Reforestation Planting Plan

Emerson Section 2 - Phase 4 Open Space Lot 121

Howard County STANDARDS AND SPECIFICATIONS FOR PLANTING A Nursery grown plant materials greater than 1" caliper should meet or exceed the requirements of the American Nurserymen Specifications, i.e. should be typical of the species and variety, have a normal habit of growth, be first quality, sound, vigorous, well-branched, have healthy, well furnished root systems, and be free of disease, insect pests and mechanical injuries. B. Planting stock less than 1" caliper should meet the following standards: Seedling/whips: Hardwoods - 1/4" to 1/2" caliper with roots not less than 8" long Shrubs - 1/8" or larger caliper with 8" root system. Soils shall not be disturbed outside the area necessary for planting Individual specimens and the removal of exotic Invasive plant material. These areas should be stabilized as shown on the temporary seeding notes on sheet 8. All material shall be planted between September 15 and May 31. Material shall not be installed when ground is frozen Plants should be planted within 24 hours of delivery if possible. Plant material which are left unplanted for more than 24 hours shall be protected from direct sun and weather and kept moist. Nursery stock should not be left unplanted for more than two weeks. Prior to planting, planting stock shall be inspected by the landscape architect or other qualified professional familiar with this plan. Plant material not conforming to standard nurseryman specifications for size, form, vigor, roots, trunk wounds, insects and disease should be replaced. A. On-site material or imported from same source as topsoil used on site for finish grading. 1. Uniform composition, free of subsoil, clay lumps, stones, stumps, roots or similar objects larger than 1 inch. 2. Topsoll must be free of plants or plant parts of bermudagrass, quackgrass, Johnsongrass, nutsedge, polson Ivy. Canada thistie, or others as specified. 3. All topsoil shall be tested by a recognized laboratory for pH and soluble salts. A pH of 4.5 to 7.5 is required. Soluble salts shall not be higher than 500 parts 7. ADDITIVE FOR BACKFILL MIX A. Wood Residuals: 1. Source shall be well composted, not chemically treated. 2 Physical properties - grading: U.S. Sleve Dry Weight Percent Passing 3. Organic content by ash analysis: 90 - 100 percent dry weight a Saturation Extract Conductivity (EC) Nil - 3.5 b. Reaction (pH) 3.0 - 5.1 5. Salinity: Maximum saturation extract conductivity 1.0 milliohms per cm at 25 degrees centigrade. B. Sand Dry Weight Percent Passing Saturation Extract Conductivity (EG) Sodium Absorption Ratio (SAR) Boron - ppm in saturation extract solution-Avaliable calcium - sodium acetate extractable - ppm --- Nil - 2000 C. Treble Superphosphate: Commercial product containing 19 to 20 percent available phosphoric acid. A. Shredded long fiber hardwood. A. Planting mix shall be prepared at approved on-site staging area using approved on-site existing soll. Mix minimum quantities of 20 cubic yards or sufficient mix for entire job if less than 20 cubic yards is required. B.Thoroughly mixed in the following proportions for tree and shrub planting mix: .2 by Sharp sand 3 ov Wood residuals 4.5 lbs. Treble superphosphate 5 lbs. Dolomite ilmestone (eliminate for acid loving plants) 10. LAYOUT AND EXCAVATION OF PLANTING AREAS A. Plants shall be placed in each zone at random locations shown at spacing as indicated on the plan. B. The Landscape Architect or qualified professional will check location of plants in the field and shall adjust to exact position before planting begins. C. Subsoil shall not be worked when moisture content is so great that excessive compaction will occur, nor when it is so dry that clods will not readily break. Water shall be applied, if necessary, to bring soil to an optimum moisture content before tilling and planting. D. Tree pits shall not be excavated more than 24 hours in advance of planting operation. Tree pits shall be excavated to the following dimensions E. Excavate shrub pits to the following depths Can + 4 In., not less than 12 in. 11. PREPARING PLANT MATERIALS FOR PLANTING A. Container stock shall be removed carefully after cans have been cut on two sides with approved cutter. Do not use spade to cut cans. Do not lift or handle container plants by tops, stems or trunks at any time. B. Do not bind or handle any plant with wire or rope at any time so as to damage bank or break branches. Lift and handle plants only from bottom of ball. C. Balled and burlapped (B&B) plants shall have firm balls of earth. Plants moved with a ball will not be accepted if the ball is cracked or broken before or during planting operations. B&B material shall be dug only when dormant. Pre-dug stored B&B material shall be inspected and approved at the storage site. D. Do not force roots for bare rooted trees into excavated pite - custom dig pits to receive roots without deformation. A. Mix soil base, amendments and chemical additives by mechanical means. B. Soll and sand bases shall be completely pulverized and free of lumps or aggregated material. Moisture content of base materials shall not be such that chemical granular or pelletized additives become dissolved during the mixing process. C. Mix media in quantities of not less than 20 cubic yards or mix total quantity required if less than 50 cubic yards. The Contractor shall be responsible for continuity between batches. D. Contaminating backfill mix with unmixed soil in backfill mixing lots shall be avoided A Scarify the walls and bottom of all plant pits immediately prior to the placement of plant and backfill mix. The Contractor shall remove all glazing of soil caused by an auger or mechanical hole digger. B. Wells around trees and shrubs: after planting is complete, form a soil well 3 inches high around each plant, extending to the outer limit of the plant pit in accordance with planting detaile shown on the Drawings.

