





Landscaping – Estimating and Bidding

Hosted by
M Squared Engineering, LLC
 on behalf of
 The Illinois Department of Transportation –
 Office of Business and Workforce Diversity
 March 15, 2012


Welcome!




- ▶ M Squared Engineering
 - Contract with IDOT to provide Technical Supportive Services in Districts 2 and 3.
 - Provide one-on-one technical assistance to contractors within Districts 2 and 3
 - Training workshops on various topics of highway construction.
 - Assistance to DBE contractors in resolving issues on IDOT Construction Projects.








Introductions

- ▶ Presenters:
 - Minal Hahm, PE, CFM
 - Vinubhai Patel
- ▶ Attendees – Introduce around the room
 - Company
 - Title
 - What you hope to learn today

Miscellaneous Announcements

- ▶ Cell phones
- ▶ Format for today
 - Casual – questions can be asked throughout
 - Will have a brief break half-way through
- ▶ Pre-requisite
 - Attendees understand DOT website
 - Good understanding of reading plans and specifications
 - If not – we'll work through it and follow up with more detail at a later date.

Workshop Goals

Learn how to:

- ▶ Understanding IDOT Standard Specifications related to Landscaping
- ▶ Estimating quantities for landscaping materials
- ▶ Brief review of IDOT website for letting schedule





Landscaping

- ▶ Landscaping:
 - Any activity that modifies the visible features of an area of land.
 - Landscaping is both science and art, and requires good observation and design skills.
 - A good landscaper understands the elements of nature and construction and blends them accordingly.





Article 201.01 (IDOT Standard Specifications)

- ▶ Clearing
- ▶ Tree Removal
- ▶ Care of Existing Plant Material
- ▶ Repair or Replacement of Existing Plant Material
- ▶ Tree stump – diameter at cut off of 6 inches or more will be considered a tree for the purposes of measurement and removal.




 Illinois Department of Transportation
Ann L. Schneider, Secretary

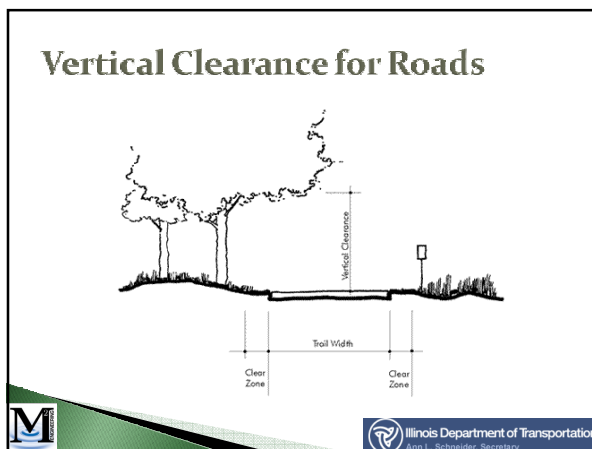
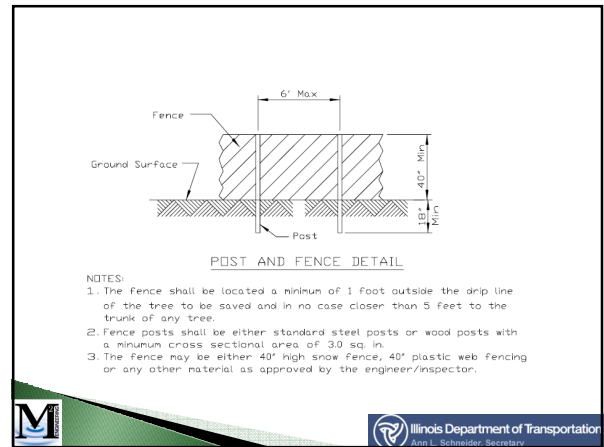
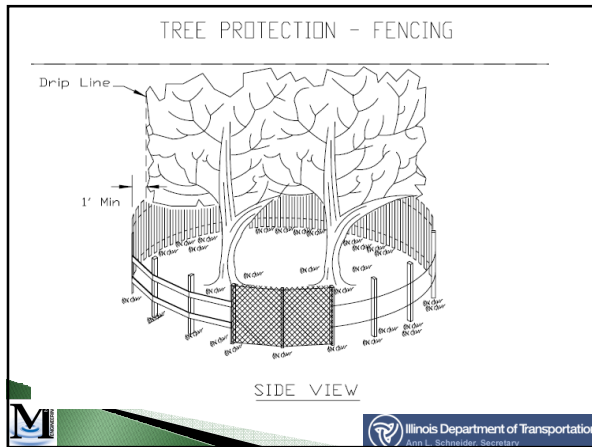
Article 201.05



