

1.\*\*FORM A DOUBLE-LAYERED CYLINDER USING 0.25" GRID GALVANIZED WELDED WIRE MESH (HARDWARE CLOTH). OVERLAP THE CUT END 2".

2.\*\*DRIVE TWO 1" x 1" OPPOSING HEARTWOOD WHITE OAK STAKES INTO THE GROUND 7" FROM THE CENTER OF THE TREE STEM.

3.\*\*SECURE THE MESH CYLINDER TO THE OUTSIDE OF THE STAKES USING EITHER, SCREWS AND WASHERS OR RATCHET-LOCKING TIES ALONG THE OVERLAP. SPACE APPROXIMATELY 4" ON CENTER ALONG THE OVERLAP.

\*\*SCREWS SHALL BE ROUND HEAD GALVANIZED 1/8" DIA. x 3/4" LONG WITH WASHERS.

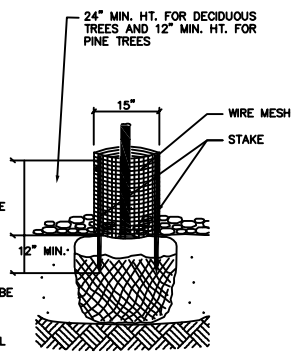
OR  
\*\*RATCHET-LOCK TIES SHALL BE NYLON AND AT LEAST 6" LONG.

4.\*\*IMBED THE LOWER EDGE OF THE MESH CYLINDER 1" BELOW THE SOIL SURFACE WITHOUT DISTURBING THE TREE ROOTS.

5.\*\*CUT EDGES WILL NOT BE PERMITTED AT THE TOP OF THE CYLINDER. CUT THE STAKE FLUSH WITH THE TOP OF THE CYLINDER.

6.\*\*MULCH WITHIN THE CYLINDER SHALL NOT EXCEED 3" DEPTH AND SHALL BE PULLED BACK FROM THE TRUNK AS SPECIFIED IN MULCH PLACEMENT DETAIL.

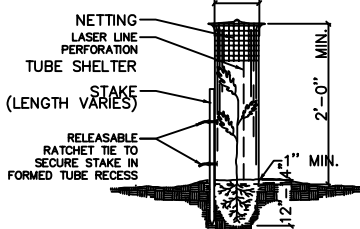
7.\*\*THE BOTTOM WHORL OF PINE BRANCHES MAY HAVE TO BE REMOVED TO PERMIT INSTALLATION OF 12" MIN. HEIGHT RODENT GUARDS.



INSTALL ON ALL DECIDUOUS AND PINE TREES, DO NOT INSTALL ON SPRUCE TREES.

RODENT PROTECTION DETAIL (OPTION 1)

PREVAILING WIND →

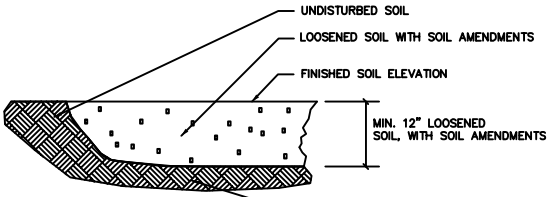


1.\*\*USE SEAMLESS, EXTRUDED, TWIN-WALL RIGID AND SEMI TRANSPARENT POLYPROPYLENE TUBES WITH A LASER LINE PERFORATION AND AN OUTWARD-FLARED TOP RIM.

2.\*\*SECURE THE SHELTER WITH NYLON RATCHET-LOCKING TIES ATTACHED TO A 1" x 1" WHITE OAK STAKE TO PREVENT DISLODGING OR TWISTING. IMBED THE BOTTOM OF THE TUBE A MINIMUM OF 1" BELOW THE SOIL SURFACE WITHOUT DISTURBING THE TREE ROOTS.

3.\*\*INSTALL A PLASTIC PHOTODEGRADABLE NETTING COVER AND SLEEVE OVER THE TOP OF THE TUBE TO PREVENT ENTRAPMENT OF BIRDS. PULL NETTING DOWN AS SHOWN.

SEEDLING TREE SHELTER DETAIL



PLANTING SOIL

1.\*\*FOLD OVER THE TOP EDGE OF THE HDPE (HIGH DENSITY POLYETHYLENE) TOWARDS THE THREE BOTTOM TABS.

