ATTACHMENT D

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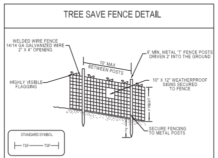
PLANNING DEPARTMENT USE ONLY (E-PLANS)

TREE SAVE FENCE DETAIL

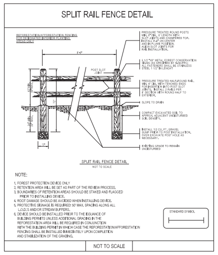


NOTES

1. PRACTICE MAY BE COMBINED WITH SEDIMENT CONTROL FENCING
2. LOCATION AND LIMITS OF FENCING SHALL BE COORDINATED IN FIELD WITH ARBORIST
3. BOUNDARIES OF LIMITS OF DISTURBANCE SHALL BE STAKED PRIOR TO INSTALLING PROTECTIVE FENCE
4. ROOT DAMAGE SHOULD BE AVOIDED
5. PROTECTIVE SIGNS REQUIRED
6. FENCING SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION

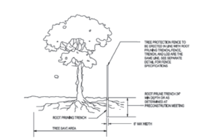
NOT TO SCALE

SPLIT RAIL FENCE DETAIL



NOT TO SCALE

PERMANENT FOREST CONSERVATION SIGN
NOT TO SCALE



NOTES:

1. RETENTION AREAS WILL BE SET AS PART OF THE REVIEW PROCESS AND PRECONSTRUCTION MEETING.
2. BOUNDARIES OF RETENTION AREAS MUST BE STAKED AT THE PRECONSTRUCTION MEETING AND FLAGGED PRIOR TO TRENCHING.
3. EXACT LOCATION OF TRENCH SHALL BE DETERMINED IN THE FIELD IN COORDINATION WITH THE FOREST CONSERVATION (FC) INSPECTOR.
4. TRENCH SHOULD BE IMMEDIATELY BACKFILLED WITH EXCAVATED SOIL OR OTHER ORGANIC SOIL AS SPECIFIED PER PLAN OR BY THE FC INSPECTOR.
5. ROOTS SHALL BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT.
6. ALL PRUNING MUST BE EXECUTED WITH LOD SHOWN ON PLANS OR AS AUTHORIZED IN WRITING BY THE FC INSPECTOR.