- ▶ Temporary Fencing
 - Minimum of 4' high
 - Stakes placed a maximum of 15 feet apart
- ▶ Tree Trunk Protection
 - 2"x8"x8' boards banded continuously around each trunk.
- ▶ Pruning for Safety and Equipment Clearance
 - In accordance with National Arborist Association Pruning Standards for Shade Trees Class II.
 - Plant material pruned to provide a minimum vertical clearance of 20 feet from the finished surface of the roadbed and shoulders.





 Illinois Department of Transportation
Ann L. Schneider, Secretary



Article 201.06 (IDOT Standard Specifications)

- ▶ All pruning shall be performed by a professional arborist.
- ▶ Remove damaged root ends by cutting them off cleanly.
- ▶ Pruning should preserve the plant's natural growth habit.
- ▶ Damage to the root zone, as determined by the engineer, shall be compensated by pruning an equivalent amount of the top vegetative growth of the plant material within one week following root damage.
- ▶ "Drop crotch" pruning shall be used for branches in excess of 2 inches in diameter.
- ▶ Fertilizer Nutrients shall be applied at the rate of 5 lbs of nutrients per 1000 square feet.



 Illinois Department of Transportation
Ann L. Schneider, Secretary

**Article 201.06
(IDOT Standard Specifications)**

- ▶ Supplemental Watering
 - Apply within 48 hours of any root damage
 - Weekly watering shall be applied if deemed necessary by the engineer
- ▶ Tree Pruning
 - In accordance with National Arborist Association Pruning Standards for Shade Trees Class II.
 - All branch pruning between October 15 and April 15 when trees are dormant.



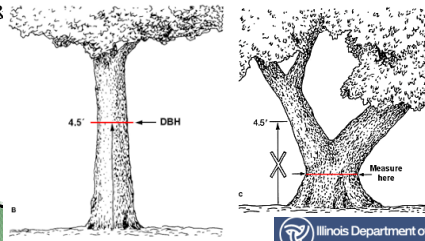
**Article 201.10
(IDOT Standard Specifications)**

- ▶ For multiple stem tree's branches having a diameter of 6 inches or more, measurement is from a point 4.5 feet above the highest ground level at the base of the tree and paid as individual trees.



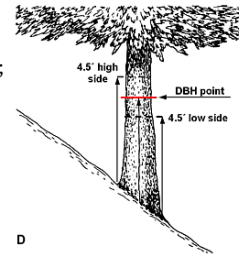
Tree size - diameter

- ▶ **General Rule:** Record the smallest trunk circumference between the DBH point (4.5 feet) and the ground, but below the lowest fork. Also record the height above the ground, in inches, where measurement was taken (images B & C)



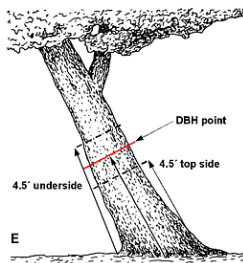
Tree on Slope

- ▶ **Tree on Slope:** Measure up 4.5 feet along the axis of the trunk on high and low sides; DBH point is midway between these two planes (D).



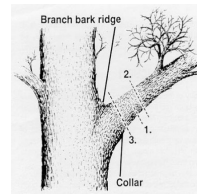
Leaning Tree

- ▶ **Leaning Tree:** Measure 4.5 feet along both the top and undersides of the trunk; DBH point is midway between these two planes (E).





Three-cut Branch Removal

- ▶ Use a pruning saw and make these three sequential cuts:
 1. On the bottom of the limb between 6 and 12 inches from the trunk; cut about one-quarter of the way through.
 2. Through the limb from the top, starting about 1 inch beyond the first cut. (The weight of the branch may cause it to snap off before the cut is complete.)
 3. Completely through the short remaining stub from top to bottom just beyond the swollen branch collar. (Support the stub while sawing, to make a clean cut.)





Section 201 (IDOT Standard Specifications)

- Measured Quantities for Tree Removal (Units & Acres)
 - Shown at definite locations on the plans or staked for removal by the Engineer.
 - The entire area shown on the plans, and directed by the engineer, will be used in computing the acres.
 - For Tree Removal quantities, 1 unit equals 1 inch (i.e. 15 units = 15" of tree diameter).
 - Do not remove a tree unless it is marked by the Engineer and take a picture of the tree first!
- When it is necessary to remove trees in connection with borrow pits furnished by the Contractor, trees will not be measured separately for payment.