C. Smooth planted areas to conform to specified grades after full settlement as occurred. Contractor shall bear final responsibility for proper surface drainage of planted areas. Any discrepancy in the drawings or specifications, obstructions on the site, or prior work done by another party, which Contractor feels precludes establishing proper drainage, shall be brought to the attention of the Landscape Architect in writing.

A MINIMUM SURVIVAL RATE OF 75% IS TO BE GUARANTEED BY THE DEVELOPER

AT THE END OF THE TWO YEAR MAINTENANCE PERIOD.

D. Water all plants immediately again after planting.

E. Spread mulch in required areas to the compacted depth of 2 inches.

Maryland

BENCHMARK DESCRIPTION

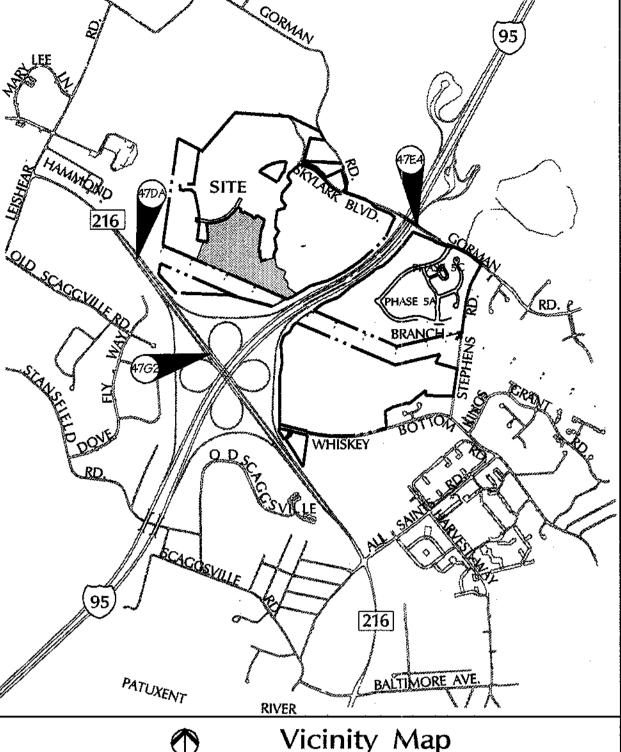
COORDINATES IN MARYLAND NAD83(91)

(HORIZONTAL) AND NGYD29 (VERTICAL) DATUMS. 47DA NORTHING: 163191.9104

ELEVATION: 315905 ft. 47E4 NORTHING: 163326.2295 EASTING: 413136.2550 ELEVATION: 338.909ft.

EASTING: 4112865759

47G2 NORTHING: 162440.1212 EASTING: 4118539279 ELEVATION: 364.210ft.