ROOT PRUNING DETAIL
NTS

SIGNIFICANT AND SPECIMEN TREE IMPACT LIST

	Tree #	Common Name	Scientific Name	DBH (inch)	CRZ Area	CRZ Impacted	% Impacted	Cond.	Remove / Save
SIGNIFICANT	8	other species		29.4	6107	6107	100%	Poor	Remove
	9	Japanese Zelkova	Zelkova serrata	28.8	5860	5860	100%	Poor	Remove
	10	Eastern White Pine	Pinus strobus	24.9	4380	1747	100%	Fair	Remove
	11	Eastern White Pine	Pinus strobus	24.9	4380	1747	100%	Fair	Remove
	22	Black Cherry	Prunus serotina	32.5	7462	6386	14%	Fair	Save
	23	Eastern White Pine	Pinus strobus	24.5	4241	1197	39.0%	Fair	Save
	24	Eastern White Pine	Pinus strobus	25.2	4487	770	45.0%	Fair	Save
	27	Pin Oak	Quercus palustris	28.8	5860	426	8%	Fair	Save
	28	TulipTree	Liriodendron tulipifera	24.2	4138	838	100%	Poor	Remove
	29	Pin Oak	Quercus palustris	28.2	5618	1105	20.0%	Poor	Save
	30	Northern Red Oak	Quercus rubra	29	5942	5942	100%	Fair	Remove
	31	Northern Red Oak	Quercus rubra	29.1	5983	5983	100%	Fair	Remove
	32	Northern Red Oak	Quercus rubra	29.7	6232	6232	100%	Good	Remove
	34	Northern Red Oak	Quercus rubra	25.9	4739	4739	100%	Poor	Remove
	35	Northern Red Oak	Quercus rubra	26.8	5074	5074	100%	Poor	Remove
	36	Willow Oak	Quercus phellos	27.1	5189	5189	100%	Good	Remove
	38	Eastern White Pine	Pinus strobus	24.1	4103	4103	100%	Poor	Remove
	40	Dawn Redwood	Metasequoia sempervirens	28.8	5860	557	10%	Fair	Save
	44	Red Mulberry	Morus alba	24,14,18,12	7850	7850	100%	Poor	Remove
	46	Northern Red Oak	Quercus rubra	24.1	4103	4103	100%	Very Good	Remove
	47	Northern Red Oak	Quercus rubra	24.3	4172	4172	100%	Good	Remove
	48	Northern Red Oak	Quercus rubra	25	4416	4416	100%	Good	Remove
	60	Chinese Elm	Ulmus parvifolia	24.1	4103	4103	100%	Good	Remove
	67	Willow Oak	Quercus phellos	28.2	5618	5618	100%	Fair	Remove
	68	Willow Oak	Quercus phellos	26.2	4850	4850	100%	Fair	Remove
	69	Willow Oak	Quercus phellos	28.9	5901	5901	100%	Fair	Remove
	70	Willow Oak	Quercus phellos	29.4	6107	6107	100%	Fair	Remove
SPECIMEN	1	Willow Oak	Quercus phellos	37.6	9988	9988	2%	Very Good	Save
	2	Willow Oak	Quercus phellos	31	6789	6789	2%	Fair	Save
	3	Willow Oak	Quercus phellos	33.1	7740	7740	45%	Good	Save
	4	Willow Oak	Quercus phellos	41.8	12344	12344	100%	Good	Remove
	5	Willow Oak	Quercus phellos	35.6	8954	8954	100%	Fair	Remove
	6	Willow Oak	Quercus phellos	34.2	8264	8264	100%	Fair	Remove
	7	Willow Oak	Quercus phellos	40.1	11361	8351	12%	Fair	Save
	15	Willow Oak	Quercus phellos	39.6	11079	11079	100%	Very Good	Remove
	16	Willow Oak	Quercus phellos	35	8655	8655	100%	Good	Remove
	17	Willow Oak	Quercus phellos	33.3	7834	7834	100%	Good	Remove
	18	Willow Oak	Quercus phellos	36.4	9361	9361	100%	Fair	Remove
	19	Willow Oak	Quercus phellos	36.8	9568	9568	100%	Good	Remove
	20	Willow Oak	Quercus phellos	35.6	8954	8954	100%	Good	Remove
	21	American Sycamore	Platanus americana	33,26,34	7850	838	0.0%	Fair	Save
	33	Northern Red Oak	Quercus rubra	32.8	7601	7601	100%	Fair	Remove
	37	Northern Red Oak	Quercus rubra	31.8	7144	7144	100%	Fair	Remove
	45	Red Mulberry	Morus alba	36, 24, 18, 26	4776	40	1%	Poor	Save
	49	Willow Oak	Quercus phellos	38.8	10636	10636	100%	Very Good	Remove
	50	Willow Oak	Quercus phellos	33.9	8119	8119	100%	Good	Remove
	51	Willow Oak	Quercus phellos	35.3	8804	8804	100%	Good	Remove
	52	Willow Oak	Quercus phellos	44.5	13990	13990	100%	Good	Remove
	53	Willow Oak	Quercus phellos	35.1	8704	8704	100%	Good	Remove
	54	Willow Oak	Quercus phellos	40.8	11761	11761	100%	Fair	Remove
	55	Willow Oak	Quercus phellos	40.5	11588	11588	100%	Good	Remove
	56	Willow Oak	Quercus phellos	30.5	6572	6572	100%	Fair	Remove
	57	Willow Oak	Quercus phellos	44	13678	13678	100%	Fair	Remove
	58	Willow Oak	Quercus phellos	43.5	13369	13369	100%	Fair	Remove
	61	Willow Oak	Quercus phellos	37.3	9829	9829	100%	Good	Remove
	62	Willow Oak	Quercus phellos	39.8	11191	11191	100%	Good	Remove
	63	Willow Oak	Quercus phellos	42.3	12641	12641	100%	Fair	Remove
	64	Willow Oak	Quercus phellos	34.1	8215	8215	0%	Fair	Save
	65	Willow Oak	Quercus phellos	33.4	7881	7881	0%	Fair	Save
	66	Willow Oak	Quercus phellos	31.2	6877	6877	0%	Fair	Save