Section 201 (IDOT Standard Specifications)

- Protection of Existing Plant Material
 - Temporary Fencing
 - Tree Trunk Protection
 - Pruning for Safety and Equipment Clearance
- Care of Existing Plant Material
 - Tree Root Pruning to maintain the vigor of the tree.
 - Tree Pruning for trees over 10 inches in diameter will be measured for payment as each per tree.
- Top Soil and Compost
 - Topsoil (Furnished from outside of the R.O.W.) – see article 1081.05(a). Topsoil is the soil at the surface of the earth, wherein plants are grown.
 - Compost (see article 1081.05(b)) is a mixture of decaying organic matter, as from leaves and manure, used to improve soil structure and provide nutrients.



Section 211 - Furnishing and Excavating Topsoil (IDOT Standard Specifications)

- ▶ Topsoil shall be obtained from within the limits of the right-of-way at the locations and to the depths designated on the plans or approved by the Engineer.
- ▶ Topsoil shall be stockpiled at locations approved by the Engineer.
- ▶ When special types of topsoil are specified, each type shall be handled separately and not allowed to mix with any other material.
- ▶ When special types of topsoil (Hydric, Prairie or Woodland) are specified, the seeds and plants within the excavated special top soils are desirable to maintain. If stockpiling cannot be avoided, special measures, such as watering the stockpile and planting a cover crop on the stockpile will be required as directed by the engineer.



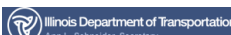
Section 211 - Placing Topsoil and Compost

- ▶ Placing Topsoil and compost
 - To be placed after the area to be covered has been shaped, trimmed, and finished according to Section 212.
 - All irregularities or depressions in the surface due to weathering or other causes shall be filled or smoothed out before the topsoil is placed (surface is rolled by the Prime).
 - If the existing surface has become hardened or crusted, it shall be disked or raked or otherwise broken up so as to provide a bond with the lift of topsoil to be applied.
 - When compost is specified, it shall be placed at the specified depth on top of the topsoil. The Engineer will verify that the proper topsoil and compost depths have been applied. After verification of proper depth, the Contractor shall completely incorporate the compost into the topsoil by diskings or tilling.



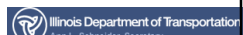
Section 211 (IDOT Standard Specifications)

- ▶ Contract Quantities
 - Shall conform to Article 202.07 of the Standard Specifications
 - Topsoil furnish and place, and compost furnish and place shall be that material obtained from outside the right-of-way and will be measured in square yards.
- ▶ Basis of Payment
 - Topsoil Excavation and Placement per Cubic Yard
 - Topsoil Furnish and Place of thickness specified per Square Yard
 - Compost Furnish and Place of the thickness specified per Square Yard

Section 250 - Seeding (IDOT Standard Specifications)

- ▶ Seeding – work consists of preparing seed bed and placing the seed and other materials.
- ▶ Materials – includes Seeds, Agricultural Ground limestone, and Fertilizer.
- ▶ Equipment includes the following:
 - Disk
 - Slope Harrow
 - Hydraulic Seeder
 - Cultipacker
 - Broadcast Seeders
 - Tractor Drawn Seeders
 - Tractor Mounted Drop Seeders
 - Rangeland Type Grass Drill and Interseeding Attachment
 - Silt Seeder



Section 250 – Fertilizer (IDOT Standard Specifications)

- When fertilizer is specified, 270 lbs of fertilizer nutrients per acre shall be applied at 1:1:1 ratio as follows.

Nitrogen Fertilizer Nutrients	90 lb/acre
Phosphorus Fertilizer Nutrients	90 lb/acre
Potassium Fertilizer Nutrients	90 lb/acre
- When agricultural ground limestone is specified, it shall be applied at a rate of 2 tons/acre multiplied by the source correction factor.

Illinois Department of Transportation
Ann L. Schneider, Secretary

Section 250 – Seed Bed Preparation (IDOT Standard Specifications)

- The area to be seeded shall be worked to a minimum depth of 3 inches with a disk tiller or other equipment approved by the Engineer, reducing all soil particles to a size not larger than 2 inches in the largest dimension.
- The prepared surface should be relatively free from weeds, clods, stones, roots, sticks, rivulets, gullies, crusting, and caking.
- No seeds shall be sown until the seed bed has been approved by the Engineer.

