

THIS PLAN IS FOR FOREST CONSERVATION ONLY

**NARRATIVE:**

THE SITE IS CURRENTLY AN OPEN FIELD OF TURF, LOCATED AT THE NORTHEAST ENTRANCE OF THE FESTIVAL OF MUDDY BRANCH SHOPPING CENTER. EXISTING ORNAMENTAL, AND SHADE TREES STRADDLE THE WEST, AND NORTHWEST PROPERTY LINES, ALL RANGING IN CALIPER SIZES BETWEEN 7" - 19" DBH OF THIS GROUPING. FOUR ARE PROPOSED FOR REMOVAL, AND REPLACEMENT.

THERE IS A SINGLE SPECIMEN TREE (ST-1) ON SITE, A 24" CALIPER RED OAK. OTHER EXISTING VEGETATION IS THE HEDGEROW, A CLUSTER OF TREES APPROXIMATELY 46' WIDE, AND 290' LONG. THE HEDGEROW IS DOMINATED BY NORWAY MAPLE (*Acer platanoides*) AND BLACK LOCUST (*Robinia pseudoacacia*) AND IS MEDIUM AGED WITH MOST OF THE DOMINANT TREES HAVING A DBH OF 6" - 12". THE HERBACEOUS LAYER IS ALMOST ENTIRELY ABSENT EXCEPT FOR THE PRESENCE OF VIRGINIA CREEPER (*Parthenocissus quinquefolia*), AND POISON IVY (*Toxicodendron radicans*). THE SHRUB LAYER CONSISTS ALMOST EXCLUSIVELY OF HONEYSUCKLE BUSH (*Lonicera* sp.).

THE PROPOSED LANDSCAPE PLANTING FOR THE CARWASH FACILITY IS TO PROVIDE SHADE, AND SITE DEFINITION WERE POSSIBLE WITH FLOWERING, AND NON-FLOWERING SHADE TREES ALONG EDGE PROPERTY LINE, DELIBERATE USE ORNAMENTAL TREES, FLOWERING SHRUBS AND GROUNDCOVER AT ENTRANCES TO DIRECT PEDESTRIANS, AND SIGNALS TO DRIVERS OF THESE POINTS OF ENTRY/EXIT WITHIN A BUSY PARKING LOT.

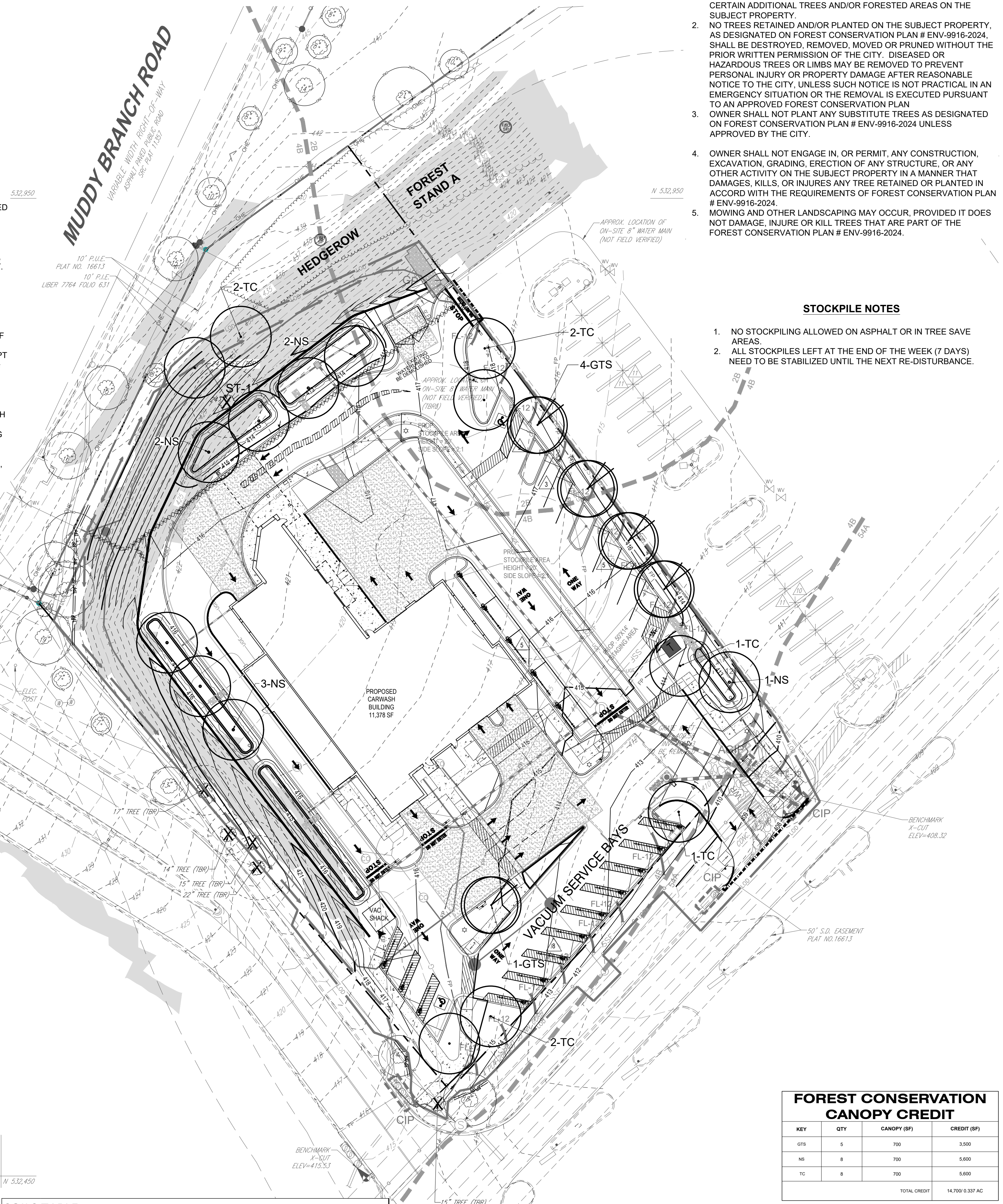
**GENERAL NOTES:**

- TAX MAP FS43, PARCEL 4.
- ELECTION DISTRICT 06
- SITE AREA (INCLUDING OFF-SITE DISTURBANCE) = 2.17 AC.
- SITE IS ZONED "C2." GENERAL COMMERCIAL
- PROPERTY BOUNDARY INFORMATION, INCLUDING BEARINGS AND DISTANCES, EASEMENTS, RIGHT OF WAYS, AND TOPOGRAPHY SHOWN HEREON WAS DEVELOPED BY BOHLER ENGINEERING AS PART OF BOUNDARY TOPOGRAPHIC SURVEY CONDUCTED ON MARCH 16, 2022.
- THE LIMITS OF THE PROPOSED 100 YEAR FLOODPLAIN AS SHOWN ON THE PLAN IS FROM AN APPROVED FLOODPLAIN STUDY FOR MUDDY BRANCH TRIBUTARY 6 BY WETLAND STUDIES & SOLUTIONS, DATED AUGUST 11, 2023. THE PROPOSED STRUCTURE IS WITHIN ZONE X, AND FLOOD HAZARD ZONE A CROSSES THE FRONT PORTION OF THE SITE.
- RIGHT OF WAY LINES FOR MUDDY BRANCH ROAD ARE VARIABLE WIDTH PER SRC PLAT 11357.
- THERE ARE NO WETLANDS WITHIN THE LOD ACCORDING TO THE U.S. FISH AND WILDLIFE SERVICE NATIONAL WETLANDS INVENTORY.
- THERE ARE NO INTERMITTENT STREAMS ASSOCIATED WITH THE PROJECT AS SHOWN ON THE SOIL SURVEY MAP OF MONTGOMERY COUNTY.
- THERE ARE AREAS OF STEEP SLOPES (>15%) WITHIN THE PROJECT AREA AS SHOWN ON PLAN.
- THE ADJOINER INFORMATION SHOWN WAS BASED ON THE BOHLER ENGINEERING AS PART OF BOUNDARY TOPOGRAPHIC SURVEY CONDUCTED ON MARCH 16, 2022.
- REFERENCE IS HEREBY MADE TO THE NRI/FSD FOR THE SITE APPROVED ON JULY 27, 2023
- TREE IDENTIFICATION INCLUDING TYPE, SIZE, LOCATION.