SPECIMEN TREE TO BE REMOVED WITH THIS PLAN

Tree #	Common Name	Scientific Name	DBH (inch)
4	Willow Oak	Quercus phellos	41.8
5	Willow Oak	Quercus phellos	35.6
6	Willow Oak	Quercus phellos	34.2
15	Willow Oak	Quercus phellos	39.6
16	Willow Oak	Quercus phellos	35
17	Willow Oak	Quercus phellos	33.3
18	Willow Oak	Quercus phellos	36.4
19	Willow Oak	Quercus phellos	36.8
20	Willow Oak	Quercus phellos	35.6
33	Northern Red Oak	Quercus rubra	32.8
37	Northern Red Oak	Quercus rubra	31.8
49	Willow Oak	Quercus phellos	38.8
50	Willow Oak	Quercus phellos	33.9
51	Willow Oak	Quercus phellos	35.3
52	Willow Oak	Quercus phellos	44.5
53	Willow Oak	Quercus phellos	35.1
54	Willow Oak	Quercus phellos	40.8
57	Willow Oak	Quercus phellos	44
58	Willow Oak	Quercus phellos	43.5
61	Willow Oak	Quercus phellos	37.3
62	Willow Oak	Quercus phellos	39.8
63	Willow Oak	Quercus phellos	42.3
Total DBH Removed			828.2
Total Caliper Replacement Required (1" caliper/4" DBH)			207
Total 3.5" Caliper Trees Required for Replacement			59

ELP Bethesda - Mitigation Planting Schedule

Qty #	Code	Botanical Name	Common Name	Size	Spacing	B&B / Cont.	Remarks
3	FG	*Fagus grandifolia*	American Beech	3½-4" Cal.	As Shown	B&B	Full, Limb to 7' from ground
3	LS	*Liquidambar styraciflua*	Sweetgum	3½-4" Cal.	As Shown	B&B	Full, Limb to 7' from ground
7	PA	*Platanus x acerifolia*	London Plane Tree	3½-4" Cal.	As Shown	B&B	Full, Limb to 7' from ground
30	QB	*Quercus bicolor*	Swamp White Oak	3½-4" Cal.	As Shown	B&B	Full, Limb to 7' from ground
1	QI	*Quercus lyrata*	American Basswood	3½-4" Cal.	As Shown	B&B	Full, Limb to 7' from ground
1	QL	*Quercus imbricaria*	Shingle Oak	3½-4" Cal.	As Shown	B&B	Full, Limb to 7' from ground
13	QP	*Quercus phellos*	Willow Oak	3½-4" Cal.	As Shown	B&B	Full, Limb to 7' from ground
3	UJ	*Ulmus americana*	American Elm	3½-4" Cal.	As Shown	B&B	Full, Limb to 7' from ground
9		*Future Trees*					
70		Total 3.5" Cal. Trees					

ELP Bethesda - Forest Conservation Planting

Qty #	Code	Botanical Name	Common Name	Size	Spacing	B&B / Cont.	Remarks
60	AR	*Acer rubrum*	Red Maple	2" Cal	As Shown	B&B	Full, Limb to 7' from ground
60	GT	*Gleditsia triacathos*	Honeylocust	2" Cal	As Shown	B&B	Full, Limb to 7' from ground
60	QP	*Quercus phellos*	Willow Oak	2" Cal	As Shown	B&B	Full, Limb to 7' from ground
61	QB	*Quercus bicolor*	Swamp White Oak	2" Cal	As Shown	B&B	Full, Limb to 7' from ground
61	TA	*Tilia americana*	American Basswood	2" Cal	As Shown	B&B	Full, Limb to 7' from ground
302		Total 2" Cal. Trees (3.02 acres on-site planting)					

Sequence of Events for Properties Required to Comply With Forest Conservation Plans, Exemptions from Submitting Forest Conservation Plans, and Tree Save Plans

The property owner is responsible for ensuring all tree protection measures are performed in accordance with the approved final forest conservation plan or tree save plan, and as modified in the field by a Planning Department Forest Conservation Inspector. The measures must meet or exceed the most recent standards published by the American National Standards Institute (ANSI A300).