Illinois Department of Transportation
Ann L. Schneider, Secretary

Section 250 – Seeding Methods (IDOT Standard Specifications)

- No seed shall be sown during high winds nor shall any seed be sown until the purity test has been completed for the seeds to be used, and shows that the seed meets the noxious weed seed requirements.
- All equipment shall be approved by the Engineer prior to being used.
- The Engineer shall be notified 48 hours prior to beginning the seeding operations.
- When seed or fertilizer is applied with a hydraulic seeder, the rate of application shall be not less than 1,000 gallons of slurry per acre.

Illinois Department of Transportation
Ann L. Schneider, Secretary



Section 250 (IDOT Standard Specifications)

- Bare Earth Seeding**
 - Seeding Classes 1, 2, and 6 shall be sown with a machine that mechanically places the seed in direct contact with the soil, packs, and covers the seed in one continuous operation.
 - Seeding Class 4 shall be sown with a rangeland type grass drill.
 - Seeding class 3 may be sown with a hydraulic seeder.
 - Seeding Classes 5 and 7 shall be sown with a hydraulic seeder or rangeland type grass drill.
- Interseeding –seeding of areas in existing turf**
 - The equipment used shall be capable of completely severing all growth at the cutting height and distributing it evenly over the mowed area.

Illinois Department of Transportation
Ann L. Schneider, Secretary

**Section 250
(IDOT Standard Specifications)**



- ▶ Interseeding (Continued) –
 - The Contractor will not be required to mow within 1 foot of the right-of-way fence, continuously wet ditches and drainage ways, slopes 1:3 (V:H) and greater, or areas which may be designated as not mowable by the Engineer.
 - Debris encountered during the mowing and interseeding operations which hamper the operation or area visible from the roadway shall be removed and disposed of according to Article 250.05.
 - Damage to the right-of-way and turf, such as ruts or wheel tracks more than 2 inches in depth, shall be repaired to the satisfaction of the Engineer prior to the time of interseeding.

**Section 250 – Seeding Mixtures
(IDOT Standard Specifications)**


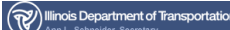
Art. 250.07 Seeding

TABLE 1 - SEEDING MIXTURES		
Class - Type	Seeds	lb/acre (kg/hectare)
1 Lawn Mixture 7/	Ky Bluegrass	100 (110)
	Perennial Ryegrass	60 (70)
	Creeping Red Fescue	40 (50)
1A Salt Tolerant Lawn Mixture 7/	Bluegrass	60 (70)
	Perennial Ryegrass	20 (20)
	Audubon Red Fescue	20 (20)
	Rescue 911 Hard Fescue	20 (20)
	Fulfs Salt Grass 1/	60 (70)
1B Low Maintenance Lawn Mixture 7/	Fine Leaf Turf-Type Fescue 3/	150 (170)
	Perennial Ryegrass	20 (20)
	Red Top	10 (10)
	Creeping Red Fescue	20 (20)

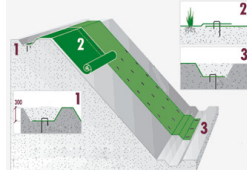

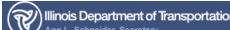
**Section 250 - Selective Mowing Stakes
(IDOT Standard Specifications)**

- ▶ Formula for pounds of fertilizer nutrients applied –
 - $$\frac{\text{Total pounds of mixed fertilizer} \times \text{percentage of each nutrient in the fertilizer applied}}{100} = \text{pounds of each fertilizer nutrient}$$
- ▶ Mowing – Only the initial mowing will be paid for. Any subsequent mowing required to obtain a height of not more than 3 inches or to disperse mowed material will be considered as included in the cost of the initial mowing.



Erosion Control Methods

- ▶ Compost
- ▶ Mulch
- ▶ Chemical Mulch Binder
- ▶ Chemical Compost Binder
- ▶ Excelsior Blanket
- ▶ Knitted Straw Mat
- ▶ Heavy Duty Erosion Control Blanket
- ▶ Wood Stakes
- ▶ Coconut Fiber



**Section 251 - Mulch
(IDOT Standard Specifications)**

- ▶ Mulching Seeding Areas
 - Within 24 hours from the time seeding has been performed.
 - On slopes steeper than 1:3 (V:H), mulch shall be applied the same day as seeded.
- ▶ Method 1
 - This method shall consist of hand or machine application of straw mulch at the rate of 2 tons/acre.
 - The mulch shall be loose enough to permit air to circulate but compact enough to reduce erosion.
 - If baled mulch material is used, care shall be taken that the material is in a loosened condition and contains no lumps or knots of compacted material.