SOILS TABLE						
SYMBOL	SOIL NAME	PRIME FARMLAND	SOIL GROUP	HIGHLY ERODIBL E	HYDRIC SOIL?	K FACTOR
2B	Glenelg silt loam, 3% - 8% slopes	Y	B	N	N	0.37
4B	Elioak silt loam, 3% - 8% slopes	Y	C	N	N	0.37
54A	Hatboro silt loam, 0% - 3% slopes, frequently flooded	N	B/D	N	Y	--

Source: USDA NRCS Web Soil Survey (<https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>)

NOTE  
FOR LOCATION OF UTILITIES CALL  
8-1-1 OR 1-800-257-7777  
OR LOG ON TO  
[www.call811.com](http://www.call811.com)  
<http://www.missutility.net>  
48 HOURS IN ADVANCE OF ANY WORK  
IN THIS VICINITY



- FOREST CONSERVATION PLAN # ENV-9916-2024. PROVIDES FOR THE PROTECTION OF EXISTING TREES AND/OR FORESTED AREAS AND FOR THE INSTALLATION, MAINTENANCE, AND PROTECTION OF CERTAIN ADDITIONAL TREES AND/OR FORESTED AREAS ON THE SUBJECT PROPERTY.
- NO TREES RETAINED AND/OR PLANTED ON THE SUBJECT PROPERTY, AS DESIGNATED ON FOREST CONSERVATION PLAN # ENV-9916-2024, SHALL BE DESTROYED, REMOVED, MOVED OR PRUNED WITHOUT THE PRIOR WRITTEN PERMISSION OF THE CITY. DISEASED OR HAZARDOUS TREES OR LIMBS MAY BE REMOVED TO PREVENT PERSONAL INJURY OR PROPERTY DAMAGE AFTER REASONABLE NOTICE TO THE CITY, UNLESS SUCH NOTICE IS NOT PRACTICAL IN AN EMERGENCY SITUATION OR THE REMOVAL IS EXECUTED PURSUANT TO AN APPROVED FOREST CONSERVATION PLAN
- OWNER SHALL NOT PLANT ANY SUBSTITUTE TREES AS DESIGNATED ON FOREST CONSERVATION PLAN # ENV-9916-2024 UNLESS APPROVED BY THE CITY.
- OWNER SHALL NOT ENGAGE IN, OR PERMIT, ANY CONSTRUCTION, EXCAVATION, GRADING, ERECTION OF ANY STRUCTURE, OR ANY OTHER ACTIVITY ON THE SUBJECT PROPERTY IN A MANNER THAT DAMAGES, KILLS, OR INJURES ANY TREE RETAINED OR PLANTED IN ACCORD WITH THE REQUIREMENTS OF FOREST CONSERVATION PLAN # ENV-9916-2024.
- MOWING AND OTHER LANDSCAPING MAY OCCUR, PROVIDED IT DOES NOT DAMAGE, INJURE OR KILL TREES THAT ARE PART OF THE FOREST CONSERVATION PLAN # ENV-9916-2024.

- STOCKPILE NOTES**
- NO STOCKPILING ALLOWED ON ASPHALT OR IN TREE SAVE AREAS.
  - ALL STOCKPILES LEFT AT THE END OF THE WEEK (7 DAYS) NEED TO BE STABILIZED UNTIL THE NEXT RE-DISTURBANCE.

**CITY OF GAITHERSBURG FORESTRY NOTES:**

- PRE-CONSTRUCTION MEETING, HELD ONSITE TO INCLUDE A PRESENTATION OF PROTECTIVE MEASURES TO CONSTRUCTION SUPERVISORS, EQUIPMENT OPERATORS, DEVELOPER'S REPRESENTATIVE, AND SITE AND SEDIMENT CONTROL INSPECTORS.
- CLEARING LIMITS SHALL FOR ROUGH STAKED BY DEVELOPER IN ORDER TO FACILITATE LOCATION FOR TRENCHING AND FENCING INSTALLATION.
- NO CLEARING OR GRADING SHALL BE IN AREAS WHERE TREE TREATMENT AND PRESERVATION MEASURE HAVE NOT BEEN COMPLETED.
- THE SEQUENCE OF TREE TREATMENT AND CONSERVATION MEASURES SHALL BE:
  - Root pruning trenching.
  - Tree protection fencing.
  - Aeration system installation.
  - Sign installation.
  - Tree pruning and chemical treatment.
- ABOVE MEASURES SHALL BE DIRECTED IN IN THE FIELD BY THE PROJECT FORESTER, ARBORIST, NATURALIST, SITE ENGINEER OR LANDSCAPE ARCHITECT.
- TREE PROTECTION FENCING SHALL BE MAINTAINED AND REPAIRED BY THE DEVELOPER OR CONTRACTOR FOR THE DURATION OF CONSTRUCTION, AND ONCE APPROVED BY THE CITY SITE INSPECTOR.
- ACCESS TO FENCED AREAS WILL ONLY BE PERMITTED WITH THE PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE, AND THE CITY SITE INSPECTOR.
- DESIGNATED AERATION ZONES SHALL BE PROTECTED WITH TEMPORARY FENCING UNTIL FINAL GRADING.
- ANY EXCAVATION OR GRADING REQUIRED WITHIN THE FENCED AREAS SHALL BE DONE AS DIRECTED AND APPROVED BY THE PERSON MENTIONED IN NOTE #6, AND THE CITY SITE INSPECTOR.
- TREES, SHRUBS, OR UNDERGROWTH SHALL BE REMOVED FROM THE PROTECTED ROOT ZONE AREAS ONLY WHEN NECESSARY AND SHALL BE REMOVED BY HAND.
- REFER TO TREE PROTECTION ACTION KEY FOR SPECIFIC TREATMENT OF EACH SPECIMEN TREE.
- ATTACHMENT OF SIGNAGE, FENCING, ETC., TO TREES TO BE SAVED IS PROHIBITED.
- AFTER CONSTRUCTION, ALL TEMPORARY BARRIERS, FENCING, DEBRIS, ETC., SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.
- NO SOD OR SEED SHALL BE PLANTED WITHIN THE DESIGNATED ROOT ZONES FOR ALL TREES TO BE SAVED.
- INVASIVE SPECIES AND REFUSE WILL BE REASONABLY REMOVED FROM FOREST CONSERVATION AREAS AND STREAM VALLEY BUFFERS PRIOR TO PLANTING.