Pre-Construction

1. An on-site pre-construction meeting is required after the limits of disturbance have been staked and flagged and before any land disturbance.
2. The property owner must arrange for the meeting and following people must participate at the pre-construction meeting: the property owner or their representative, construction superintendent, International Society of Arboriculture (ISA) certified arborist/Maryland Licensed Tree Expert (representing owner) that will implement the tree protection measures, The Planning Department Forest Conservation Inspector, and Montgomery County Department of Permitting Services (DPS) Sediment Control Inspector. The purpose of this meeting is verify the limits of disturbance and discuss specific tree protection and tree care measures shown on the approved plan. No land disturbance shall begin before tree protection and stress-reduction measures have been implemented and approved by the Planning Department's Forest Conservation Inspector.
   a. Typical tree protection devices include:
      i. Chain link fence (four feet high)
      ii. Super silt fence with wire strung between the support poles (minimum 4 feet high) with high visibility flagging.
      iii. 14 gauge, 2 inch x 4 inch welded wire fencing supported by steel T-bar posts (minimum 4 feet high) with high visibility flagging.
   b. Typical stress reduction measures may include, but are not limited to:
      i. Root pruning with a root cutter or vibratory plow designed for that purpose. Trenchers are not allowed, unless approved by the Forest Conservation Inspector
      ii. Crown Reduction or pruning
      iii. Watering
      iv. Fertilizing
      v. Vertical mulching
      vi. Root aeration systems

   Measures not specified on the Forest Conservation Plan may be required as determined by the Forest Conservation Inspector in coordination with the property owner's arborist.
3. A Maryland licensed Tree expert must perform, or directly supervise, the implementation of all stress reduction measures. Documentation of the process (including photographs) may be required by the Forest Conservation Inspector, and will be determined at the pre-construction meeting.
4. Temporary tree protection devices must be installed per the approved Forest Conservation Plan, Exemption Plan, or Tree Save Plan and prior to any land disturbance. The Forest Conservation Inspector, in coordination with the DPS Sediment Control Inspector, may make field adjustments to increase the survivability of trees and forest shown as saved on the approved plan.
5. Tree protection fencing must be installed and maintained by the property owner for the duration of construction project and must not be altered without prior approval from the Forest Conservation Inspector. All construction activity within protected tree and forest areas is prohibited. This includes the following activities:
   a. Parking or driving of equipment, machinery or vehicles of any type.
   b. Storage of any construction materials, equipment, stockpiling, fill, debris, etc.
   c. Dumping of any chemicals (i.e., paint thinner), mortar or concrete remainder, trash, garbage, or debris of any kind.
   d. Felling of trees into a protected area.
   e. Trenching or grading for utilities, irrigation, drainage, etc.
6. Forest and tree protection signs must be installed as required by the Forest Conservation Inspector. The signs must be waterproof and wording provided in both English and Spanish.

During Construction

7. Periodic inspections will be made by the Forest Conservation Inspector. Corrections and repairs to tree protection devices must be completed within the timeframe given by the Inspector.
8. The property owner must immediately notify the Forest Conservation Inspector of any damage to trees, forests, understory, ground cover, and any other undisturbed areas shown on the approved plan. Remedial actions, and the relative timeframes to restore these areas, will be determined by the Forest Conservation Inspector.

Post-Construction

9. After construction is completed, but before tree protection devices have been removed, the property owner must request a final inspection with the Forest Conservation Inspector. At the final inspection, the Forest Conservation Inspector may require additional corrective measures, which may include:
   a. Removal, and possible replacement, of dead, dying, or hazardous trees
   b. Pruning of dead or declining limbs
   c. Soil aeration
   d. Fertilization
   e. Watering
   f. Wound repair
   g. Clean up of retention areas, including trash removal
10. After the final inspection and completion of all corrective measures the Forest Conservation Inspector will request all temporary tree and forest protection devices be removed from the site. Removal of tree protection devices that also operate for erosion and sediment control must be coordinated with both DPS and the Forest Conservation Inspector and cannot be removed without permission of the Forest Conservation Inspector. No additional grading, sodding, or burial may take place after the tree protection fencing is removed.
11. Long-term protection measures, including permanent signage, must be installed per the approved plan. Installation will occur at the appropriate time during the construction project. Refer to the approved plan drawing for the long-term protection measures to be installed.

INSPECTIONS

All field inspections must be requested by the applicant. Inspections must be conducted as follows:

Tree Save Plans and Forest Conservation Plans without Planting Requirements

1. After the limits of disturbance have been staked and flagged, but before any clearing or grading begins
2. After necessary stress reduction measures have been completed and protection measures have been installed, but before any clearing and grading begin.
3. After completion of all construction activities, but before removal of tree protection fencing, to determine the level of compliance with the provision of the forest conservation.