SCALE: 1'' = 2000'

General Notes

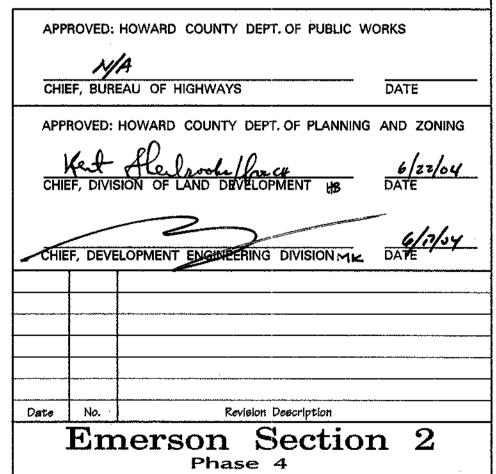
1. OPEN SPACE AREAS MAY CONTAIN ACTIVE RECREATION FACILITIES AS ALLOWED THE APPROVED DEVELOPMENT CRITERIA.

EMPLOYMENT USE = 50 FOOT BUFFER FROM ANY STREAM, RESIDENTIAL USES = 50 FOOT BUFFER FOR INTERMITTENT STREAMS AND 75 FOOT BUFFER FOR PERENNIAL STREAMS. 3. PHASING FOR THIS PROJECT IS IN ACCORDANCE WITH THE DECISION AND ORDER FOR 4. DEVELOPMENT FOR THIS PHASE WILL BE DONE IN ACCORDANCE WITH THE

THROUGH AERIAL PHOTOGRAPHY DURING THE SUMMER OF 1998.

HOWARD COUNTY FLOODPLAIN STUDY DATED NOVEMBER 1980 REF. D-6-10-26 & AUGUST 1986 REF. D-1065. THE 100-YEAR FLOODPLAINS FOR THE REMAINING STREAMS ARE FROM FLOOD STUDY PREPARED BY DAFT-MCCUNE-WALKER, INC. MARCH, 2000. 9. THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.

10. PROPOSED WATER AND SEWER SYSTEMS ARE TO BE PUBLIC. 11. EXISTING UTILITIES ARE BASED ON PLANS OF RECORD. 12. THERE ARE NO KNOWN CEMETERIES OR GRAVE SITES ON THIS PROPERTY. 13. FOREST CONSERVATION ACT COMPLIANCE FOR EMERSON 2 PHASE 4 WAS PREVIOUSLY ADDRESSED UNDER F-03-13. 14. TRAFFIC STUDY SUBMITTED AND APPROVED UNDER 5-99-12 (PB-339) AND REAPPROVED UNDER PB-359.



Open Space Lot 121

THE HOWARD RESEARCH & DEVELOPMENT CORPORATION 10275 Little Patuxent Parkway Columbia, Maryland 21044

Daft McCune-Walker, Inc.