**CITY OF GAITHERSBURG FOREST CONSERVATION INSPECTION PROCEDURES:**

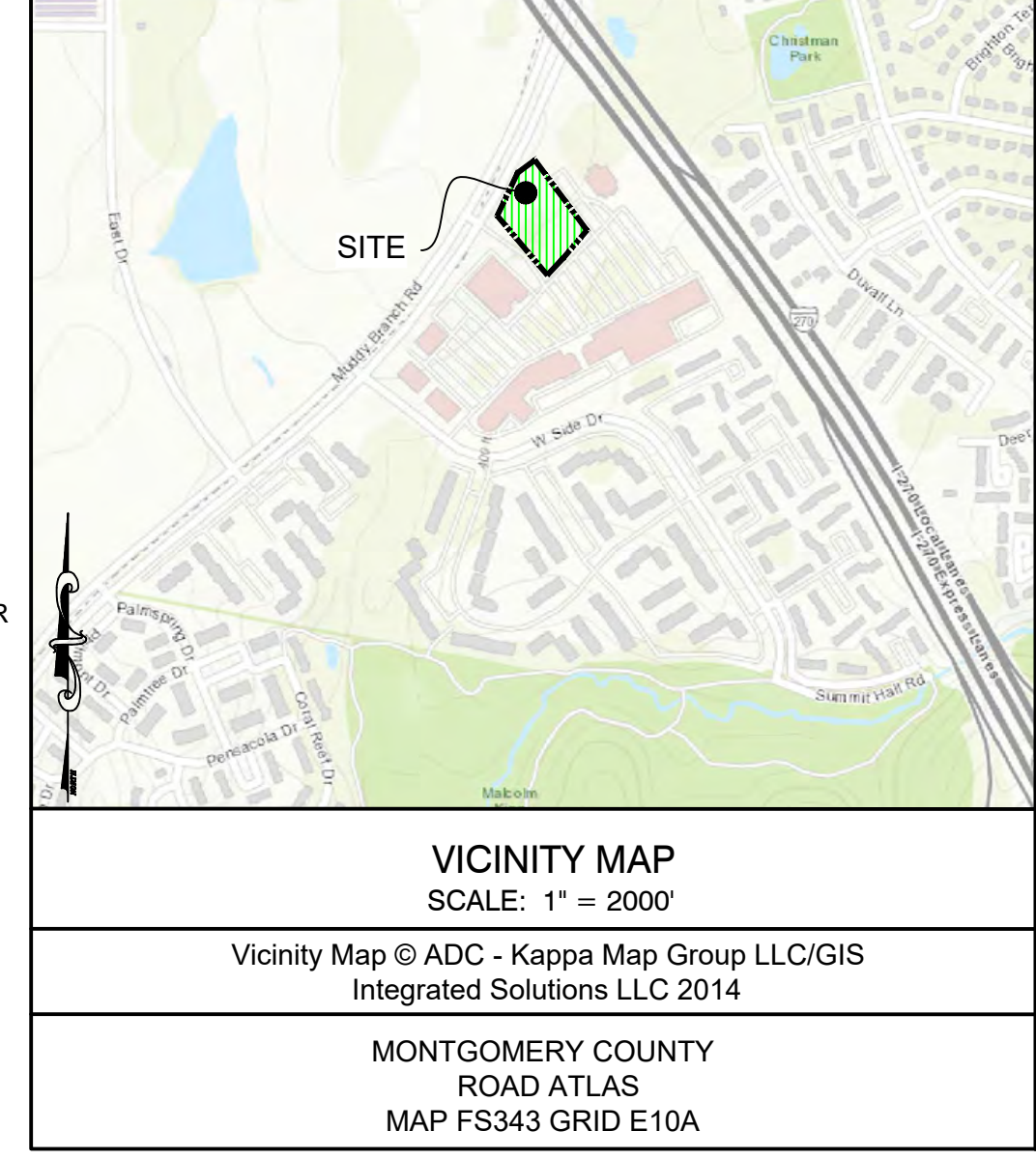
- UPON PERMIT ISSUANCE, THE BUILDER/DEVELOPER MUST ARRANGE FOR AN ENGINEER'S STAKE OUT OF TREE PROTECTION IN ACCORDANCE WITH APPROVED PLAN. A RECONSTRUCTION MEETING WILL THEN BE SCHEDULED TO DETERMINE THE LOCATION OF TREE PROTECTION DEVICES. THE PLANNING AND CODE ADMINISTRATION INSPECTOR SHALL ADJUST TREE PROTECTION AND ROOT PRUNING IN THE FIELD AS NECESSARY, WHICH MAY EXPAND OR DECREASE THE AREA BEING PROTECTED. INSTALLATION OF ALL TREE PROTECTION DEVICES SHOULD BE SCHEDULED AND AN INSPECTION ARRANGE WITH THE CITY AFTER ALL WORK IS COMPLETE. THE CITY WILL ISSUE A PUNCH LIST FOR ANY REMAINING WORK NEEDED PRIOR TO THE START OF GRADING, OR ISSUE A REPORT APPROVING THE START OF GRADING. ONCE WORK BEGINS ON-SITE, THE TREE PROTECTION DEVICES WILL BE RE-INSPECTED ON A BIWEEKLY BASIS, AND THE BUILDER/DEVELOPER WILL BE NOTIFIED OF ANY WORK THAT IS NEEDED. IT SHALL BE THE BUILDER/DEVELOPER'S RESPONSIBILITY TO MAINTAIN ALL TREE PROTECTION DEVICES, AND MAKE ANY REPAIRS NEEDED.
- CITY APPROVAL IS REQUIRED PRIOR TO REMOVAL OF ANY TREE PROTECTION DEVICE OR ENTRANCE INTO A TREE SAVE AREA. **TREE SAVE AREAS CANNOT BE USED FOR STORAGE OF ANY BUILDING MATERIALS.**
- THE PLANNING AND CODE ADMINISTRATION INSPECTOR MAY REQUIRE PRUNING AND REMOVAL OF ANY TREE IN THE TREE SAVE AREA DURING CONSTRUCTION AND PRIOR TO BOND RELEASE. THESE DECISIONS WILL BE BASED ON THE TREES' HEALTH, PROXIMITY TO BUILDINGS, DRAINAGE OR OTHER CONCERNS. EVERY EFFORT WILL BE MADE TO PRESERVE THOSE TREES IN THE TREE SAVE AREA.
- THE CITY WILL REQUIRE MITIGATION OF TREES LOST DURING CONSTRUCTION IN ACCORDANCE WITH THE FOREST CONSERVATION ORDINANCE. MITIGATION WILL BE REQUIRED PRIOR TO BOND RELEASE, AND ALL REPLACEMENT TREES MUST BE INSPECTED BY THE CITY AFTER INSTALLATION. THESE REPLACEMENT TREES SHALL HAVE A ONE-YEAR GUARANTEE IN ACCORDANCE WITH INDUSTRY STANDARDS. THE CITY MAY ALSO ALLOW THE DEVELOPER TO ESCROW MONIES FOR MITIGATION TO SATISFY THEIR OBLIGATION, WHICH WILL BE USED BY THE CITY TO PURCHASE AND INSTALL REPLACEMENT TREES.
- FOR MITIGATION AND AFFORESTATION, CITY INSPECTION IS REQUIRED AFTER THE PLANTING HAVE BEEN MADE. THE MAINTENANCE PERIOD, ONE YEAR OR AS STATED IN THE MAINTENANCE AGREEMENT, WILL NOT BEGIN UNTIL THIS INSPECTION HAS BEEN MADE. QUARTERLY REPORTS TO THE CITY, IF REQUIRED, ON THE HEALTH OF THE TREES IN THE SAVE AREA SHOULD ALSO BE MADE, AND ANY RECOMMENDATIONS IMPLEMENTED. IT SHALL BE THE BUILDER/DEVELOPER'S RESPONSIBILITY TO MAINTAIN THESE PLANTINGS UNTIL THEY AREA ACCEPTED BY THE CITY. A FINAL INSPECTION BY THE CITY WILL BE MADE PRIOR TO THE END OF THE MAINTENANCE PERIOD, AND A PUNCH LIST DEVELOPED FOR ANY TREES THAT NEED TO BE REPLACED. THE CITY MAY ALLOW THE DEVELOPER TO ESCROW MONIES TO SATISFY THEIR OBLIGATION FOR ANY FURTHER PLANTING REQUIRED, WHICH WILL BE USED BY THE CITY TO PURCHASE AND INSTALL THE REPLACEMENT TREES.
- IT SHALL BE THE BUILDER/DEVELOPER'S RESPONSIBILITY TO SATISFY ALL REQUIREMENTS AND CONDITIONS OF THE FOREST CONSERVATION PLAN AND/OR ANY MAINTENANCE AGREEMENT. IN THE EVENT OF A VIOLATION, THE CITY WILL TAKE ENFORCEMENT ACTION IN ACCORDANCE WITH THE TREES AND FOREST CONSERVATION ORDINANCE (CHAPTER 22) OF THE CITY CODE. THIS MAY INCLUDE CORRECTION NOTICES, CIVIL CITATIONS, OR COLLECTION OF THE BOND GUARANTEEING THIS WORK.

**FOREST CONSERVATION CANOPY CREDIT**

KEY	QTY	CANOPY (SF)	CREDIT (SF)
GTS	5	700	3,500
NS	8	700	5,600
TC	8	700	5,600
TOTAL CREDIT			14,700 @ 0.337 AC

**FCP TREE SCHEDULE**

KEY	QTY	BOTANICAL	COMMON NAME	SIZE	ROOT CONDITION	NATIVE	SPACING	REMARKS
<b>SHADE TREES</b>								
GTS	5	<i>Gleditsia triacanthos</i>	SHADEMASTER HONEYLOCUST	3" cal.	B&B	Non-native	As Shown Min. 25' O.C.	Full branching, heavy
NS	8	<i>Nyssa sylvatica</i>	BLACKGUM	3" cal.	B&B	Native	As Shown Min. 25' O.C.	Full branching, heavy
TC	8	<i>Tilia cordata</i>	LITTLE LEAF LINDEN	3" cal.	B&B	Non-native	As Shown Min. 25' O.C.	Full branching, heavy



