

LANDSCAPE NOTES

1. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE PLANS, INCLUDING THE DRAINAGE AND UTILITY PLANS AND NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO SUBMISSION OF BIDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE RESULTING FROM NEGLIGENCE OR FAILURE TO COMPLY WITH THIS REQUIREMENT.
2. COORDINATE ALL TREE LOCATIONS WITH SITE LIGHTING AND DRAINAGE STRUCTURES. ALL TREE PLANTING TO BE KEPT TWO (2) FEET AWAY FROM ANY DRAINAGE OR SANITARY STRUCTURE OR PIPING.
3. ALL PRECAUTIONS SHALL BE TAKEN IN CARTING, STORING, AND PLANTING OF MATERIALS TO PROTECT ADJACENT PAVEMENT AREAS.
4. DAMAGE TO EXISTING OR NEW WORK BY THE CONTRACTOR AS A RESULT OF THIS WORK SHALL BE REPAIRED AT HIS EXPENSE.
5. THE PLANTING PLAN WILL TAKE PRECEDENCE OVER THE PLANT LIST QUANTITIES IF DISCREPANCIES BETWEEN THE TWO EXIST, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
6. ALL PLANT NAMES AND DESCRIPTIONS SHALL BE AS DEFINED IN HORTUS THIRD, L.H. BAILEY HORTORUM, 1976.
7. PLANT MATERIALS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED. NURSERY-GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES OF THE AMERICAN NURSEYMEN ASSOC. ALL PLANTS SHALL BE OF SPECIMEN QUALITY, SYMMETRICAL, FREE OF DISEASE AND INSECTS, EGGS, OR LARVAE, AND SHALL HAVE A HEALTHY, WELL-DEVELOPED ROOT SYSTEM. THE OWNER OR HIS REPRESENTATIVE RESERVES THE RIGHT TO TAG AND INSPECT ALL PLANT MATERIALS AND REJECT ANY PLANTS FOUND TO BE UNACCEPTABLE EITHER AT THE NURSERY, AT THE SITE UPON DELIVERY, OR UPON INSTALLATION.
8. ALL PLANTS SHALL BE LABELED BY PLANT NAME. LABELS SHALL BE ATTACHED SECURELY TO ALL PLANTS, BUNDLES, AND CONTAINERS OF PLANT MATERIALS WHEN DELIVERED. PLANT LABELS SHALL BE DURABLE AND LEGIBLE.
9. SUBSTITUTIONS OF PLANT MATERIAL WILL NOT BE PERMITTED UNLESS AUTHORIZED BY THE TOWNSHIP OF WEST ORANGE AND PSE&G.
10. TOPSOIL SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:
 - 10.1. LOAM WITH THE ADDITION OF COMPOST OR HUMUS.
 - 10.2. ORGANIC MATTER CONTENT SHALL BE BETWEEN 5%-12%.
 - 10.3. THE PH SHALL BE IN THE RANGE OF 6.0 TO 7.0 INCLUSIVE, UNLESS OTHERWISE APPROVED OR SPECIFIED BY THE TOWNSHIP OF WEST ORANGE FORESTER.
- 10.4. SOIL TEXTURAL ANALYSIS: TOPSOIL SHALL CONSIST OF THE FOLLOWING PERCENTAGES OF SAND, SILT, AND CLAY. ANY SOIL THAT DOES NOT MEET THE REQUIREMENTS BELOW WILL BE REJECTED AND REMOVED FROM THE SITE:

ROCKS, STONE, AND GRAVEL > 2.0 mm	< 5%
SAND (0.05-2.0 mm)	40-60%
SILT (0.002-0.05 mm)	20-50%
CLAY (< 0.002 mm)	20% MAXIMUM
11. TOPSOIL SHALL COMPLY WITH ANY AND ALL ENVIRONMENTAL AND CLEAN FILL REQUIREMENTS, TO THE SATISFACTION OF THE ENVIRONMENTAL CONSULTANT.
12. LOCATE GUY WIRES SO THAT THEY WILL NOT PULL CROTCH APART.
13. UPON COMPLETION OF THE FIRST YEAR OF THE TWO (2) YEAR PLANT GUARANTEE PERIOD, THE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING OR REMOVING ALL STAKES. THIS SHALL BE DONE IN CONSULTATION WITH THE CITY REPRESENTATIVE. ALL STAKES REMAINING SHALL THEN BECOME THE RESPONSIBILITY OF THE OWNER.
14. ALL PLANT MATERIAL IS TO BE LOCATED PER THE PLANTING PLAN. IF OBSTRUCTIONS (ROCK, TREE ROOTS, UTILITIES, ETC.) ARE ENCOUNTERED DURING THE EXCAVATION OF TREE PITS AND PLANTING BEDS, THE LANDSCAPE ARCHITECT IS TO BE NOTIFIED IMMEDIATELY OF ALTERNATE LOCATIONS FOR ANY PLANTING SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
15. IF THE CONTRACTOR DETERMINES THE SUB-GRADE SOIL CONDITIONS ARE DELETERIOUS TO PLANT GROWTH OR WILL INHIBIT DRAINAGE, THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY AND PRIOR TO INSTALLATION OF PLANT MATERIAL.
16. ROOT BALLS SHALL BE FIRMLY WRAPPED WITH NONSYNTHETIC, ROTTABLE BURLAP AND SECURED WITH HEAVY NONSYNTHETIC OR ROTTABLE TWINE. THE ROOT COLLAR SHALL BE APPARENT AT THE SOIL SURFACE. ROOT BALLS BROKEN, LOOSE OR CRACKED SHALL BE REJECTED. THE ROOT BALL AND BURLAP ARE TO BE INTACT. ALL PLANTS SHALL BE DELIVERED TO THE SITE COVERED WITH A TARPULINE. THE TOWNSHIP OF WEST ORANGE WILL REJECT ANY PLANT MATERIAL NOT MEETING THE ABOVE CONDITIONS. ALL PLANTS THAT CANNOT BE PLANTED IMMEDIATELY UPON DELIVERY SHALL BE KEPT IN THE SHADE, COVERED IN SOIL, WET MULCH, OR OTHER ACCEPTABLE MATERIAL, AND KEPT WELL WATERED. ALL BURLAP, TWINE AND DEBRIS ARE TO BE REMOVED FROM SITE AND PROPERLY DISPOSED OF.
17. ALL PLANT MATERIALS ARE TO BE INSTALLED AS PER THE PLANTING DETAILS. SCARIFY THE BOTTOM OF THE PLANTING PIT TO A DEPTH OF 6".
18. PLANT TREES PER TOWNSHIP OF WEST ORANGE STANDARDS.