Additional Requirements for Plans with Planting Requirements

4. Before the start of any required reforestation and afforestation planting
5. After the required reforestation and afforestation planting has been completed to verify that the planting is acceptable and prior to the start the maintenance period.
6. At the end of the maintenance period to determine the level of compliance with the provisions of the planting plan, and if appropriate, release of the performance bond.

GENERAL CONDITIONS

I. SCOPE
- A. The landscape contractor shall provide all materials, labor and equipment to complete all landscape work as shown on the plans, plant list and specifications.
- B. Total number of plants shall be as drawn on the landscape plan. If this total differs from the plant schedule, the landscape contractor is to notify the landscape architect before the bid date.

II. STANDARDS
- A. All plant material will conform to the current issue of the American Standard for Nursery Stock published by the American Nursery and Landscape Association (ANLA) conform in general to representative species.
- B. The plant material must be selected from nurseries that have been inspected by state or federal agencies. Any certificates required must be provided to owner or representative upon delivery of materials.

III. SUBSTITUTIONS
- A. If a plant is found not to be suitable or available, the contractor is to notify the landscape architect before bidding.
- B. The owner or landscape architect is then required to select a reasonable alternate or to inform all landscape contractors of the availability of the original plant.
- C. If a substitute is selected, it must be of the same size, value and quality as the original plant.
- D. Substitutions to be made with written approval of M-NCPPC.

IV. UTILITIES
- A. The landscape contractor shall notify utility companies prior to construction and call "Miss Utility" at 1(800)257-7777, to locate main utility lines.
- B. If there is a conflict with the utilities and the planting, the landscape contractor shall notify the landscape architect or owner immediately. Any cost of relocating caused by the contractors' failure to notify shall be borne by the contractor.

V. DRAINAGE
- A. Plants shall not be planted in situations that show obvious poor drainage. Such situations shall be brought to the attention of the landscape architect or owner and, if deemed necessary, plants shall be relocated or the contract shall be adjusted to provide drainage correction at a negotiated cost.

VI. WORKMANSHIP
- A. During planting, all areas shall be kept clean and neat, and all reasonable precautions shall be taken to avoid damage to existing plants, turf and structures.
- B. Upon completion, all debris and waste material resulting from planting operations shall be removed from the project and the area cleaned up.
- C. Any damaged areas shall be restored to their original condition at the cost of the contractor.

I. PLANT MATERIAL

I. STANDARDS
- A. Bare root
  1. Bare rooted shrubs shall be dug with adequate fibrous roots.
  2. Roots shall be protected during handling and transit and planted to guard against drying out and damage. If not planted soon after arrival, material must be heeled in and maintained.
- B. Balled and Burlapped (B&B)
  1. Balled and Burlapped plants shall be dug with firm natural balls of earth.
  2. Ball sizes shall be in accordance with ANLA specifications.
- C. Container grown stock shall have been grown in a container long enough for the root system to have developed sufficiently to hold soil in container together.
- D. All plant material shall be nursery grown unless otherwise specified. Pruning shall be done before planting or during the planting operation.
- E. All plant material to be transported in covered container. Locally available material may be covered with a burlap or similar cover to keep from drying out, provided the transporting vehicle maintains a maximum of 35 mph.
- F. Anti-desiccants shall be applied on all materials dug while in foliage.
- G. Container stock may replace B&B as long as all other criteria are met.
- H. Same plant material for location near each other shall be similar in appearance. Hedge material will be similar enough in size and shape, etc. to create a uniform hedge.

