 5". SEE COMPOST SPECIFICATIONS ON DWG L2.1.
   d. ROTOTILL NATIVE CLAY SOIL, PERMAMATRIX, AND COMPOST TOGETHER UNTIL MIX IS HOMOGENOUS (I.E. MATERIAL IS CONSISTENT THROUGHOUT)
5. PLACE FIRST 6" TO 8" LIFT OF STRUCTURAL SOIL.
6. PLACE FIRST LIFT OF AMENDED NATIVE SOIL AT DEPTH THAT MEETS AND MATCHES FIRST LIFT OF STRUCTURAL SOIL.
7. 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.
8. PLACE SECOND LIFT OF AMENDED NATIVE SOIL AT DEPTH THAT MEETS AND MATCHES SECOND LIFT OF STRUCTURAL SOIL.
9. COMPACT STRUCTURAL SOIL PER SPECIFICATIONS. DO NOT OVERCOMPACT.
10. PLACE BASE ROCK OF PERVIOUS PAVEMENT PER SPECIFICATIONS AND CIVIL DWGS AND AS SHOWN ON DETAIL 2/SC2.1.
11. PLACE THIRD 6" TO 8" LIFT OF STRUCTURAL SOIL..
12. PLACE THIRD LIFT OF AMENDED NATIVE SOIL AT DEPTH THAT MEETS AND MATCHES THIRD LIFT OF STRUCTURAL SOIL.
13. 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.
14. PLACE FINAL LIFT OF AMENDED NATIVE SOIL AT DEPTH THAT MEETS AND MATCHES FINAL LIFT OF STRUCTURAL SOIL.
15. COMPACT STRUCTURAL SOIL PER SPECIFICATIONS. DO NOT OVERCOMPACT.
17. 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.
18. PLACE BASE ROCK OF PERVIOUS PAVEMENT PER SPECIFICATIONS AND CIVIL DWGS AND AS SHOWN ON DETAIL 2/SC2.1.
19. PLACE PERVIOUS CONCRETE PER CIVIL DWGS.




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

## 3 SC2.1 Compost Amended Tree Well

NTS




**NOTES:**
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   d. ROTOTILL AMENDMENTS INTO 5 INCHES OF SOIL (A TOTAL AMENDED DEPTH OF ABOUT 9.5 INCHES, FOR A SETTLED DEPTH OF 8 INCHES.)
2. RAKE BEDS TO SMOOTH AND REMOVE SURFACE ROCKS LARGER THAN 2 INCHES DIAMETER.
3. LIGHTLY COMPACT WITH LIGHT BOOT TAMPING OR WATER APPLICATION TO SPEED UP SETTLING.
4. SEE COMPOST SPECIFICATIONS PER L2.1.