**FOREST CONSERVATION WORKSHEET**

Tract Area	A. Total Tract Area (acres or Square Feet)	2.17
	B. Gross Area Deductions (Per Tree Manual)	0.00
	C. Net Tract Area = (A) - (B)	2.17
Land Use	C-2	
D. Afforestation Threshold: D = (C) x 15%	E. 0.326	
F. Existing Forest Cover (F) is greater than the Conservation Threshold (E) then G = E - F otherwise G = 0	F = 0	
H. Breakover Point (Amount of forest retention without mitigation)	H = 0	
I. If Area above Conservation Threshold (G) is greater than 0, then H = (0.2 x G) + the Conservation Threshold (E)	I = 0	
J. If Area above Conservation Threshold (G) is equal to 0, then H = Existing Forest Cover (F)	J = 0	
K. Total Area of Forest to be Cleared	K = 0	
L. Total Area of Forest to be Retained: K + (F) - (J)	L = 0	
M. Reforestation for Clearing Below the Conservation Threshold	M = 0	
N. If the area of Retained Forest (K) is greater than the Conservation Threshold (E) then N = (K) - (E); otherwise N = 0	N = 0	
O. Total Afforestation Required if Existing Forest (F) is less than the Afforestation Threshold (E) then O = (E) - (F)	O = 336	
P. Total Reforestation Required: P = L + M + N	P = 336	
R. Total Planting Requirement: R = P + Q	R = 336	

**FOREST CONSERVATION SUMMARY**

TOTAL TRACT AREA	2.17 AC
GROSS AREA DEDUCTIONS	0.00 AC
NET TRACT AREA	2.17 AC
AFFORESTATION THRESHOLD (NET TRACT AREA x 15%)	0.326 AC
TOTAL PLANTING REQUIREMENT	0.326 AC or 14,179 sf
TOTAL TREE/ORNAMENTAL TREE PLANTING PROVIDED	0.337 AC or 14,700 sf

**TREES 24" DBH OR GREATER**

TREE #	SPECIES	SIZE (in. dbh)	NAME	ACTION
ST #1	<i>Quercus rubra</i>	24"	Red Oak	Remove

**LEGEND**

- PROJECT BOUNDARY
- EXISTING ADJACENT PROPERTY
- EXISTING 100-YEAR FLOODPLAIN
- OVERHEAD POWER LINE
- TELEPHONE WIRES
- EXISTING CONTOURS
- LIMITS OF DISTURBANCE
- EXISTING TREE LINE
- EXISTING HEDGEROW
- SOIL BOUNDARY
- EXISTING EDGE OF PAVEMENT
- EXISTING SIDEWALK
- 15% OR GREATER STEEP SLOPES
- PROP. CONTOURS
- PROP. RETAINING WALL
- VACUUM SERVICE BAYS
- EROSION CONTROL SANDBAGS
- SUPER SILT FENCING
- TREE PRUNING
- TREE PROTECTION FENCING
- FSD DATA SAMPLE POINT
- EXISTING TREE, DEAD
- EXISTING TREES TO REMAIN WITH CRITICAL ROOT ZONE (1" DBH+1.5' CRZ)
- EXISTING TREE TO BE REMOVED WITH CRITICAL ROOT ZONE (1" DBH+1.5' CRZ)

**SCALE**  
0 30' 60'  
SCALE: 1" = 30'

**REVISIONS**

No.	DATE	BY	Description

DRAWN BY: AS  
APPROVED BY: AB  
CHECKED BY: KM  
DATE: 04/12/2024  
TITLE: FOREST CONSERVATION PLAN  
PROJECT NO.: 50161039  
SHEET NO.: 1 of 2

**Dewberry**

DEWBERRY ENGINEERS INC  
2101 GAITHER ROAD SUITE 340  
ROCKVILLE, MD 20850  
PH: 301.948.8300 FX: 301.258.7607  
www.dewberry.com

**CONTACT**  
ALAN BARNEY  
2101 GAITHER ROAD SUITE 340  
ROCKVILLE, MD 20850  
PH: 301.337.2865  
www.dewberry.com

**APPLICANT / DEVELOPER**  
CRAIN PARTNERS, LLC  
1018 VERMEER AVE  
GAITHERSBURG, MD 20878  
PH: 301.943.7550  
EMAIL: BRETT@WHIPCLEAN.COM

**FOREST CONSERVATION PLAN**  
**WHIP CLEAN CARWASH**  
**MUDDY BRANCH ROAD**  
TM: FS43, PARCEL: 4  
MONTGOMERY COUNTY, MARYLAND  
ELECTION DISTRICT 06

SEAL

**FOREST CONSERVATION PLAN**  
**WHIP CLEAN CARWASH**  
**MUDDY BRANCH ROAD**  
**TM: FS43, PARCEL: 4**  
**MONTGOMERY COUNTY, MARYLAND**  
**ELECTION DISTRICT 06**

SEAL



**PROFESSIONAL CERTIFICATION:**  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY REGISTERED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 1102. EXPIRATION DATE: AUGUST 3, 2026.  
KEY MAP

SCALE

AS SHOWN

No.	DATE	BY	Description

REVISIONS

DRAWN BY: AS  
APPROVED BY: AB  
CHECKED BY: KM  
DATE: 04/12/2024  
TITLE

FOREST CONSERVATION NOTES & DETAILS

PROJECT NO. 50161039

**PLANTING SPECIFICATIONS:**  
**GENERAL NOTES**

- THIS FOREST CONSERVATION PLAN IS PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS SET FORTH BY THE FOREST AND TREE PRESERVATION ORDINANCE OF THE CITY OF GAITHERSBURG. THE PREPARATION OF THIS PLAN, THE NOTES AND DETAILS WERE PREPARED USING THE GUIDELINES OF THE CITY OF GAITHERSBURG'S ADOPTED FOREST CONSERVATION MANUAL.
- AFFORESTATION/REFORESTATION PLANTING AND RELATED WORK MUST BE PERFORMED BY A CONTRACTOR THAT IS KNOWLEDGEABLE AND EXPERIENCED IN AFFORESTATION/REFORESTATION TECHNIQUES AND PLANTING PRACTICES.

**QUALITY ASSURANCE**

- NAMES OF PLANT MATERIAL LISTED CONFORM GENERALLY WITH NAMES ACCEPTED BY THE NURSERY TRADE. THE CONTRACTOR IS TO PROVIDE STOCK TRUE TO BOTANICAL NAME.
- ALL PLANT MATERIAL SHALL CONFORM TO THIS CURRENT ISSUE OF THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- HARDWOOD TREES SHALL MEET THE FOLLOWING STANDARDS: TREES SHALL HAVE A SOLID ROOT MASS WITH THE SOIL IN PLACE. THE ROOTS SHALL APPEAR CLEAN AND WHITE IN COLORATION. IF GROWING, THE TREES SHALL APPEAR HEALTHY WITH NO FOLIAGE SPOTS, DISCOLORATION, WILTING OR OTHER EVIDENCE OF THE PRESENCE OF DISEASE OR INSECTS.
- IF SPECIFIED MATERIAL IS NOT OBTAINED, SUBMIT IN WRITING TO DEWBERRY ENGINEERS FOR THE EVALUATION AND APPROVAL OF EQUIVALENT MATERIAL. ONLY NATIVE MATERIAL AS DEFINED BY THE CITY OF GAITHERSBURG'S TREE MANUAL WILL BE ACCEPTABLE FOR AFFORESTATION/REFORESTATION PLANTINGS.

**PRODUCT SPECIFICATIONS**

- FERTILIZER:** ALL FERTILIZER SHALL BE GRANULAR, PACKET OR PELLET WITH 35% TO 80% OF THE TOTAL NITROGEN IN A SLOW RELEASE FORM. FOR TREES AND SHRUBS, FERTILIZER SHALL BE A COMPLETE FERTILIZER WITH A MINIMUM ANALYSIS OF 10% NITROGEN, 8% PHOSPHOROUS, AND 4% POTASSIUM. FOR USE ON SPECIMEN OR SIGNIFICANT TREES, THE FERTILIZER SHALL BE HIGH IN PHOSPHOROUS, AND 5% POTASSIUM SHALL BE USED IN WETLAND AND REPAIRIAN BACKFILL MIXTURES. FERTILIZER SHALL BE ADDED DEPENDING ON THE SIZE OF THE PLANT, AND THE MANUFACTURER'S RECOMMENDED RATE.
- ORGANIC MATTER:**  
PEAT MOSS - TYPE 1 SPAGNUM PEAT MOSS, FINELY DIVIDED WITH PH OF 3.1 - 5.0, OR SEDGE PEAT - DECOMPOSED PEAT CONTAINING NO IDENTIFIABLE FIBERS, OR COMPOSTED SEWAGE SLUDGE APPROVED, SCREENED, POLYMER-DEWATERED SEWAGE SLUDGE WITH A PH OF 6.2 - 7.2.
- BACKFILL MIXTURE:**  
BACKFILL MIXTURE OR CONTAINERIZED TREES SHALL BE 2/3 EXISTING SOIL MIXED WITH 1/3 ORGANIC MATERIAL, PLUS GRANULAR FERTILIZER.
- MULCH:**  
MATERIAL SHALL BE WELL AGED, FINE SHREDDED HARDWOOD, DARK BROWN IN COLOR, OR APPROVED EQUAL MATERIAL SHALL BE MULCHING GRADE, UNIFORM IN SIZE, AND FREE OF FOREIGN MATTER.