II. MATERIALS
- A. ANTI-TRANSPIRANTS
  1. Anti-transpirants shall be an emulsifiable concentrate used to retard excess water loss without harming normal transpiration.
- B. BACK FILL MIXTURES
  1. Back fill mixture shall be 1/3 existing soil mixed with 1/3 organic material (or peat) and 1/3 topsoil.
  2. If any other additives are found to be needed at the time of planting, it shall be added only with the approval of the landscape contractor, landscape architect and owner or owner's representative.
  3. Fertilizer is to be added depending on the size of the plant and the manufacturer's recommendation.
     - i. Trees - Use tree fertilizer as required by particular species
     - ii. Shrubs - Use tree fertilizer as required by particular species
     - iii. Ground Cover, Vines & Herbaceous Plants - Use tree fertilizer as required by species.
- C. TOPSOIL
  1. If used, top soil shall be sandy loam and uniform in color and composition.
  2. It shall be free of stones, roots, lumps, plants and other debris over 1 1/2".
  3. It shall not contain toxic substances harmful to plant growth.
  4. Top soil shall have a pH range of 5.0 to 7.0 and the organic matter shall be a minimum content of 1.0%
- D. ORGANIC MATTER
  1. Organic Matter used in back fill shall be peat or other material approved by the landscape architect or owner.
- E. PEAT MOSS
  1. Type I - sphagnum peat moss finely divided with a pH of 4.0 to 5.0.
- F. LEAF MOLD
  1. This a composted leaf material to be used with the approval of landscape architect.
- G. COMPOST
  1. To be organic matter composted and aged by accepted methods to be used only when specified or by approval of landscape architect.
- H. DOLOMITE LIME
  1. This is agricultural grade limestone containing total carbonates of 85% with a minimum of 30% magnesium carbonates.
- I. FERTILIZER
  1. Fertilizer shall be granular, packet or pellet with 35% to 85% of the total nitrogen in a slowly available form. To be applied by manufacturers methods.
  2. Fertilizer shall be a complete fertilizer with a minimum analysis as required by soil test and plant material.
- J. TRACE ELEMENTS
  1. These slow release materials containing zinc (Zn), molybdenum (Mo), iron (Fe), copper (Cu), boron (B), and magnesium (Mg). To be applied as per manufacturer's directions as deemed necessary by soil test.

III. BACKFILLING A TREE PIT
- A. Cut rope or wire on ball of tree and pull burlap back to the edge of the root ball remove all plastic wraps and twine. Roll burlap 1/3 of the way down the root ball.
- B. Backfill tree pit with a soil mixture stated in the specifications
- C. Mix soil amendments in the mixture either prior to filling pit or as pit is being filled
- D. Make sure plants remain straight during backfilling procedure.
- E. Backfill sides of tree pit halfway with soil mixture and tamp as pit is being filled
- F. Finish backfilling sides of tree pit and tamp firmly.
- G. NEVER COVER TOP OF TREE BALL WITH SOIL. Top of root ball should be ¼ the root ball height above the tree pit.
- H. Form a 4" saucer above existing grade and around the outer rim of the tree pit.
- I. Mulch top of root ball and saucer within 48 hours to a minimum depth of 2" and not exceed 3".
- J. Water thoroughly the interior of the tree saucer until it is filled. EVEN IF IT IS RAINING.
- K. Provide enough water to ensure saturation of the root ball.
- L. Prune out any dead, conflicting or broken branches.
- M. In extremely hot weather, reduce foliage surface by pruning or stripping of foliage.
- N. Remove all tags, labels, strings, etc. from the tree.

IV. TREES BRACED BY STAKING
- A. Choose the correct size and number of stakes and size of hose and wire according to the Tree Support Detail and plant requirements. Staking shall be completed within 48 hours of planting the tree.
- B. Space stakes evenly and vertically on the outside of the tree ball, driven firmly into the ground (stakes can be slightly angled away from the tree). NOTE: Never drive a stake through the tree ball, as it will damage the tree's root system. Stakes to be 2/3 above ground, 1/3 below.
- C. Cut pieces of reinforced hose long enough to loop around the trunk of the tree.
- D. Place the hose around the trunk at the height required to provide optimum support. Then run the wire through the hose and pull both ends horizontally beyond the stake by 2'.
- E. Cut the wire to sufficient length and then twist the wire at the rubber hose to keep it in place.
- F. Run both ends of wire together around the stake twice and then twist wire back onto itself to secure it. Cut off excess wire and stake.
- G. The above procedures are to follow for each stake.
- H. STAKES
  1. Stakes shall be 2"x2" hardwood, reasonably free of knots to be long enough for 1/3rd to be driven into the soil, and 2/3rds above the soil surface.
- I. WIRE
  1. Wire shall be 12 or 14 gauge galvanized steel or acceptable equal, depending on the size of the tree.
- J. CABLE
  1. Cable shall be 1/4" or 3/16" galvanized steel, depending on size of tree.
- K. CLAMPS
  1. Clamps shall be galvanized steel or zinc and large enough to hold wires or wires used.
- L. HOSE
  1. Hose shall be corded rubber, uniform in color and either 3/4" to 1" in diameter, depending on the size of the tree.
- M. MULCH
  1. Material shall be double shredded composted hardwood bark, such as "silvabark" or approved equivalent.
  2. Material shall be mulching grade, uniform in size and free of foreign or harmful matter.