**Section 251 - Mulch
(IDOT Standard Specifications)**

- ▶ Method 2 –
 - This method shall consist of placing and stabilizing straw at the rate of 2 tons/acre over seeded areas. All requirements of Method 1 must be met plus the mulch shall be thoroughly stabilized. The Contractor has the option of any of the following procedures for stabilizing the straw.
 - Procedure 1 – This procedure consists of anchoring the straw into the soil by means of a mechanical stabilizer with dull blades or disks.
 - Procedure 2 – This procedure consists of stabilizing the straw with an approved mulch blower followed immediately by an overspray application of hydraulic mulch.

Section 251 - Mulch (IDOT Standard Specifications)

- ▶ Method 2 (Continued) –
 - Procedure 3 – This procedure shall consist of stabilizing the straw with a chemical mulch binder. The chemical mulch binder may be applied simultaneously with the straw or as an overspray.
 - Simultaneous Application – Coated straw is placed by equipment which will blow or eject, by means of a constant air stream.
 - Overspray Application – Performed according to Procedure 2.
 - The chemical mulch binder shall be approved by the Engineer and shall be applied at the rate recommended by the supplier and approved by the Engineer.

Section 251 - Mulch (IDOT Standard Specifications)

- ▶ Method 3 –
 - This method shall not be used on slopes steeper than 1:3 (V:H). This method shall consist of machine application of wood or paper fiber hydraulic mulch at the specified rate using an approved hydraulic seeder. The hydraulic mulch shall be applied as a slurry of 1 ton of mulch and not less than 2000 gallons of water/acre. The hydraulic mulch slurry shall be agitated a minimum of five minutes before application. The seeding shall not be applied concurrently with this operation.
- ▶ Following the mulching operation, foot and vehicular traffic, or the movement of equipment over the mulched area shall be prohibited.

Section 251 – Erosion Control Blanket (IDOT Standard Specifications)

- ▶ Erosion Control Blanket –
- ▶ May be placed using either excelsior blanket or knitted straw blanket. The blanket shall be placed within 24 hours after seeding operations have been completed on the areas specified.
- ▶ If, as a result of rain, the prepared seed bed becomes crusted or eroded, or if eroded places, ruts, or depressions exist for any reason, the Contractor shall rework the soil until it is smooth and reseed such areas which are reworked.
- ▶ After the area has been properly shaped, fertilized, and seeded, the blanket shall be laid out flat, evenly, and smoothly, without stretching the material. The blankets shall be placed so that the netting is on the top and the fibers are in contact with the soil.

Section 251 (IDOT Standard Specifications)

- ▶ Erosion Control Blanket –
 - Anchoring the blankets in ditches and on slopes vary depending on the type of blanket (Excelsior Blanket, Knitted Straw Blanket, and Heavy Duty Erosion Control Blanket).
- ▶ Method of Measurement –
 - Per acre for Mulch, Method 1; Mulch, Method 2; Mulch Method 3; or Mulch Method 4.
 - Per square yard for Erosion Control Blanket or heavy Duty Erosion Control Blanket.



Article 253.08 – Excavation of Plant Holes (IDOT Standard Specifications)

- ▶ The sides of all plant holes shall be saucer shaped with the proportions being the width equal to three times the depth.
- ▶ On slopes, the depth of excavation will be measured at the center of the hole.
- ▶ Excess material excavated from the holes shall be spread in the immediate area as directed by the Engineer.
 - The excavated material shall not be stockpiled on turf or in ditches.
- ▶ The sides of holes shall not be glazed or smooth.
- ▶ (a) Excavation for Trees. Holes for trees shall be dug at the location indicated by the marking flags. The diameter and depth of the hole shall be according to the following chart. (see next slide for Chart)