200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296–3333

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

Cover Sheet

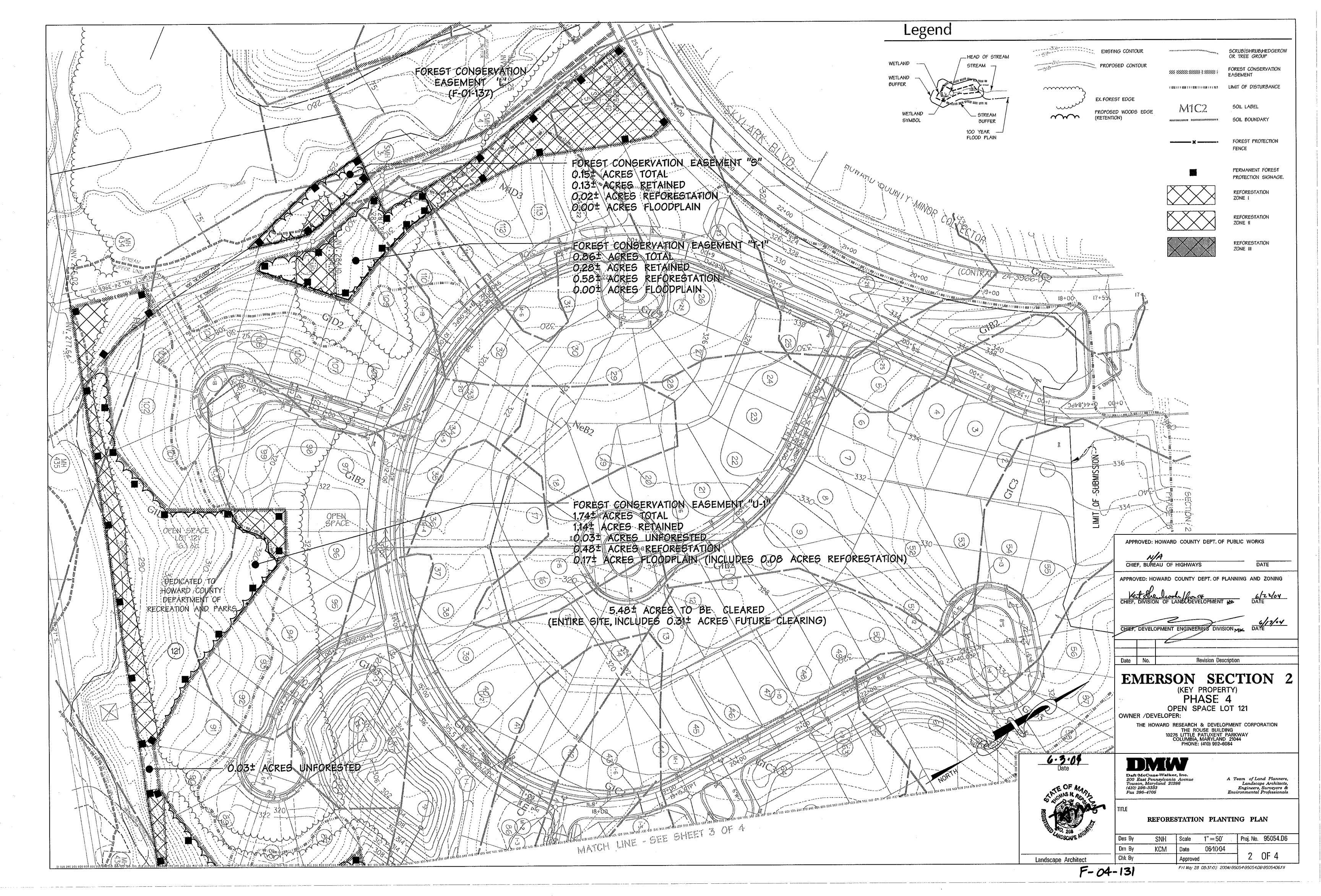