V. INSPECTION
- A. Plants may be subject to inspection and approval by the owner or owner's representative at the place of growth for conformity to specification requirements as to quality, size and variety. This will be at the owner's expense. Plants damaged in handling or transportation may be rejected by the owner or owner's representative

II. PLANTING PROCEDURES FOR TREES

I. PREPARING TREE PIT
- A. The tree pit must be a minimum width of 2 times the size of the root ball at the top.
- B. The walls of tree pit shall be dug so that they are scarified.
- C. The tree pit shall be deep enough to allow 1/3 of the root ball to be above the existing grade. Any loose soil at the bottom of the pit shall be tamped by hand or with the bucket of the backhoe.
- D. Dig pit 6" deeper than depth required for root ball. Fill bottom of pit with 6" compacted soil mix adjusting depth to ensure top of root ball is 1/4 above the surface of the soil.

II. PLACING TREE IN THE PIT
- A. Place the tree in the pit by lifting and carrying the tree by its ball (never lift by branches or trunk) and then lowering it into the pit. Contractor is responsible for providing any machinery necessary to lift and move plant material and to insure it is not dropped.
- B. Set the tree straight and in the center of the pit with the most desirable side of the tree facing toward the prominent view (sidewalk, building, street, etc.).
- C. Any dropped material may be rejected by owner or representative. Any dropped material should be flagged with red flagging on its trunk and noted on a plan. Should plant die, it will be replaced by the contractor at no cost to the owner.

III. PLANTING PROCEDURES FOR SHRUBS

I. PREPARING SHRUB PIT
- A. For a single shrub, the pit shall be dug large enough for the proper setting of the root ball (4" wider than root ball at base. 2to 3 times the width of the root ball at the top).
- B. For a shrub mass planting, the entire bed area shall be rototilled 3 to 4 " deep. Each shrub pit shall be excavated for the proper setting of the root ball.
- C. For a hedge, a trench shall be dug large enough for the proper setting of all of the plants root balls (the trench shall be 2 times wider than the root balls).
- D. Form a compacted base in the bottom of the hole to adjust plant height to proper location. Compact sufficiently to prevent settling.

II. PLANTING SINGLE SHRUBS AND BACKFILLING PIT
- A. Remove all plastic wraps, twine, containers, etc.
- B. Place the plant in the pit by lifting and carrying in by the root ball.
- C. Set the plant straight and in the center of the pit with the most desirable side facing toward the prominent view.
- D. Use a soil mixture as specified.
- E. Make sure the plant remains straight during backfilling procedure.
- F. Backfill side of the pit halfway with soil mixture and tamp as the pit is being filled.
- G. Pull the burlap back 1/3 the way down the root ball. Make sure burlap does not become exposed above soil surface.
- H. Finish backfilling the sides of the shrub pit and tamp firmly.
- I. Form a saucer above the existing grade and around the planting pit
- J. Mulch top of root ball and saucer a minimum of 2" depth and not to exceed 3" in depth.
- K. Water thoroughly, the interior of the shrub saucer to insure root ball is saturated. EVEN IF IT IS RAINING.
- L. Prune out any dead, conflicting or broken branches.
- M. Remove all tags, labels, strings, etc. from the plant.

III. PLANTING A SHRUB MASS
- A. Follow the same procedure as for a single shrub. (Section II A-I)
- B. Edge and rake the entire planting bed to obtain uniform surface.
- C. Mulch the entire planting bed a minimum of 2" depth and not to exceed 3" depth.
- D. Water the entire planting bed thoroughly. EVEN IF IT IS RAINING. To saturate top 2" of soil.
- E. Prune out any dead, conflicting or broken branches.
- F. Remove all tags, labels, strings

IV. PLANTING PROCEDURES FOR GROUND COVER

I. PREPARING GROUNDCOVER BED
- A. The ground cover bed shall be loosened prior to planting by one of the following methods: rototilling, back-hoeing and rototilling or by picking (generally done on small areas or on slopes). Soil shall be loosened to a depth of 4" to 6".
- B. Soil additives for the ground cover bed shall be peat and topsoil, (2" deep) after the soil has been loosened and additives then worked into the bed by one of the following methods: rototilling, back-hoeing and rototilling or by picking (in which soil additives are spread by hand into the individual plant pockets and worked into the soil by pick)
- C. Fertilize in planting hole or use water soluble fertilizer at base of plants after planting.
- D. Mulch the entire ground cover bed to minimum 1" depth and not to exceed 2" in depth.