**PRE-PLANTING SPECIFICATIONS**

- ALLOW SIX (6) MONTHS IN ADVANCE TO ORDER MATERIALS AND PLANTS.
- ACCEPTABLE PLANTING TIME FOR CONTAINER GROWN MATERIAL (TREES, SHRUBS, AND SEEDINGS) IS FROM MARCH - JUNE 15, AND SEPTEMBER - DECEMBER. PLANTING SHALL NOT TAKE PLACE IN SUBFREEZING TEMPERATURES, WHEN THE GROUND IS FROZEN, OR WHEN THE SOIL IS TOO WET OR DRY OR OTHERWISE IN A CONDITION NOT GENERALLY ACCEPTED AS SATISFACTORY FOR PLANTING AND MAY ADVERSELY AFFECT PLANT MATERIALS.

**PRE-PLANTING SPECIFICATIONS, CONT'D.**

- ALL PLANTING AREAS SHALL BE IN A STABILIZED CONDITION SO AS TO MINIMIZE SOIL EROSION. SEEDING IS NOT A PART OF THE FINAL FOREST CONSERVATION PLAN. REFER TO THE SEDIMENT AND EROSION CONTROL PLANS FOR SEEDING SPECIFICATIONS.
- THE LANDSCAPE CONTRACTOR SHALL NOTIFY DEWBERRY ENGINEERS (703) 849-0100 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE A PRE-PLANTING MEETING.
- PLANTING SHOULD OCCUR WITHIN 24 HOURS OF PLANT MATERIAL DELIVERY TO THE SITE. PLANT MATERIAL LEFT UNPLANTED FOR MORE THAN 24 HOURS SHALL BE PROTECTED FROM DIRECT SUN AND WEATHER, AND KEPT MOIST. NURSERY STOCK SHALL NOT BE LEFT UNPLANTED FOR MORE THAN 2 WEEKS. IF MORE THAN 2 WEEKS, STOCK SHALL BE RETURNED, AND REPLACED WITH NO FUTURE COST TO THE CITY.
- WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS, OR OBSTRUCTIONS, NOTIFY DEWBERRY ENGINEERS (301) 849-0100 BEFORE PLANTING. WHERE RUBBLE FILL IS USED, COVER WITH 2-1/2" MINIMUM OF NATIVE STOCKPILED TOPSOIL OR OTHER APPROVED EQUAL PRIORITY TO PLANNING. TREES PLANTING IN THIS AREA SHOULD BE INSTALLED 3" ABOVE GRADE TO ALLOW FOR MINOR SETTLING. THE AREA MUST BE PERMANENTLY STABILIZED PRIOR TO PLANTING TREES. PERMANENT STABILIZATION SEED MIXTURE WILL BE IN ACCORDANCE WITH THE APPROVED SEDIMENT CONTROL PLAN. ALTER PERMANENT STABILIZATION CAN BE SODDING, HYDRO-SEEDING, SEED & STRAW, OR SEED & MULCH.
- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES. THE REPAIR OF UTILITIES DAMAGED DURING PLANTING SHALL BE AT THE LANDSCAPE CONTRACTOR'S EXPENSE.
- THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ACCESS TO THE SITE WITH THE OWNER.

**PLANTING SPECIFICATIONS**

- REFER TO THE PLANTING PLAN AND PLANT SCHEDULE FOR PLANT MATERIAL SIZE, LOCATION, AND SPACING.
- ALL PLANT MATERIAL SHALL BE PLANTED BY MANUAL METHODS OF PLANTING USING SHOVELS, DIBBLE BARS, AND/OR MATTOCKS.
- DE-CONSOLIDATE THE SOIL WITHIN THE AFFORESTATION/REFORESTATION AREAS 12" BY DICING OR PLOWING.
- BACKFILL MIXTURE FOR CONTAINERIZED TREES SHALL BE 2/3 EXISTING SOIL MIXED WITH 1/3 ORGANIC MATERIAL, OR IF PLANTED ON FILL MATERIAL 12" OF NATIVE STOCKPILED TOPSOIL OR OTHER APPROVED EQUAL. REMOVE THE TREE FROM THE CONTAINER, AND GENTLY LOOSEN THE ROOTS FROM THE SOIL. DURING THE BACKFILLING PROCEDURE, THOROUGHLY WATER THE SOIL AROUND THE ROOT MASS WHILE TAMPING THE BACKFILLED MIXTURE TO ELIMINATE ANY AIR POCKETS. AFTER BACKFILLING IS COMPLETE, AND THE TOP OF THE ROOT MASS AND PLANTING AREA IS MULCHED, WATER ON THE INTERIOR OF THE ROOT MASS UNTIL IT IS THOROUGHLY SATURATED, EVEN IF IT IS RAINING.
- ONLY THE NUMBER OF TREES THAT BE PLANTED IN ONE DAY SHALL BE TAKEN TO THE FIELD. IF SAID TREES ARE NOT PLANTED, TERMS OF SECTION 5 ABOVE APPLY, AND NO MORE TREES SHALL BE TAKEN TO THE FIELD UNTIL PREVIOUS TREES ARE PLANTED (WITHIN 2 WEEKS.)
- UNLESS SPECIFICALLY SHOWN WHERE TREES AND SHRUBS ARE TO BE PLANTED PER THE PLANTING PLAN, TREES SHALL BE PLANTED IN AN AGGREGATE DISTRIBUTION PATTERN OVER THE ENTIRE PLANTING AREA. THE ROOT COLOR SHOULD BE SET JUST ABOVE THE GROUND.
- TREES SHALL NOT RECEIVE AN AMENDED BACKFILL MIXTURE, BUT SHALL BE FERTILIZED AT THE MANUFACTURER'S RECOMMENDED RATE. REMOVE THE TREE FROM THE CONTAINER, AND GENTLY LOOSEN THE ROOTS FROM THE SOIL. AFTER BACKFILLING, TAMP THE BACKFILL TO ELIMINATE ANY AIR POCKETS. AFTER BACKFILLING IS COMPLETE, AND THE TOP OF THE ROOT MASS, AND PLANTING AREA IS MULCHED, WATER THE INTERIOR OF THE ROOT MASS UNTIL IT IS THOROUGHLY SATURATED, EVEN IF IT IS RAINING.
- SEVER ANY GIRDLING ROOTS DURING PLANTING.