PLANT MATERIAL SIZE	MINIMUM DIAMETER OF BALL (W)	MINIMUM BALL DEPTH (D)	PLANTING HOLE WIDTH (3W)
4ft (1.2 m) < 8 ft (2.4 m) (height)	14 in. (355 mm) < 22 in. (560 mm)	10.5 in. (270 mm) < 14.5 in. (370 mm)	42 in. (1070 mm) < 66 in. (1680 mm)
8 ft (2.4 m) < 12 ft (3.6 m) (height)	16 in. (400 mm) < 28 in. (700 mm)	12 in. (300 mm) < 18.5 in. (470 mm)	48 in. (1220 mm) < 84 in. (2140 mm)
1 in. (25 mm) < 2 in. (50 mm) (diameter)	22 in. (560 mm) < 38 in. (960 mm)	14.5 in. (370 mm) < 23 in. (585 mm)	66 in. (1680 mm) < 114 in. (2900 mm)
2 in. (50 mm) < 3 in. (75 mm) (diameter)	28 in. (700 mm) < 38 in. (960 mm)	12 in. (300 mm) < 23 in. (585 mm)	84 in. (2140 mm) < 114 in. (2900 mm)
3 in. (75 mm) < 4 in. (100 mm) (diameter)	16 in. (400 mm) < 24 in. (600 mm)	12 in. (300 mm) < 16 in. (400 mm)	48 in. (1220 mm) < 72 in. (1830 mm)
4 in. (100 mm) < 5 in. (125 mm) (diameter)	24 in. (600 mm) < 31 in. (775 mm)	16 in. (400 mm) < 19.5 in. (495 mm)	72 in. (1830 mm) < 93 in. (2300 mm)
5 in. (125 mm) or larger (diameter)	31 in. (775 mm) < 42 in. (1070 mm)	19.5 in. (495 mm) < 25 in. (635 mm)	93 in. (2300 mm) < 126 in. (3200 mm)
	42 in. (1070 mm) < 53 in. (1340 mm)	25 in. (635 mm) < 32 in. (780 mm)	126 in. (3200 mm) < 150 in. (4000 mm)
	53 in. (1340 mm) or larger (diameter)	32 in. (780 mm) or larger (diameter)	150 in. (4000 mm) or larger (diameter)



Article 253.10 – Planting Procedures (IDOT Standard Specifications)

- ▶ When directed by the Engineer, the backfill shall consist of suitable soil removed from the hole and topsoil as needed to match the level of the existing grade. If the existing soil is determined to be unsuitable, the backfill shall consist of topsoil as approved by the Engineer. Topsoil shall be stockpiled only at locations approved by the Engineer.
- ▶ The backfill soil at the time of planting shall be capable of providing a sound growth environment and be in a loose, friable condition. At no time shall the backfill or other topsoil used on the job be stockpiled on turf or in ditches.



Article 253.10 – Planting Procedures (IDOT Standard Specifications)

- ▶ All plants shall be placed in a plumb position and set 2 in. (50 mm) higher than the depth they grew in the nursery. Prepared backfill shall be placed around the root system. Tamping or watering shall accompany the backfilling operation to eliminate air pockets.
- ▶ Thorough watering of trees, shrubs, and vines, with a method approved by the Engineer, shall immediately follow the backfilling operation. This watering shall completely saturate the backfill and be performed during the same day of planting. After the ground settles, as a result of the watering, additional backfill shall be placed to match the level of the finished grade. Approved watering equipment shall be at the site of the work and in operational condition prior to starting the planting operation.



Article 253.10 – Planting Procedures (IDOT Standard Specifications)

- ▶ Balled and Burlapped Plants - After the plant is placed in the hole, all cords and burlap shall be removed from the trunk. Wire baskets shall be removed from at least the upper one half of the planting ball. All materials shall be disposed of properly.
- ▶ Container Grown Plants - Prior to placing the plant in the hole, the container shall be removed with care so as not to disturb the ball of soil that contains the root system. During the planting operation, care shall be taken not to destroy the solidity of the ball of soil. Pots which will decompose in one growing season shall be removed to a point just below the surface of the ground.



Article 253.10 – Planting Procedures (IDOT Standard Specifications)

- ▶ Bare Root Plants - The roots shall be carefully spread in a natural position and prepared backfill shall be worked in around the roots so each root is individually packed to eliminate air pockets. The plant shall be gently raised and lowered to assure contact of the roots with the soil.
- ▶ Seedling Plants - When seedlings are removed from storage for planting, they shall be transported to the planting site in containers of water and the roots shall be continuously immersed until planted. Any unplanted seedlings left at the end of each day shall be removed from the water, the roots wrapped in moist materials and the seedlings placed in storage.