II. PLANTING GROUND COVER
- A. The ground cover planting holes shall be dug through the mulch with one of the following: hand trowel, shovel, bulb planter or hoe.
- B. Before planting, biodegradable pots shall be crushed and the top edges broken down below the surface. Non-biodegradable pots shall be removed. Unwrap any bound roots, do not break root ball.
- C. The ground cover (either potted or bare root) shall be planted:
  1. So that the roots of the plant are surrounded by soil below the mulch: potted plants being set so that the top of the soil in the pot is even with the existing grade, and bare root plants being covered up to the crown of the plant or soil level.
  2. At an equal distance apart (plans and specifications specify the "on center" (o.c.) distance for the ground cover). See spacing guide.
- D. The entire ground cover bed shall be edged and thoroughly watered.

V. SEEDING

I. TEMPORARY SEEDING
- A. Vegetation - Annual Ryegrass or Pearl Millet shall be used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetation cover, permanent seeding is required.
  1. Seed Mixtures - Temporary Seeding
     Preferred: Annual Ryegrass – coolseason, 40 lbs./acre. (1/2 that amount for over seeding) Pearl Millet – warm season, 20lbs/acre. (These are preferred because existing and proposed native grasses and wildflowers may not compete well with certain grass species)
- B. If seed mixtures used are other than those preferred, they must be from table B.1 of "Standards and Specifications for Soil Erosion and Sediment Control" by the Maryland Department of Environmental Protection. Temporary plant material must be removed prior to seeding of other material.
- C. For sites having soil tests performed, the seeding and amendment rates shown in table B.1 of "Standards and Specifications for Soil Erosion and Sediment Control" shall be deleted and the rates recommended by the testing agency shall be written in. Soil tests are not required for temporary seeding.

II. PERMANENT SEEDING
- A. Seeding grass and legumes to establish ground cover for a minimum period of one year on all disturbed areas generally receiving low maintenance. Seed mixtures:
  1. Seed mixtures not from table B.3 of "Standard and Specifications for Soil Erosion and Sediment Control" by the Maryland department of Environmental Protection, must be approved by landscape architect. Additional planting specifications for exceptional sites such as shore lines, stream banks or dunes, or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Technical Field Office Guide: Section 342 - Critical Area Planting.
  2. For sites having disturbed areas over 5 acres, the rates shown in table B.3 of "Standards and Specification for Soil Erosion and Sediment Control" shall be deleted and the rates recommended by the soil testing agency shall be written in.
  3. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs./acre). The above recommended soil amendments and hose stated in the soil test to be performed at the time of seeding, o as recommended by state agency and manufacturers products.
  4. Do not fertilize area to be seeded around storm water management facilities.
  5. Contractor to provide a final product of grass crop creating a lawn of uniform color and texture after three mowings.

VI. SOIL TESTING

1. Contractor to perform soil test as per accepted methods by the local agricultural extension service.
2. Samples to be tested by reputable lab.
3. Contractor will be held responsible for notifying owner of any problems or deficits determined by the test results.
4. Corrections will be discussed and cost negotiated with owner.
5. Plant failure based on soil deficits or problems due to failure of contractor to take samples, will be replaced at the cost of the contractor after corrections have been made.

DEVELOPER'S CERTIFICATE

The Undersigned agrees to execute all the features of the Approved Final Forest Conservation Plan No. 820210190 including, financial bonding, forest planting, maintenance, and all other applicable agreements.

Developer's Name: ELP Bethesda at Rock Spring, LLC (Printed Company Name)

Contact Person or Owner: Steven Mongomery (Printed Name)

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Phone and Email: (410) 402-2449 steven.montgomery@erickson.com

Signature: ______________

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Scale:
Drawing: NOTES AND DETAILS

C-210

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