19. PLANT PERENNIALS AND GROUND COVER IN 8" DEEP TOPSOIL BED CONSISTING OF 2/3 TOPSOIL AND 1/3 HUMUS.
20. ALL EXISTING SOIL SHALL BE REMOVED AND BACKFILLED WITH NEW TOPSOIL MEETING PARKS AND FORESTRY SPECIFICATION.
21. REMOVE ALL TWINE, ROPE, WIRE, AND BURLAP FROM THE TOP 2/3 OF THE ROOT BALL. ALL METAL CAGES ARE TO BE ENTIRELY REMOVED. SEE PLANTING DETAIL.
22. TREES IN LAWN AREA ARE TO BE MULCHED WITH 3 INCHES CLEAN, FRESH, SHREDDED HARDWOOD BARK, FREE OF STICKS, LEAVES AND OTHER FOREIGN MATTER. MULCH IS NOT TO BE PLACED WITHIN 3 INCHES OF THE TRUNKS OF TREES AND SHRUBS. SEE PLANTING DETAIL.
23. KEEP MULCH 1/2" BELOW TOP OF PAVEMENTS AND CURBS.
24. ALL NEWLY INSTALLED LANDSCAPING SHALL BE SET PLUMB IN THE PLANTING PIT AND BACKFILLED IN LIFTS NOT TO EXCEED EIGHT (8) INCHES. IN PLANTING BEDS BACKFILL SHALL CONSIST OF THREE (3) PARTS NATIVE TOPSOIL, THREE (3) PARTS SCREENED TOPSOIL AND THREE (3) PARTS PEAT. A MOISTURE ABSORBENT POLYMER SHALL BE INCLUDED IN THE AMENDED BACKFILL ON WELL AND EXCESSIVELY DRAINED SOILS AND ON EARTHEN BERMS TO ENSURE SOIL MOISTURE AVAILABILITY. ALL LANDSCAPE BEDS SHALL BE UNDERLAIN WITH A SUITABLE WATER PERMEABLE WEED FABRIC AND SHALL RECEIVE A MINIMUM THREE (6) INCH APPLICATION OF SHREDDED HARDWOOD MULCH. UNTREATED WOOD CHIPS SHALL NOT BE USED. PLANT MATERIAL ARRANGED IN GROUPINGS SHALL BE CONTAINED IN ONE (1) CONTINUOUS MULCHED BED TO REDUCE POSSIBLE PLANT DAMAGE CAUSED BY MAINTENANCE EQUIP. THE LANDSCAPE BED SHALL EXTEND TO THE BRANCH LINES OF THE NEWLY INSTALLED PLANTINGS.
25. REFER TO SOIL EROSION AND SEDIMENT CONTROL DETAILS SHEET FOR SEED MIXES.
26. PLANTS SHALL BE SET AT THE SAME RELATIONSHIP TO FINISHED GRADE AND ORIENTATION AS THEY WERE AT THE NURSERY UNLESS OTHERWISE NOTED ON THE DRAWINGS. THE ROOT FLARE IS TO BE PLANTED AT FINISHED GRADE OR 1" ABOVE. SEE PLANTING DETAIL.
27. GRADE ALL NEW PLANTING AREAS TO MAINTAIN POSITIVE DRAINAGE, SEE GRADING PLAN.
28. PROVIDE 8 INCH DEPTH OF TOPSOIL FOR PERENNIALS AND 14 INCH DEPTH MIN. OF TOPSOIL FOR SHRUBS IN ALL PROPOSED PLANTING BEDS.
29. GENERAL TURF GRASS: TOPSOIL AND SEED ALL DISTURBED AREAS NOT BUILT UPON, PAVED, OR LAWN DISCARPED AS A RESULT OF ANY AND ALL CONSTRUCTION OR STORAGE OF EQUIPMENT, WHETHER AREAS ARE SHOWN ON THE PLAN OR NOT - CONTRACTOR TO FIELD VERIFY AREAS TO BE SEED. SEE SEEDING NOTES PER SOIL EROSION AND SEDIMENT CONTROL PLAN.
30. ALL EXISTING DISTURBED LAWN AREAS ARE TO BE SEED WITHIN 18" OF FOUNDATION OF BUILDING.
31. THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF TWO YEARS FROM THE DATE OF ACCEPTANCE. THE CONTRACTOR SHALL REPLACE, WITHOUT COST TO THE OWNER, ALL PLANTS DETERMINED BY THE TOWN TO BE DEAD OR IN AN UNACCEPTABLE CONDITION DURING AND AT THE END OF THE GUARANTEE PERIOD IN A TIMELY FASHION. REPLACEMENTS SHALL CLOSELY MATCH ADJACENT SPECIMENS OF THE SAME SPECIES. THE GUARANTEE OF ALL REPLACEMENT PLANTS SHALL EXTEND FOR A PERIOD OF TWO YEARS FROM THE DATE OF THEIR ACCEPTANCE AFTER REPLACEMENT.
32. FALL DIGGING HAZARDS:

TREES THAT ARE NOT TO BE TRANSLANTED IN THE FALL.