**GUARANTEE AND REPLACEMENT**

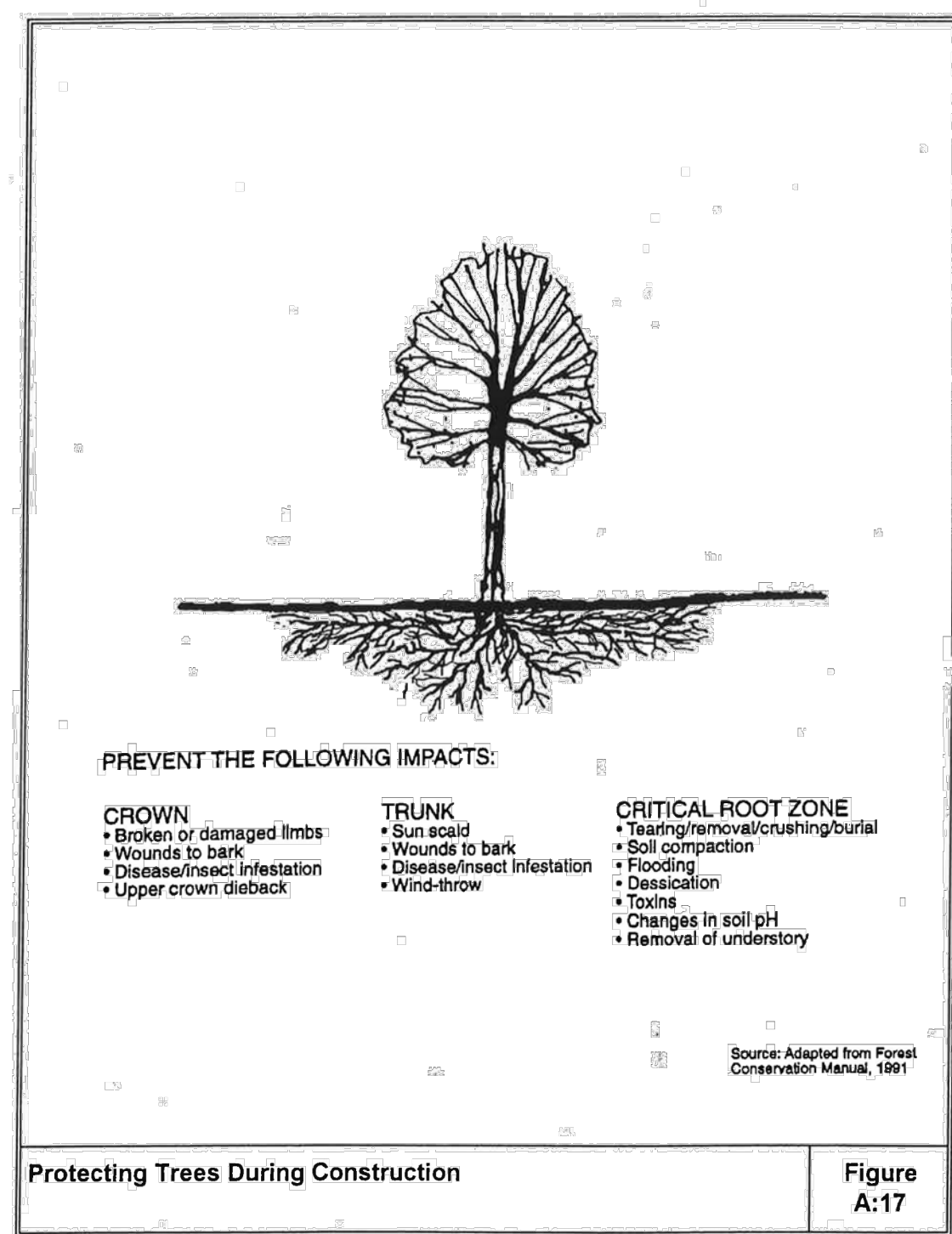
- ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE LANDSCAPE CONTRACT TO BE ALIVE AND IN A HEALTHY, VIGOROUS CONDITION FOR A PERIOD OF TWO YEARS FOLLOWING THE INITIAL ACCEPTANCE.
- AT THE END OF THE WARRANTY PERIOD, INSPECTION OF THE PLANT MATERIAL WILL BE MADE BY THE CITY'S REPRESENTATIVE. PLANT MATERIAL WHICH IS DEAD OR IN AN UNHEALTHY CONDITION SHALL BE REMOVED FROM THE SITE, AND REPLACED AT THE EXPENSE OF THE LANDSCAPE CONTRACTOR.
- A TREE SHALL BE CONSIDERED DEAD WHEN THE MAIN LEADER HAS DIED BACK, OR 25% OF THE CROWN IS DEAD, SIZE, AND VARIETY AS SPECIFIED IN THE PLANT LEGEND OR AS ACCEPTED IN WRITING AS SUBSTITUTES BEFORE ORIGINAL PLANTING. PLANTS SHALL BE FURNISHED, PLANTED AND MULCHED AS SPECIFIED HEREIN, AND AT THE EXPENSE OF THE LANDSCAPE CONTRACTOR.

**FINAL FOREST CONSERVATION PLAN PROCEDURES**

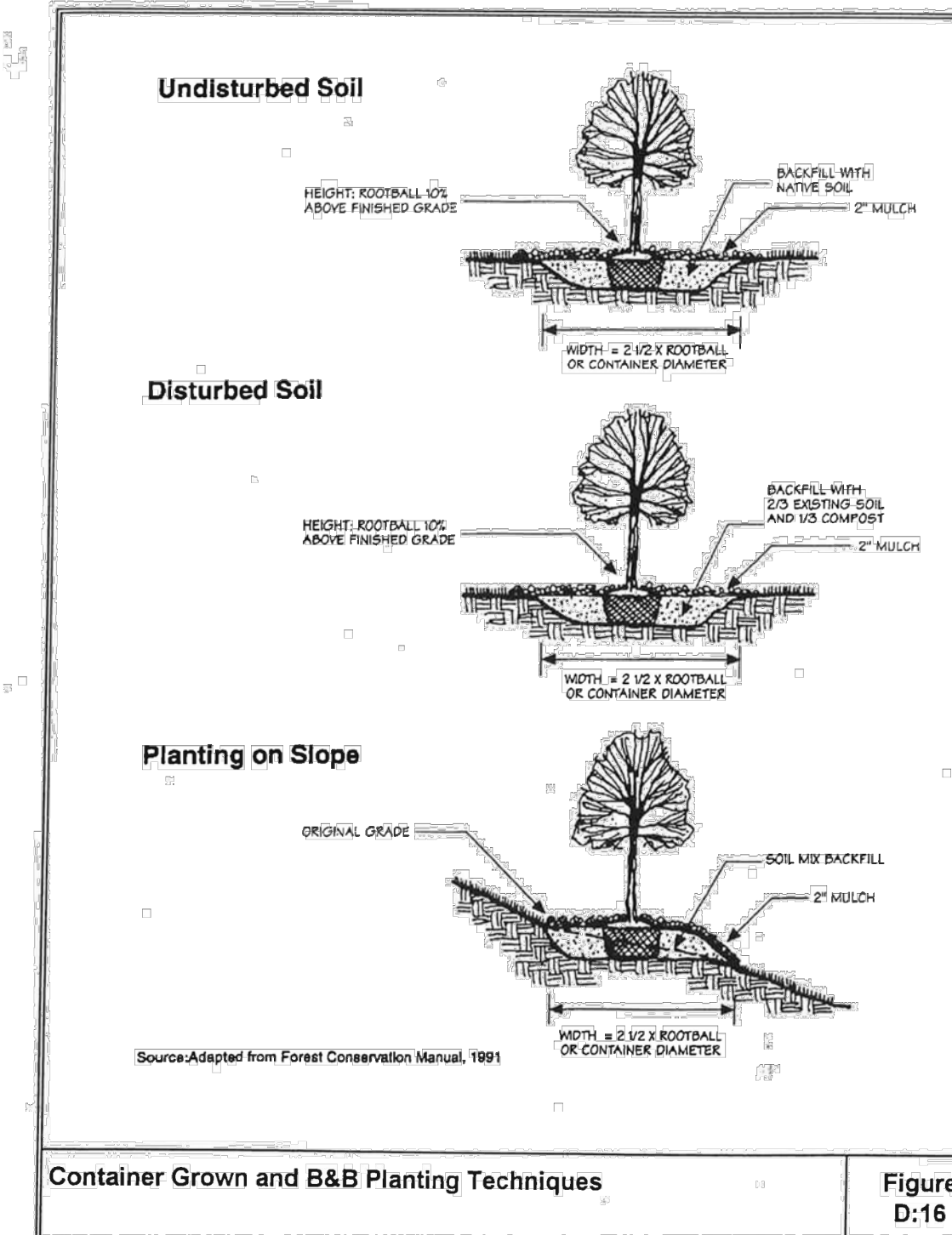
- UPON PERMIT ISSUANCE, THE BUILDER/DEVELOPER MUST ARRANGE FOR AN ENGINEER'S STAKE OUT OF TREE PROTECTION IN ACCORDANCE WITH APPROVED PLANS. A PRE-CONSTRUCTION MEETING WILL THEN BE SCHEDULED TO DETERMINE THE LOCATION OF TREE PROTECTION DEVICES. THE PLANNING AND CODE ADMINISTRATION INSPECTOR SHALL ADJUST TREE PROTECTION AND ROOT PRUNING IN THE FIELD AS NECESSARY, WHICH MAY EXPAND OR DECREASE THE AREA BEING PROTECTED. INSTALLATION OF ALL TREE PROTECTION DEVICES SHOULD BE SCHEDULED, AND AN INSPECTION ARRANGED WITH THE CITY AFTER ALL WORK IS COMPLETE. THE CITY WILL ISSUE A PUNCH LIST FOR ANY REMAINING WORK NEEDED PRIOR TO THE START OF GRADING, OR ISSUE A REPORT APPROVING THE START OF GRADING.