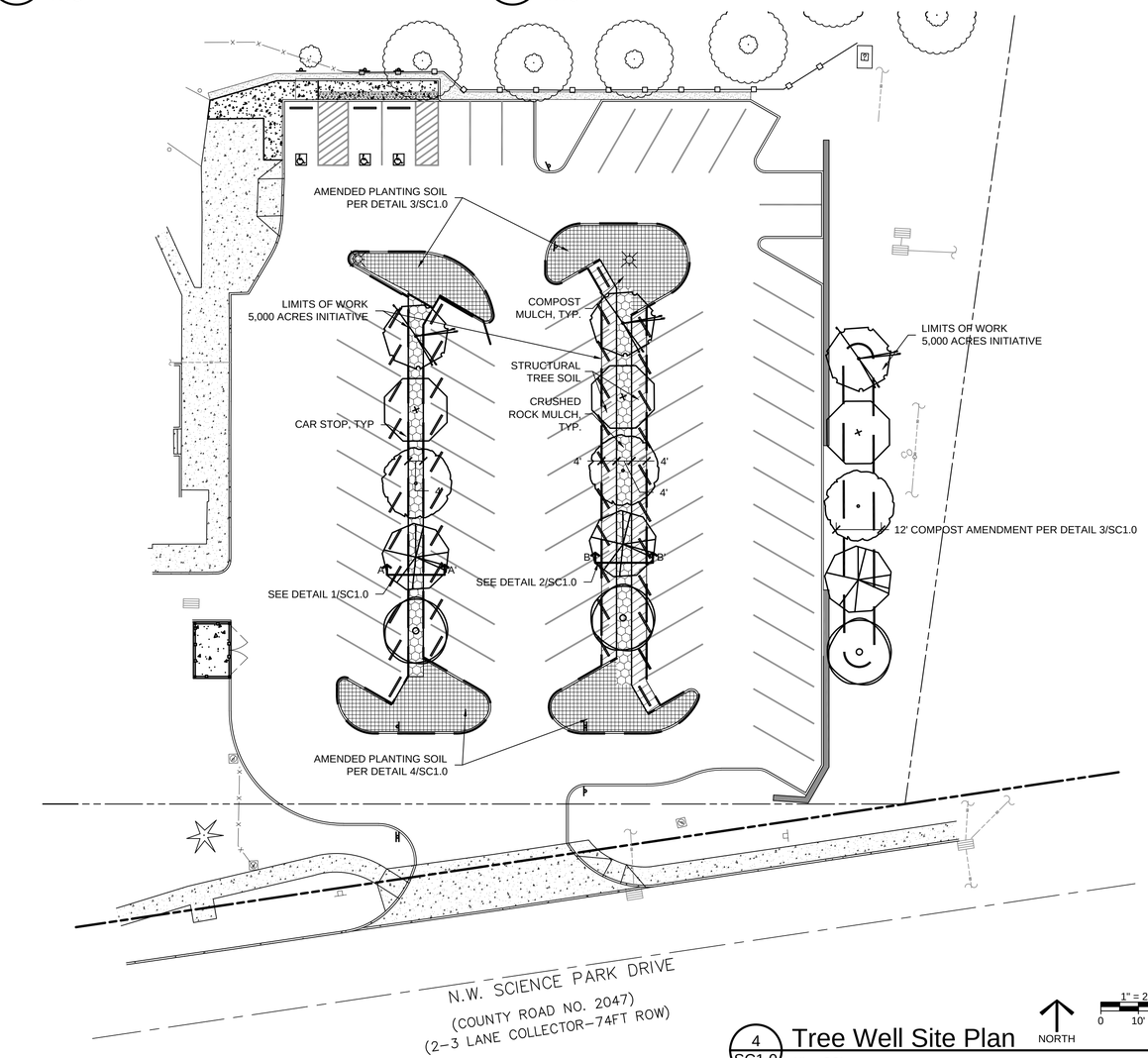
## 4 SC2.1 Compost Amendment Outside Tree Well

NTS

## Compost Specification

1. 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:
   a. ORGANIC MATTER CONTENT BETWEEN 45% AND 65% AS DETERMINED BY LOSS OF IGNITION TEST METHOD.
   b. PH BETWEEN 5.5 AND 8.0.
   c. 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.
   d. MAXIMUM ELECTRICAL CONDUCTIVITY OF 6 MMHOS/CM.
   e. MOISTURE CONTENT RANGE BETWEEN 35 AND 50%.
   f. NO VIABLE WEED SEEDS.
   g. 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).
   h. 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 |
| SELENIUM1 | ≤ 18 PPM |
| ZINC | ≤ 1400 PPM |




## 4 SC1.0 Tree Well Site Plan

1" = 20'

| PERMIT REVIEW | BY | DATE |
|---|---|---|
| REVISION SUMMARY | | 3/1/13 |

TREE WELL SITE PLAN

*SUNSET SWIM CENTER*

*PARKING LOT RENOVATION*

TUALATIN HILLS PARK & RECREATION DISTRICT

BEAVERTON, OR

REGISTERED PROFESSIONAL ENGINEER 12282PE 3/1/13 OREGON NOV. 12, 2002 JOHN D. HOWORTH

EXPIRES: 06/30/13

TUALATIN HILLS PARK & RECREATION DISTRICT

Connecting People, Parks & Nature

GreenGirl Land Development Solutions
2124 SE Woodward Street, Portland, OR 97215
503.334.8634 greengirl@greengirlpdx.com
Sustainability for all the places between the buildings.

| | |
|---|---|
| 3J JOB ID # | 11050 |
| LAND USE # | DR2012-0047 |
| TAX LOT # | 1N132BD 9300 |
| DESIGNED BY | M. CAHILL |
| CHECKED BY | JDH |

SHEET TITLE
T.W. SITE PLAN

SHEET NUMBER
**SC2.0**