Scale: 1"=600" 1 of 4

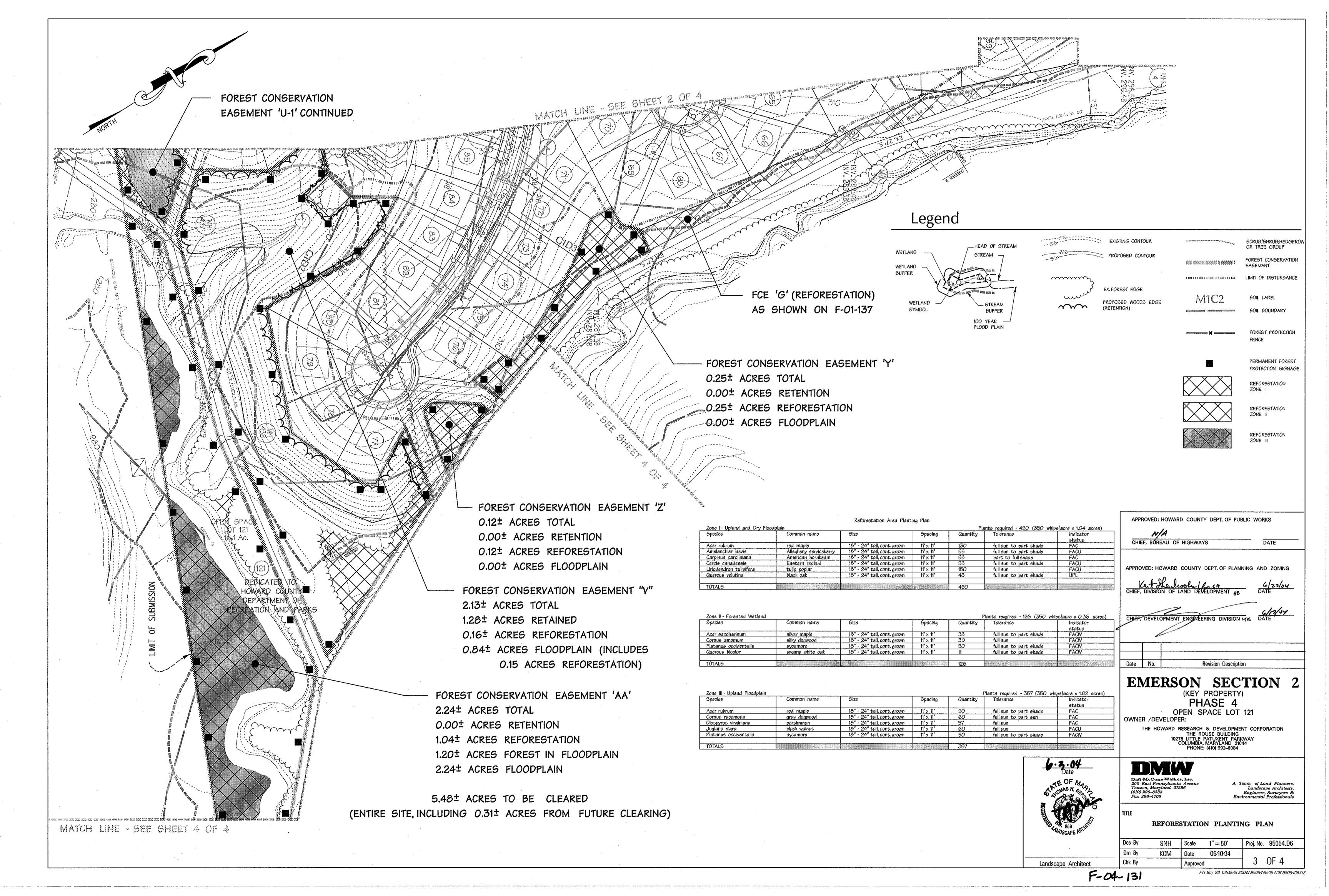
-PHASE 5C AREA 3 PHASE 1 Sheet Index DESCRIPTION REFORESTATION PLANTING PLAN