**FINAL FOREST CONSERVATION PLAN PROCEDURES, CONTD.**

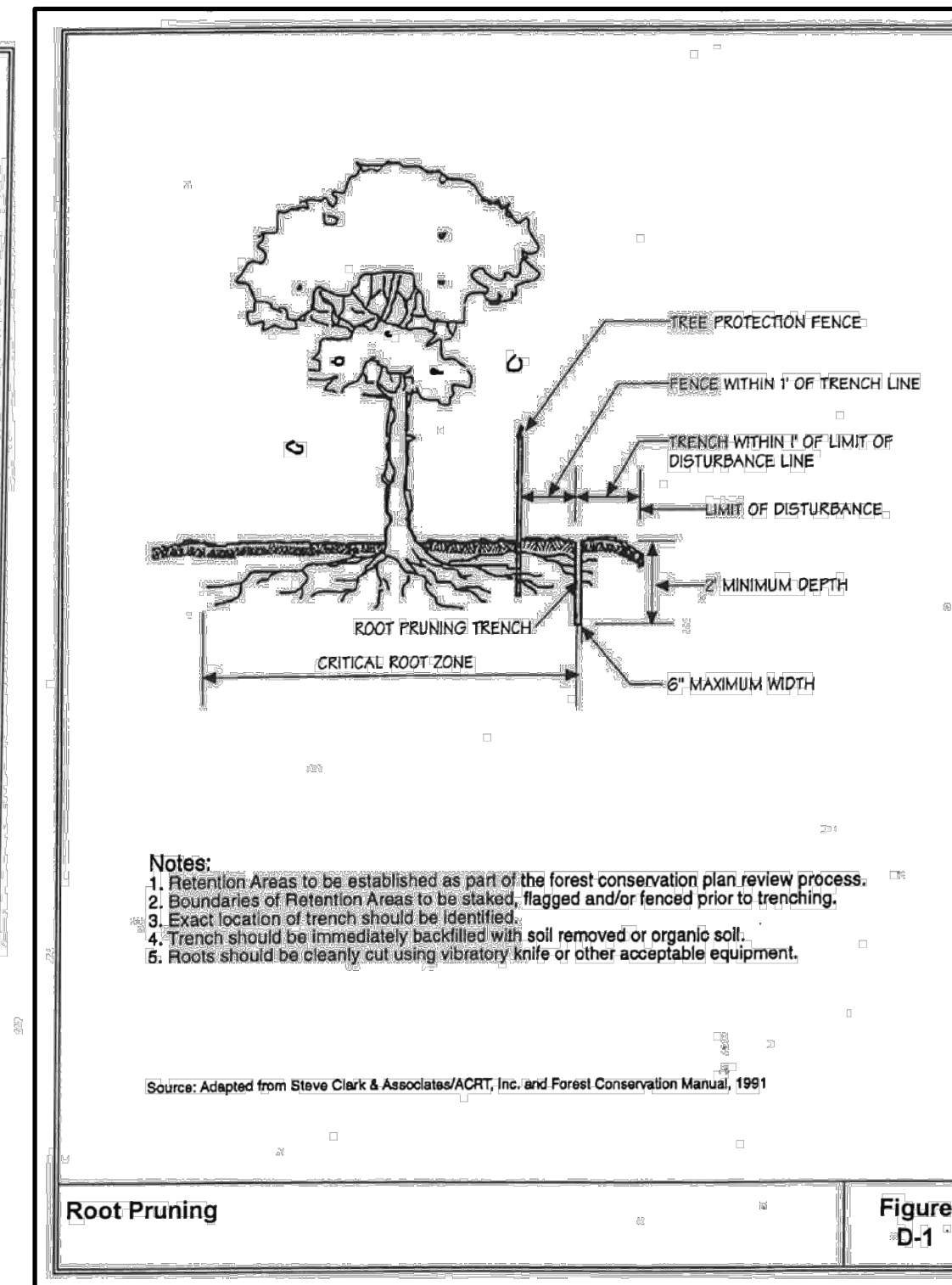
- ONCE WORK BEGINS ON-SITE, THE TREE PROTECTION DEVICES WILL BE RE-INSPECTED ON A BIWEEKLY BASIS, AND THE BUILDER/DEVELOPER WILL BE NOTIFIED OF ANY WORK THAT IS NEEDED. IT SHALL BE THE BUILDER/DEVELOPER'S RESPONSIBILITY TO MAINTAIN ALL TREE PROTECTION DEVICES, AND MAKE ANY REPAIRS NEEDED.
- CITY APPROVAL IS REQUIRED PRIOR TO REMOVAL OF ANY TREE PROTECTION DEVICE OR ENTRANCE ONTO A TREE SAVE AREA. TREE SAVE AREAS CANNOT BE USED FOR STORAGE OF ANY BUILDING MATERIALS.
- THE PLANNING AND CODE ADMINISTRATION INSPECTOR MAY REQUIRE PRUNING AND REMOVAL OF ANY TREE IN THE TREE SAVE AREA DURING CONSTRUCTION AND PRIOR TO BOND RELEASE. THESE DECISIONS WILL BE BASED ON THE TREES' HEALTH, PROXIMITY TO BUILDINGS, DRAINAGE, OR OTHER CONCERNS. EVERY EFFORT WILL BE MADE TO PRESERVE THOSE TREES IN THE TREE SAVE AREA.
- THE CITY WILL REQUIRE MITIGATION OF TREES LOST DURING CONSTRUCTION IN ACCORDANCE WITH THE FOREST CONSERVATION ORDINANCE. MITIGATION WILL BE REQUIRED PRIOR TO BOND RELEASE, AND ALL REPLACEMENT TREES SHALL HAVE A ONE-YEAR GUARANTEE IN ACCORDANCE WITH INDUSTRY STANDARDS. THE CITY MAY ALSO ALLOT THE CONTRACTOR TO ESCROW MONIES FOR MITIGATION TO SATISFY THEIR OBLIGATION, WHICH WILL BE USED BY THE CITY TO PURCHASE AND INSTALL THE REPLACEMENT TREES.



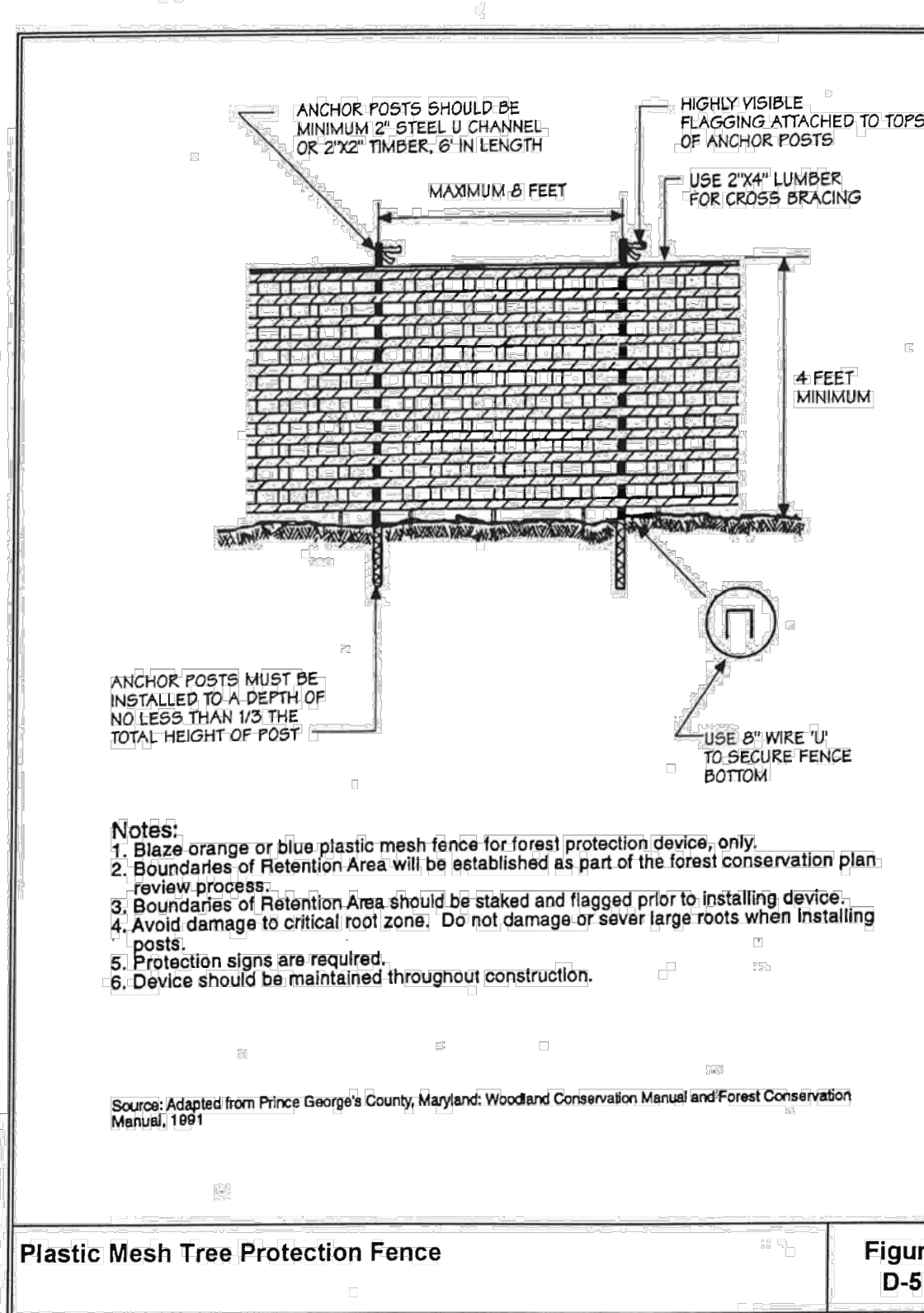
Protecting Trees During Construction **Figure A-17**