BETULA VARIETIES OSTRYA LEX OPACA VARIETIES CELTIS VARIETIES PYRUS VARIETIES LIQUIDAMBAR VARIETIES	HALSEA VARIETIES CARPINUS VARIETIES PRUNUS - ALL STONE FRUITS KOELREUTERIA PANICULATA CERCIDIPHYLLUM VARIETIES QUERCUS - ALL OAKS EXCEPT Q.PALUSTRIS LIRIODENDRON VARIETIES CRATAEGUS VARIETIES SORBUS VARIETIES NYSSA SYLVATICA ZELKOVA VARIETIES
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THE CONTRACTOR WILL ASSUME RESPONSIBILITY FOR PLANT SURVIVAL OF THE ABOVE MATERIALS IF MOVED DURING THE FALL SEASON.

33. THE LOWER BRANCH OF STREET TREES SHALL BE TRIMMED TO 8' FROM GRADE. THE TRUNK SHALL BE STRAIGHT.
34. PLANT MATERIAL HAS BEEN SELECTED TO ACCOMMODATE DEER RESISTANT AND NATIVE SPECIES TO THE BEST EXTENT POSSIBLE. IT IS RECOMMENDED THAT THE LANDSCAPE CONTRACTOR ASSESS THE DEER POPULATION AND DETERMINE WHETHER THE APPLICATION OF DEER REPELLANT IS NECESSARY.
35. WATERING MUST TAKE PLACE THROUGHOUT THE 2 YEAR PERIOD, AT LEAST 20 GALLONS AT APPROXIMATELY TWO WEEK INTERVALS FROM MAY 15 TO OCTOBER 31. CONTRACTOR MAY NEED TO INCREASE OR REDUCE THE FREQUENCY OF WATERING BASED ON WEATHER CONDITIONS, RESULTING SOIL WATER CONTENT OR OTHER FACTORS.

LAWN SEED MIX

LAWN AREAS - AREAS DESIGNATED AS LAWN, OR DISTURBED AREAS NOT DESIGNATED FOR ANY OTHER PLANTING SHALL BE PERMANENTLY STABILIZED BY SEEDING WITH THE FOLLOWING SEED MIXTURE AT A RATE OF 200 LBS. / ACRE.

- 10% KENTUCKY BLUEGRASS - BARON MIX
- 20% PERENNIAL RYEGRASS
- 70% TURF TYPE TALL FESCUE

SEEDING DATES FOR THIS MIXTURE SHALL BE APRIL 1 TO JUNE 1 OR SEPTEMBER 1 TO OCTOBER 30.