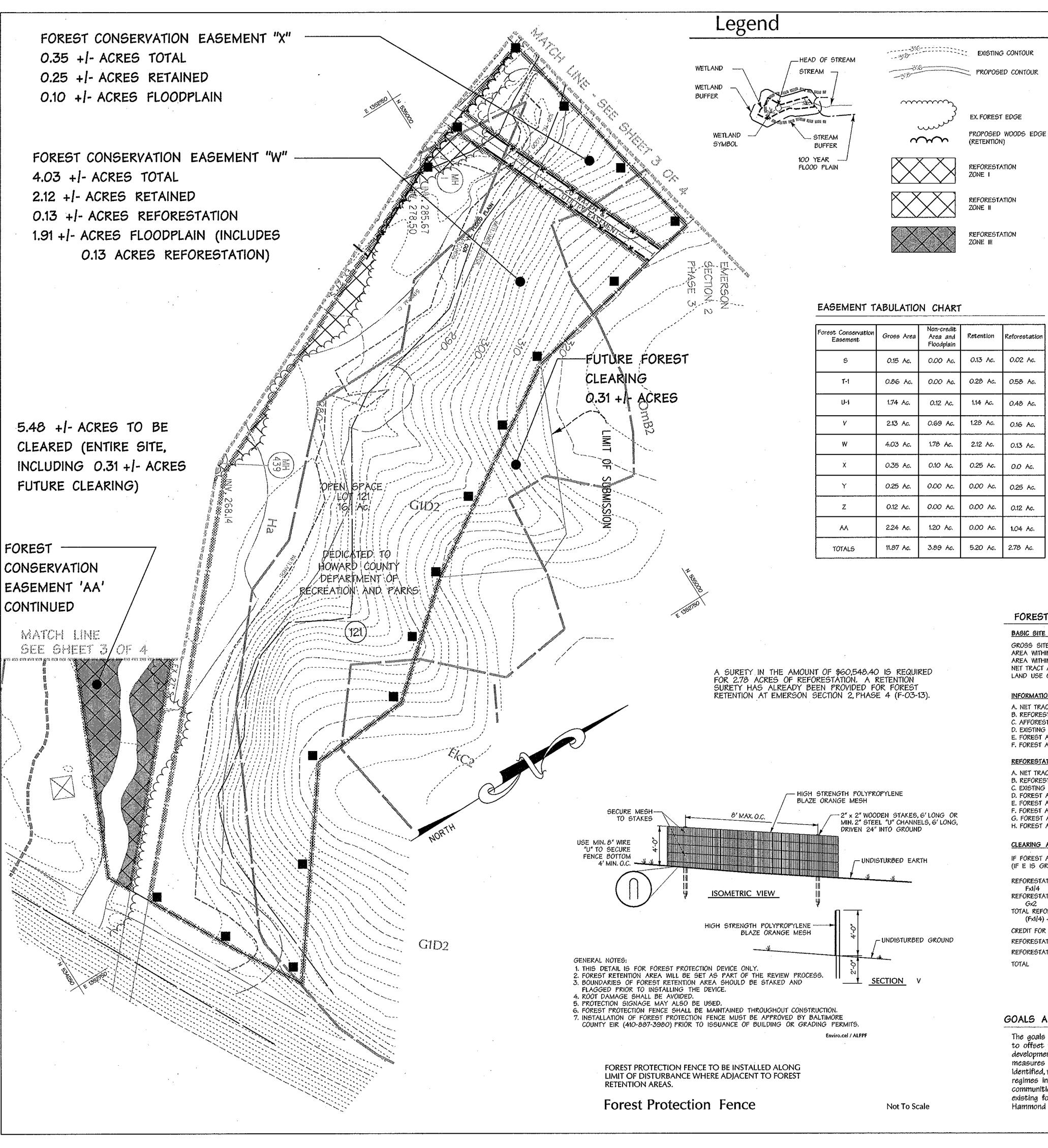
Overall Property Outline

REFORESTATION PLANTING PLAN REFORESTATION PLANTING PLAN & DETAILS

Professional Engr. No.







FOREST CONSERVATION 200 200200 200200 2 200200 5

LIMIT OF DISTURBANCE

SOIL BOUNDARY

FOREST PROTECTION

0.13 Ac.

1.04 Ac.

BASIC SITE DATA

GROSS SITE AREA

PERMANENT FOREST

FOREST CONSERVATION TRACKING CHART

Section! Phase Number	Gross Area	Floodplain	Net Tract Area	Ex. Forest Area	Forest * Cleared	Forest Retained	Reforest.!Affor. Required	Reforest./Affor. Provided	Excess Reforest./Affor.	Future Forest Clearing	Future Refor.[Affor,	Comments
2 14/18	106.20	3.50	102.70	24.70	7.93	16.77	0.61	5.03	4.42	4.48	3.41	
2 2	118.90	3.50	115.40	24.80	8.03	16.77	2.95	5.03	2.08	3.28	3.41	See Note A
2j3	137.35	4.00	133,35	34.40	12.53	21.87	1.27	5.03	3.76	2.18	3.91	See Note B
3 <i>i</i> 1	206.85	21.19	185,66	85.30	39.47	45.83	0.00	5.03	5.03	2.18	3.91	
3/2	220.27	21.27	199.00	87.50	41.67	45,83	0.00	5.03	5.03	2.18	3.91	See Note C
2 14	264.81	26.57	238.24	98.18	47.15	51.03	0.00	5.03	5.03	249	5.24	
2 5 C	267.84	27.40	240.44	98.62	47.59	51.03	0.00	5.77	5.77	2.49	5.24	
2!6 A	277.66	27.40	250.26	98.62	47.59	51.03	0.00	5. <i>7</i> 7	5.77	2.49	5.24	See Note D
2/4	277.66	27.40	250,26	98.62	47.59	51.03	0.00	8.55	8.55	2.49	3.91	See Note E

ACRES (1/10)

277.66

PORTION OF EMERSON SECTION 2 - PHASE 4

A. 1.20+/- ACRES OF FUTURE FOREST CLEARING SHOWN ON F-01-137 WAS CLEARED FOR SWM ON OPEN SPACE LOT 174. B. 1.10+/- ACRES OF FUTURE FOREST CLEARING SHOWN ON F-01-137 C. GROSS AREA INCLUDES 1.07+1- ACRES FOR SANITARY SEWER EXTENSION AND CONTAINS 0.08+1- ACRES OF FLOODPLAIN. D. GROSS AREA EXCLUDES 0.38 ACRES FOR THE SANITARY SEWER SHOWN ON F-02-178. GROSS AREA ALSO EXCLUDES 0.07 ACRES FOR AREA PREVIOUSLY ACCOUNTED FOR UNDER P-03-16.