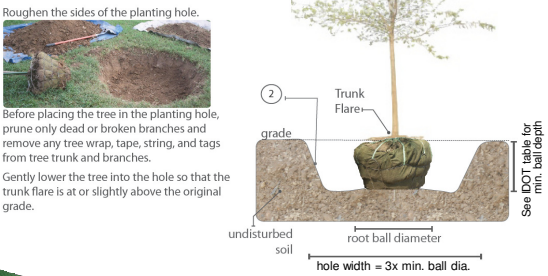



Article 253.10 – Planting Procedures (IDOT Standard Specifications)

- ▶ Seedling Plants -
 - If holes are prepared according to Article 253.08, the roots shall be placed in the center of the hole and the backfill shall be compacted around the roots to eliminate air pockets. The backfill shall be saturated with water after the plant is placed.
 - If an approved tree planting machine or a hand method that utilizes a planting bar or spade is used, no backfill will be required.
- ▶ Water Saucer - All plants, except seedlings, placed individually and not specified to be bedded with other plants, shall have a water saucer constructed of soil equal to one half the diameter of the planting hole width and 4 in. (100 mm) in depth.



Planting a Balled in Burlap Tree (Flat Ground)



Roughen the sides of the planting hole.

Before placing the tree in the planting hole, prune only dead or broken branches and remove any tree wrap, tape, string, and tags from tree trunk and branches.

Gently lower the tree into the hole so that the trunk flare is at or slightly above the original grade.

Planting a Balled in Burlap Tree (Flat Ground)

- Backfill 1/3 of the planting hole with original soil to stabilize root ball and keep tree upright.
- Cut and remove top 2/3 of the wire basket
- Cut and remove top 2/3 of the burlap from the root ball
- Completely backfill hole with original soil and add soil amendment if needed

Illinois Department of Transportation
Ann L. Schneider, Secretary

Conversion Factors

12 inches = 1 foot
 3 feet = 1 yard
 5,280 feet = 1 mile
 1 Station = 100 feet
 1 Sq. Yd. = 9 Sq. Ft.
 1 Acre = 43,560 Sq. Ft.
 1 Cu. Yd. = 27 Cu. Ft.

Illinois Department of Transportation
Ann L. Schneider, Secretary

Important calculations in Highway Landscaping Contracts- Topsoil Pay Item

- Determining the amount of topsoil to be placed in a ROW area:
- Example:
 End Area A measures 80' wide and 4" in depth, and End Area B measures 85' and 4" in depth and there is a length of 250' between the 2 areas: Semi-dumps have a capacity of 24 CY (capacity) per load.

$$\left\{ \left(\frac{80' + 85'}{2} \right) \times 250' \right\} \div 9 \text{ SF/SY} = 2,291.7 \text{ SY (required pay item quantity)}$$

- 4" (depth of topsoil placement) /12" per foot = 0.3333 FT
- End area A: 80' (width) x 0.3333' (depth) = 26.4 Square Feet
- End area B: 85' (width) x 0.3333' (depth) = 28.1 Square Feet

Illinois Department of Transportation
Ann L. Schneider, Secretary

Important calculations in Highway Landscaping Contracts- Topsoil Pay Item

Example (continued):

$$\left(\frac{26.4 \text{ SF} + 28.1 \text{ SF}}{2} \right) \times 250 = 6,813 \text{ Cubic Feet}$$

6,813 Cubic Feet / 27 CF per Cubic Yard = 252.3 Cubic Yards (Topsoil Required)
 252.3 Cubic Yards x 1.25 (swell factor or loose yards) = 315.4 Cubic Yards need to be hauled in by truck.

Note: Soil swells when excavated, and it shrinks when it is placed/compacted. Therefore, the swell factor and shrinkage factor (25%) will correctly tell us how much topsoil we will need to haul in, and how much is actually placed.

315.4 Cubic Yard / (24 CY Truck Capacity) / 0.80 (80% capacity) = 16.43 truck loads or say 17 loads.

Illinois Department of Transportation
Ann L. Schneider, Secretary

Letting Dates

- IDOT Website:
- <http://www.dot.state.il.us/letting.asp>

Illinois Department of Transportation
Ann L. Schneider, Secretary

Letting and Bidding Web Page

DOING BUSINESS LETTING & BIDDING

- Construction Guides
- Consultant Services
- Contractor Services
- Forms
- Highway Authority Agreements
- Land Acquisition Services
- Letting and Bidding
- Manuals
- Materials
- Outdoor Advertising / Billboards
- Research
- Safety Information
- Small Business Enterprises
- Subscription Services
- Surplus Equipment Sales
- Target Market Program
- Technology Transfer Center
- Transportation Bulletins
- Utility & Highway Permits