2.\*\*BEND THE HDPE INTO A CIRCLE WITH THE SIDE TABS ON THE OUTSIDE OF THE CIRCLE.

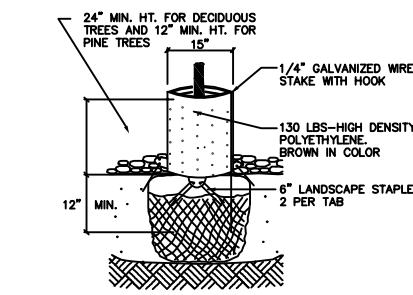
3.\*\*ALIGN THE HINGES AND BEGIN SLIDING THE 1/4" GALVANIZED WIRE STAKE (WITH HOOK) THROUGH THE HINGES TO INTERCONNECT THE HDPE AFTER SLIDING THE WIRE THROUGH ALL OF THE HINGES, TURN THE HOOK TOWARDS THE INSIDE OF THE HDPE.

4.\*\*PUSH THE STAKE INTO THE GROUND, A MINIMUM OF 12". DRIVE SIX LANDSCAPE STAPLES (6" LENGTH, 2 PER TAB) THROUGH THE HOLES IN THE 3 BOTTOM TABS AT OPPOSITE ANGLES TO SECURE THE HDPE TO THE GROUND.

5.\*\*MULCH WITHIN THE CYLINDER SHALL NOT EXCEED 3" DEPTH AND SHALL BE PULLED BACK FROM THE TRUNK AS SPECIFIED IN MULCH PLACEMENT DETAIL.

6.\*\*THE BOTTOM WHORL OF PINE BRANCHES MAY HAVE TO BE REMOVED TO PERMIT INSTALLATION OF 12" MIN. HEIGHT RODENT GUARDS.

7.\*\*INSTALL ON ALL DECIDUOUS AND PINE TREES, DO NOT INSTALL ON SPRUCE TREES.



\* 24" SIZE FOR DECIDUOUS TREES  
12" SIZE FOR CONIFEROUS TREES.

RODENT PROTECTION DETAIL (OPTION 2)

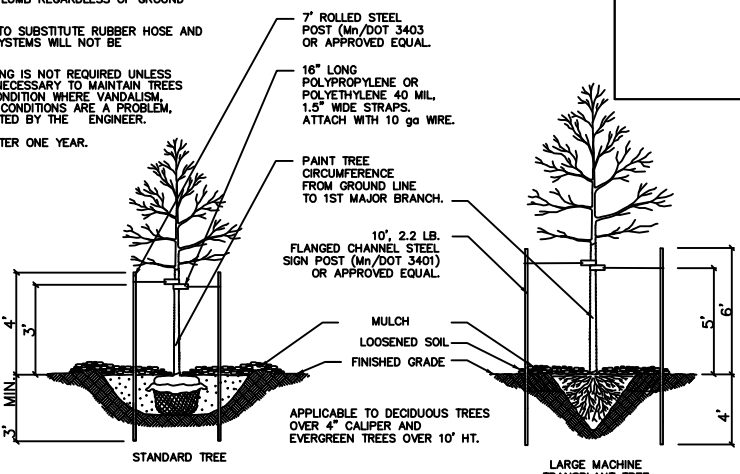
NOTES:

1.\*\*STEEL POSTS TO BE NOTCHED OR DRILLED TO RETAIN GUY WIRES. PLACE OUTSIDE OF ROOT BALL. DRIVE PLUMB REGARDLESS OF GROUND SLOPE.

2.\*\*REQUESTS TO SUBSTITUTE RUBBER HOSE AND WIRE GUYING SYSTEMS WILL NOT BE APPROVED.

3.\*\*TREE STAKING IS NOT REQUIRED UNLESS SPECIFIED OR NECESSARY TO MAINTAIN TREES IN A PLUMB CONDITION WHERE VANDALISM, SOIL, OR WIND CONDITIONS ARE A PROBLEM, OR AS REQUESTED BY THE ENGINEER.

4.\*\*REMOVE AFTER ONE YEAR.



STAKING / GUYING DETAIL

GENERAL NOTES

SEE SPECIAL PROVISIONS FOR SPECIFIC PROJECT REQUIREMENTS.