BIORETENTION SEED MIX

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- 39.0% SCHIZACHYRIUM SCOPARIUM 'CAMPER'
- 5.0% ELYMUS VIRGINICUS, PA ECOTYPE
- 8.0% CHASMANTHUM LATIFOLIUM, WV ECOTYPE
- 6.4% PANICUM RIGIDULUM, PA ECOTYPE
- 4.0% CHAMAECRISTA FASCICULATA, PA ECOTYPE
- 4.0% ECHINACEA PURPUREA
- 3.0% COROPUS LANCEOLATA
- 3.0% RUDEBECKIA HIRTIA, COASTAL PLAIN NC ECOTYPE
- 2.0% CAREX VULPINOIDA, PA ECOTYPE
- 2.0% HELIOPSIS HELIANTHOIDES, PA ECOTYPE
- 1.5% VERBENA HASLATA, PA ECOTYPE
- 1.5% ASCLEPIAS INCARNATA, PA ECOTYPE
- 1.0% LUNJUS EFFUSUS
- 1.0% LIRIES SPICATA, PA ECOTYPE
- 1.0% PANICUM SPHAEROCARPON
- 1.0% PENSTEMON DIGITALIS, PA ECOTYPE
- 0.5% BAPTISIA AUSTRALIS, SOUTHERN WV ECOTYPE
- 0.5% CAREX SCOPARIA, PA ECOTYPE
- 0.5% EUPATORIUM COELESTINUM, VA ECOTYPE
- 0.5% PICHANTHEMUM TENUIFOLIUM
- 0.5% SENNA HEBECARRA, VA & WV ECOTYPE
- 0.5% TRIDACANTHA CHINENSIS, PA ECOTYPE
- 0.5% ZIZIA ALUEA, PA ECOTYPE
- 0.4% GEUM CANADENSE, PA ECOTYPE
- 0.4% MONARDRA PULCHRA, FORT INDIANTOWN GAP-PA ECOTYPE
- 0.3% AGROSTIS PERENNANS, ALABAMA FINE BUSH-NY ECOTYPE
- 0.3% ASTER LAEVIS, NY ECOTYPE
- 0.3% ASTER NOVAE-ANGLIAE, PA ECOTYPE
- 0.3% HELIOPSIS AUTUMNALIS, PA ECOTYPE
- 0.2% ASTER UMBELLATUS, PA ECOTYPE
- 0.2% SODIAGDO PATULA, PA ECOTYPE
- 0.1% VERONICASTRIUM VIRGINICUM, PA ECOTYPE

NOTES:

1. SEED AT A RATE OF 20 LBS./ACRE OF 100% PURE LIVE SEED.
2. APPLY SEED WITH A COVER CROP OF GRAIN RYE AT 30 LB PER ACRE

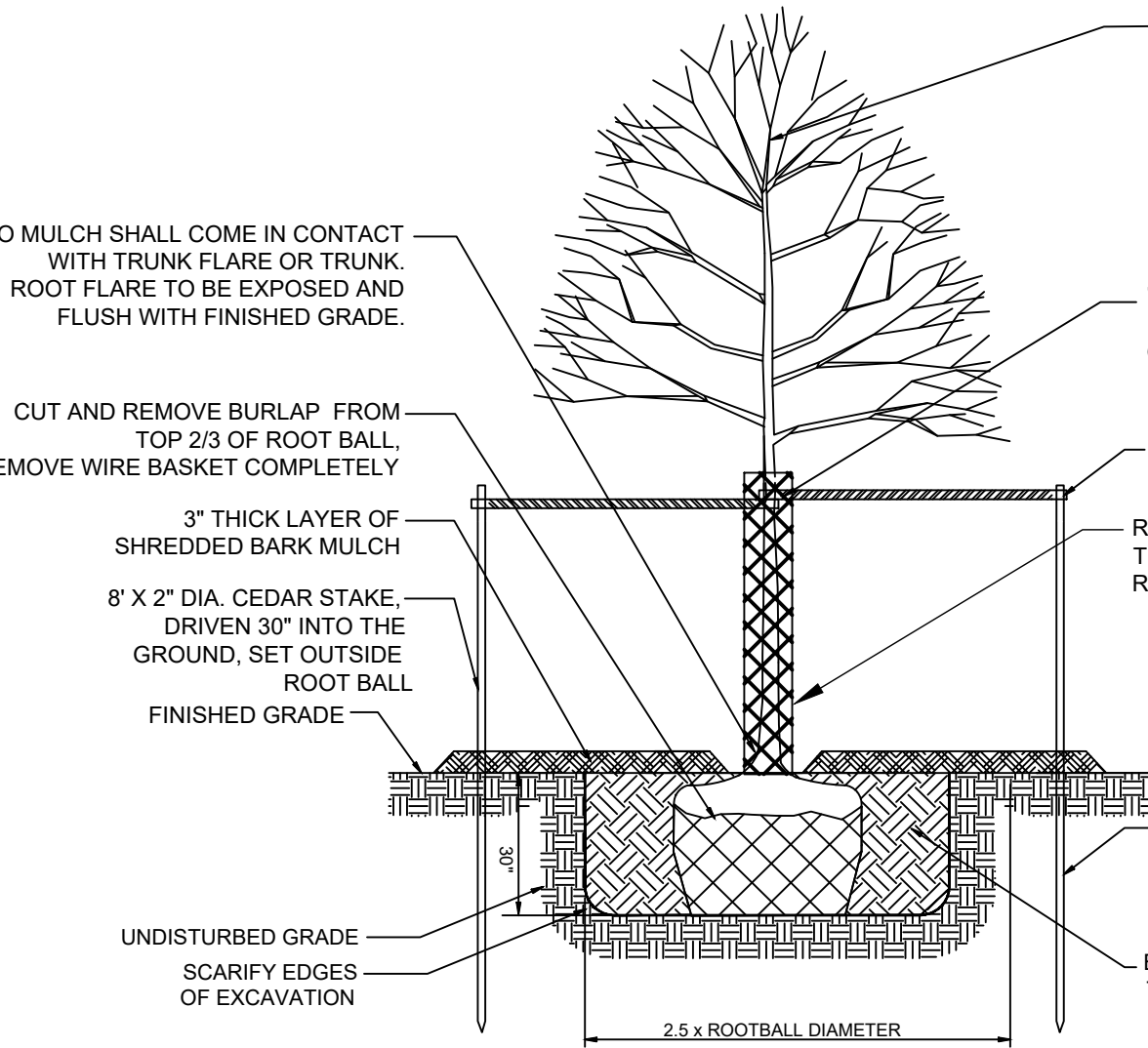
GENERAL SEEDING NOTES / WATERING SCHEDULE:

1. FINAL SEED MIXTURES, RATES & SPECIES TO BE DETERMINED BASED ON SCD REVIEW.
2. SEEDING SHALL TAKE PLACE IN THE SPRING (APRIL 1 TO JUNE 1) OR THE FALL (SEPTEMBER 1 TO OCTOBER 1).
3. ELIMINATE UNWANTED VEGETATION PRIOR TO SEEDING USING A BROAD-SPECTRUM NON-SELECTIVE HERBICIDE PER MANUFACTURER'S SPECIFICATIONS.
4. IT IS RECOMMENDED THAT CONTRACTOR INSTALL SEED MIXTURE USING A NO-TILL TRUAUX-TYPE DRILL WHERE APPLICABLE.
5. CONTINUOUS MOISTURE FOR 4-6 WEEKS MUST BE INSURED TO ALLOW PROPER GERMINATION. SOIL TO REMAIN CONTINUOUSLY MOIST FOR THE TOP 4 INCHES OF TOPSOIL. DO NOT SATURATE.

WEED CONTROL / MAINTENANCE

1. DURING THE ESTABLISHMENT YEAR, CONTRACTOR SHALL MOW SEEDING IF WEED HEIGHT EXCEEDS MEADOW MIX HEIGHT. MOW AT A HEIGHT OF 8"-10". DO NOT MOW CLOSE, AS SOME OF THE MEADOW MIX MAY BE DAMAGED.
2. AFTER THE FIRST GROWING SEASON, AND IF MEADOW MIX IS WELL ESTABLISHED, THE MEADOW MIX SHALL BE MOVED ONLY ONCE ANNUALLY. ANNUAL MAINTENANCE MOWING SHALL BE DONE IN LATE WINTER DURING THE MONTH OF MARCH.

NOTE: INSTALL PHC TREE SAVER MYCORRHIZAL FUNGAL TRANSPLANT INOCULANT FOR TREES AND SHRUBS. INSTALL ONE 3 OUNCE PACKET PER CALIPER INCH OR PER 1 FOOT OF ROOTBALL DIA.



SINGLE-STEM TREE PLANTING DETAIL