Land Acquisition Services

- Specialty Agent Application
- Approved Specialty List
- Training
- Equipment Appraisal
- Specialty Services
- Regulatory Agent
- Appraisal/Traverse Agreement
- Construction/Right of Way Acquisition Services
- Land Acquisition Manual
- Land Acquisition Exhibit Forms and Transmittal Index

Letting and Bidding

- Administrative Code/Plans
- Approved Bid Information
- Letting and Bidding Information
- Checklist/Forms/URLs/Contact/Process

Surplus Equipment Sales

- Surplus Equipment Sales

Illinois Department of Transportation
Ann L. Schneider, Secretary

Letting and Bidding Web Page

PROJECTS ROAD CLOSURES NEWS DOING BUSINESS LETTING & BIDDING CAREERS @ IDOT GENERAL INFO

LETTING AND BIDDING INFORMATION

[2003](#) | [2004](#) | [2005](#) | [2006](#) | [2007](#) | [2008](#) | [2009](#) | [2010](#) | [2011](#) | [2012](#)

2012

- [March 09, 2012 Letting](#)
- [January 20, 2012 Letting](#)

2011

- [November 18, 2011 Letting](#)
- [September 23, 2011 Letting](#)
- [August 5, 2011 Letting](#)
- [June 17, 2011 Letting](#)
- [April 29, 2011 Letting](#)
- [April 1, 2011 Special Letting](#)

Archived Notice of Letting Bulletins
Contractor's Marketplace
Letting Schedule
Pay Item Reports With Awarded Prices
Price Indices for Bituminous, Steel and Fuel
Project Labor Agreements - Critical Document

**** "HOW TO" PROCEDURES AND FREQUENTLY ASKED QUESTIONS ****

<http://www.dot.state.il.us/desenv/delett.html>




Illinois Department of Transportation
Ann L. Schneider, Secretary

IDOT Letting Schedule

<http://www.dot.state.il.us/desenv/LettingSchedule.pdf>

IDOT LETTING SCHEDULE 2011 - 2013


Transportation Bulletin	Pre-Qualification "Cut Off"	Joint Venture "Cut Off"	Bid Authorization "Cut Off"	Letting Day	DBE Utilization Plan (SEC 2023 and SEC 2024)
12/9/2011	12/30/2011	1/13/2012	1/17/2012	1/20/2012	Submit With Bid
12/20/2011	12/30/2011	1/13/2012	1/17/2012	1/20/2012	Submit With Bid
2/3/2012	2/17/2012	3/2/2012	3/6/2012	3/9/2012	Submit With Bid
3/23/2012	4/6/2012	4/20/2012	4/24/2012	4/27/2012	Submit With Bid
5/11/2012	5/25/2012	6/8/2012	6/12/2012	6/15/2012	Submit With Bid
6/29/2012	7/13/2012	7/27/2012	7/31/2012	8/3/2012	Submit With Bid
8/17/2012	8/31/2012	9/14/2012	9/18/2012	9/21/2012	Submit With Bid
10/5/2012	10/19/2012	11/2/2012	11/7/2012	11/9/2012	Submit With Bid
12/7/2012	12/28/2012	1/11/2013	1/15/2013	1/18/2013	Submit With Bid
2/1/2013	2/15/2013	3/1/2013	3/5/2013	3/8/2013	Submit With Bid
3/22/2013	4/5/2013	4/19/2013	4/23/2013	4/26/2013	Submit With Bid
5/10/2013	5/24/2013	6/7/2013	6/11/2013	6/14/2013	Submit With Bid




Illinois Department of Transportation
Ann L. Schneider, Secretary

Special Thanks

- ▶ PTAC / EigerLABS
- ▶ IDOT District 2
 - Fred Marruffo
District 2 EEO Officer
Illinois Department of Transportation
819 Depot Avenue
Dixon, Illinois 61021
Phone: (815) 284-5345
Fax: (815) 285-5262
Email: Fred.Marruffo@illinois.gov





Illinois Department of Transportation
Ann L. Schneider, Secretary

Questions?

- ▶ M Squared Engineering, LLC
 - Vinubhai Patel
◦ (630) 453-8994
◦ vpatel@msquaredengineering.com
 - Minal Hahm
◦ (262) 376-4246
◦ minal@msquaredengineering.com



Illinois Department of Transportation
Ann L. Schneider, Secretary