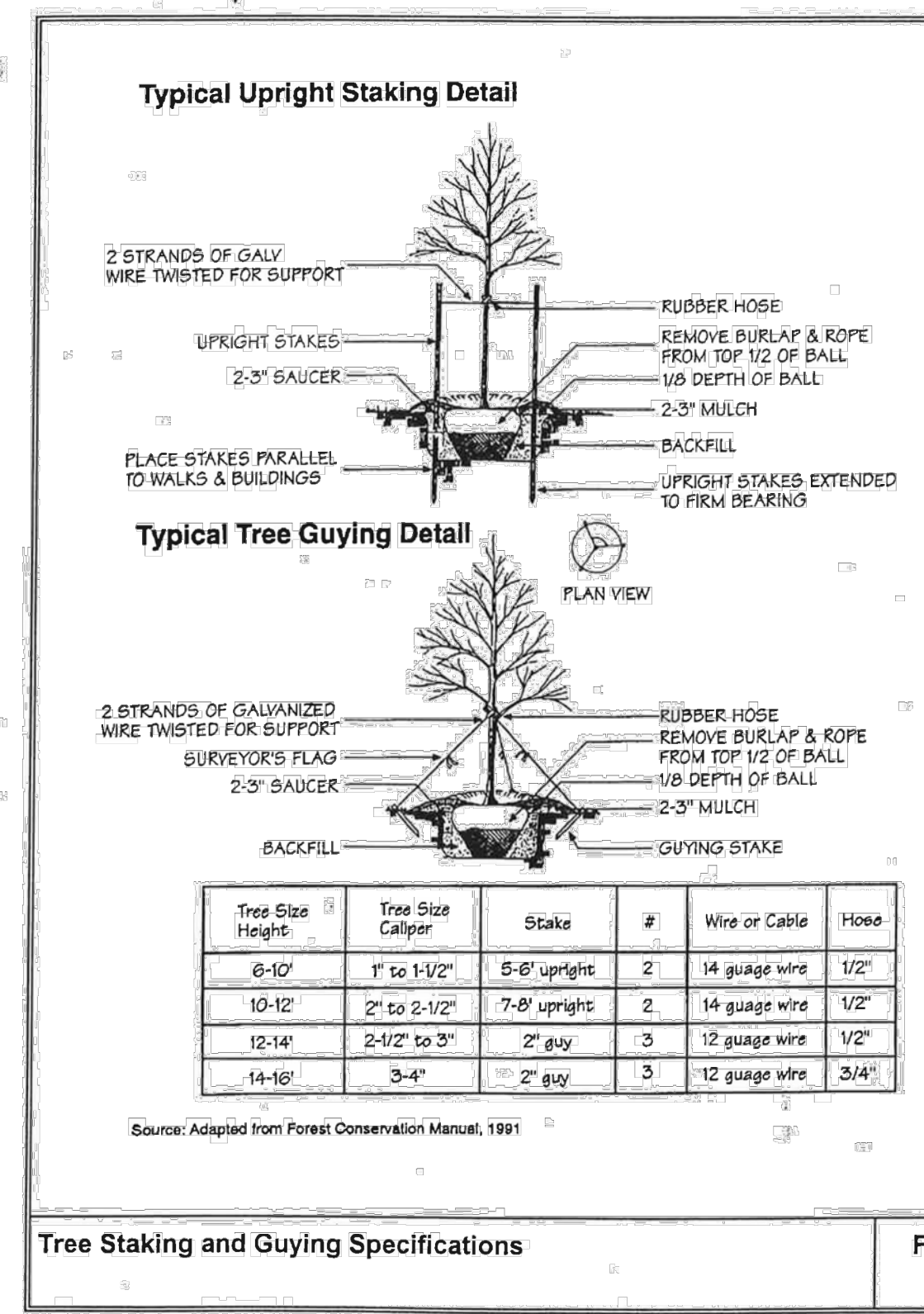
Container Grown and B&B Planting Techniques **Figure D-16**



Root Pruning **Figure D-1**



Plastic Mesh Tree Protection Fence **Figure D-5**



Tree Staking and Guying Specifications **Figure D-20**

**SEQUENCE OF CONSTRUCTION - PHASE II**

- IMPORT STOCKPILE FILL AS NECESSARY AND INITIATE GRADING FOR THE PROPOSED BUILDING PAD. RELOCATE SEDIMENT CONTROL MEASURES AS NECESSARY WHILE GRADING.
- INSTALL BUILDING FOUNDATIONS, BEGIN VERTICAL CONSTRUCTION OF BUILDING.
- INSTALL UNDERGROUND STORAGE VAULT. INSTALL STORM DRAIN, WATER, SANITARY SEWER, AND DRAIN UTILITIES FROM CONNECTION POINTS TO THE BUILDING.
- INSTALL STORM DRAIN INLETS AND CORRESPONDING INLET PROTECTION.
- INSTALL CURB AND GUTTER AND BEGIN PAVING OPERATIONS. REPLACE SUPER SILT FENCE AT THE ENTRANCE TO THE SITE, AT THE DRIVE CONNECTING TO THE ADJACENT PROPERTY AND AROUND STOCKPILE/ STAGING AREAS WITH SILT FENCE ON PAVEMENT.
- AFTER SITE STABILIZATION, CONSTRUCT MICRO-BIORETENTION AREAS AND COMPLETE SITE GRADING. INSTALL SUPER SILT FENCE AROUND PERIMETER OF MICRO-BIORETENTION AREAS AS INDICATED.
- INSTALL LANDSCAPING ACROSS SITE AS WELL AS WITHIN THE MICRO-BIORETENTION AREAS PER THE APPROVED LANDSCAPE PLANS.
- CALL INSPECTOR AND UPON APPROVAL FROM THE INSPECTION, REMOVE ALL SEDIMENT CONTROL DEVICES. NOTE: ALL SEQUENCES SHOULD CALL FOR THE PERMITTEE TO OBTAIN WRITTEN APPROVAL FROM THE CITY INSPECTOR, PRIOR TO THE REMOVAL OF ANY SEDIMENT CONTROL DEVICES.
- GENERAL CONTRACTOR SHALL AT ALL TIMES PROTECT AGAINST SILT LADEN RUNOFF LEAVING THE SITE. PERIMETER CONTROLS SHOULD BE CHECKED DAILY AND ADJUSTED AND/OR REPAIRED TO FULLY CONTRAIL AND CONTROL SEDIMENTATION ON THE SITE. THE GENERAL CONTRACTOR MAY NEED TO ADJUST OR REPAIR MEASURES AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR.
- SUBMIT AND OBTAIN AS BUILT APPROVAL. NOTE: ANY PLAN THAT INCLUDES STORM WATER MANAGEMENT FACILITIES MUST INCLUDE A CONSTRUCTION INSPECTION CHECKOFF LIST FOR EACH STORM WATER MANAGEMENT FACILITY. THIS MUST BE COMPLETED AND RETAINED FOR SUBMISSION AS PART OF THE STORM WATER AS-BUILT, WHICH MUST BE SUBMITTED AND APPROVED PRIOR TO FINAL RELEASE OF THE PROJECT. NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER WHEN STRUCTURES AND OTHER APPURTENANCES THAT MUST BE AS-BUILT, WILL BE BURIED, COVERED OR CONSIDERED TO BE IN A CONFINED SPACE BEFORE THEY ARE CONSTRUCTED SO THAT THEY MAY BE INSPECTED. ALL MATERIAL TICKETS AND PIPE CERTIFICATIONS FOR COMPONENTS OF THE STORM WATER MANAGEMENT FACILITIES MUST BE RETAINED AND GIVEN TO THE ENGINEER TO BE INCLUDED WITH THE AS-BUILT SUBMITTAL.

NOTE  
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