E. THIS LINE ITEM ACCOUNTS FOR REFORESTATION PROVIDED RETROSPECTIVELY ON A PHASE THAT PREVIOUSLY ADDRESSED FOREST CONSERVATION. APPROXIMATELY 1.33 ACRES OF FUTURE REFORESTATION AREA WILL BE USED UNDER THIS REFORESTATION

FOREST CONSERVATION CALCULATIONS

OROGO OTTE / TREET	2,,,,
AREA WITHIN 100 YEAR FLOODPLAIN AND EXISTING SEWER EASEMENT	27.40
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE)	0.0
NET TRACT AREA	250.2
LAND USE CATEGORY COMMERCIAL!IN	IDUSTRIALIOFFI
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INFORMATION FOR CALCULATIONS	
A. NET TRACT AREA	250.2
B. REFORESTATION THRESHOLD (15% x A)	37.5
C. AFFORESTATION MINIMUM (15% x A)	37.5
D. EXISTING FOREST ON NET TRACT AREA	98.6
E. FOREST AREAS TO BE CLEARED	47.5
F. FOREST AREAS TO BE RETAINED	51.0
REFORESTATION CALCULATIONS	
A. NET TRACT AREA	250.
B. REFORESTATION THRESHOLD (15% x A)	37.5
C. EXISTING FOREST ON NET TRACT AREA	98.6
D. FOREST AREAS TO BE CLEARED	47.5
E. FOREST AREAS TO BE RETAINED	51.0
F. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD	47.5
G. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD	0.00
H. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD	13.4
CLEARING ABOVE THE THRESHOLD ONLY	
IF FOREST AREAS TO BE RETAINED ARE GREATER THAN THE REFORESTATION THRESHO)LD
(IF E IS GREATER THAN B), THE FOLLOWING CALCULATIONS APPLY:	
REFORESTATION FOR CLEARING ABOVE THRESHOLD	
Fx1/4	11.90
REFORESTATION FOR CLEARING BELOW THRESHOLD	
Gx2	0.00
TOTAL REFORESTATION REQUIRED	
(Fx1/4) + (Gx2)	11.90

GOALS AND OBJECTIVES

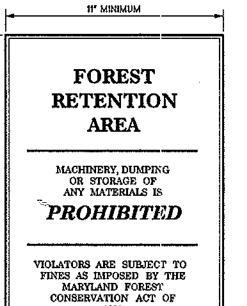
REFORESTATION REQUIRED

REFORESTATION PROVIDED

TOTAL

CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD

The goals and objectives of this plan are to identify reforestation areas to offset forest conservation obligations for the cumulative Emerson development. Details concerning tree installation and long-term protection measures have been specified, and three planting zones have been Identified, with plant species chosen to tolerate the different moisture regimes in each. Species have been selected to compliment existing communities in the vicinity, and proposed reforestation areas will enhance existing forests as well as establish new riparlan forest habitat along Hammond Branch.



SCALE: 1"=200'-0"

SIGNS TO BE PLACED ON METAL POSTS 5'

OF FOREST CONSERVATION AREA.

ABOVE FINISH GRADE PRIOR TO PLANTING.

PLACE SIGNS EVERY 100' AROUND PERIMETER

Forest Retention Area Signage

	NA		
CHII	EF, BUREAU O	F HIGHWAYS	DATE
APPRO	VED: HOWARD	COUNTY DEPT. OF PL	ANNING AND ZONING
,	a se o	1 10	, ,
CHIEF	PENT () Went	Note / fre CIF	
O. 112.1	Diviolori or	Date De l'activité	B 27112
			6/17/04
CHIEF,	DEVELOPMEN	IT ENGINEERING DIVISI	ONME DATE
Date	No.	Revision Desci	intion
	1 140. 1	HOMORUL DESCR	ipuon

(KEY PROPERTY)

PHASE 4 **OPEN SPACE LOT 121**

OWNER /DEVELOPER:

THE HOWARD RESEARCH & DEVELOPMENT CORPORATION THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044 PHONE: (410) 992–6084



Landscape Architect

13,49

0.00 ACRES

8.55 ACRES

8.55 ACRES

Daft McCune Walker, Inc. 200 East Pennsylvania Avenue Towson, Maryland 21286 (410) 296–3893 Fax 296–4705

A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

REFORESTATION PLANTING PLAN

Des By SNH Scale 1'' = 50'Proj. No. 95054.D6 WDE 06/10/04 Chk By Approved

F-04-131

FrI May 28 03:35:20 2004\95054\95054.D6\95054D6f13