PLANTING HOLE AND BED CULTIVATION	THE PLANTING DETAILS REPRESENT ADEQUATELY DRAINED SOIL CONDITIONS. THE CONTRACTOR SHOULD EXERCISE DISCRETION IN SETTING PLANTS 1"-3" HIGHER IN POORLY DRAINED SOILS OR USING ALTERNATIVE PLANTING DETAILS ON SHEET B.														
BACKFILL SOIL	USE CULTIVATED AND AMENDED SOIL EXCAVATED FROM PLANTING HOLES. REMOVE ALL DEBRIS INCLUDING ROCKS LARGER THAN 3" DIAMETER.														
FERTILIZER	MN/DOT 3881														
COMPOST	Mn/DOT 3890														
MULCH MATERIAL	Mn/DOT 3882 TYPE 6 UNLESS OTHERWISE SPECIFIED.														
MASS PLANTING	MASS PREPARE PLANT SPACING OF 4' OR LESS. PLANT IN STAGGERED ROWS ON THE PERIMETER FIRST, THEN UNIFORMLY FILL IN WITH REMAINING QUANTITY. USE TRIANGULAR SPACING, UNLESS SPECIFIED OTHERWISE. PROVIDE 5' RADIUS CLEAR OF SHRUBS AROUND EACH DECIDUOUS TREE AND 8' RADIUS AROUND EACH EVERGREEN TREE. THIS RADIUS (CLEARANCE) SHALL BE MEASURED FROM THE CENTER OF THE TREE TO THE CENTER OF THE SHRUB. NOTIFY ENGINEER OF GROSS PLANT QUANTITY SURPLUS OR DEFICIENCY IMMEDIATELY. MASS MULCH PLANT SPACINGS OF 4' OR LESS.														
TREE PAINTING	PAINT OAKS, LINDENS, LOCUSTS, MAPLES, CRABAPPLES AND MOUNTAIN ASH. ONLY UNDILUTED EXTERIOR WHITE LATEX PAINT IS ACCEPTABLE. PAINT TREE CIRCUMFERENCE FROM GROUND LINE TO FIRST MAJOR BRANCH.														
PLANTING PLAN	RESPECT STATED DIMENSIONS BEFORE SCALING FROM PLAN.														
WATERING GUIDELINES	<table border="1"> <thead> <tr> <th>PLANT TYPE</th> <th>AVERAGE AMOUNT OF WATER PER APPLICATION IN GALLONS</th> </tr> </thead> <tbody> <tr> <td>MACHINE TRANSPLANTED TREES 42" AND UP</td> <td>50 - 100</td> </tr> <tr> <td>BARE ROOT TREES</td> <td>15</td> </tr> <tr> <td>BALLED &amp; BURLAPPED SHRUBS</td> <td>10</td> </tr> <tr> <td>BARE ROOT OR CONTAINER SHRUBS</td> <td>7</td> </tr> <tr> <td>WOODY SEEDLINGS</td> <td>4</td> </tr> <tr> <td>PERENNIALS AND VINES</td> <td>3</td> </tr> </tbody> </table>	PLANT TYPE	AVERAGE AMOUNT OF WATER PER APPLICATION IN GALLONS	MACHINE TRANSPLANTED TREES 42" AND UP	50 - 100	BARE ROOT TREES	15	BALLED & BURLAPPED SHRUBS	10	BARE ROOT OR CONTAINER SHRUBS	7	WOODY SEEDLINGS	4	PERENNIALS AND VINES	3
	PLANT TYPE	AVERAGE AMOUNT OF WATER PER APPLICATION IN GALLONS													
	MACHINE TRANSPLANTED TREES 42" AND UP	50 - 100													
	BARE ROOT TREES	15													
	BALLED & BURLAPPED SHRUBS	10													
BARE ROOT OR CONTAINER SHRUBS	7														
WOODY SEEDLINGS	4														
PERENNIALS AND VINES	3														
IT IS THE CONTRACTOR'S RESPONSIBILITY TO MONITOR AND MAINTAIN SOIL MOISTURE AT ADEQUATE BUT NOT EXCESSIVE LEVELS. THE ABOVE LISTED APPLICATION AMOUNTS ARE GUIDELINES, NOT REQUIREMENTS.															



REVISED: 1-10

FILE NAME: G:\ENG\SPCS\5311

ENGINEERING DEPARTMENT

PLATE: 5311

PLANTING DETAIL