

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1

THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS,

SEQUENCE OF CONSTRUCTION NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION ACTIVITY OBTAIN GRADING PERMIT.

> CLEAR & GRUB FOR INSTALLATION OF SUPER SILT FENCE AND INSTALL SUPER SILT FENCE. UPON APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR CLEAR & GRUB REMAINDER OF DISTURBANCE, BRING ROADWAY TO SUBGRADE AND STABILZE IN ACCORDANCE WITH TEMPORARY SEEDBED NOTES. INSTALL UTILITIES WITHIN THE AREA OF THE ROADWAY PAVING. INSTALL CURB AND GUTTER AND BASE COURSE PAVING.

INSTALL FINAL PAVING. INSTALL REQUIRED LANDSCAPING AS SPECIFIED ON THESE PLANS.

AS-BUILT NOTES: 1.) HORIZONTAL DATUM FOR THIS AS-BUILT IS BASED ON THE MARYLAND STATE REFERENCE SYSTEM NAD 83/ ADJ 07 AS PROJECTED FROM HO.CO. GEODETIC CONTROL STATIONS 3805 AND 3606. VERTICAL DATUM FOR THIS AS-BUILT IS NORTH AMERICAN VERTICAL DATUM NGVD 29 AS PROJECTED FROM THE ABOVE MENTIONED HOWARD COUNTY GEODETIC CONTROL STATIONS.

2.) THE INSTRUMENTS USED IN PERFORMING THE AS-BUILT WERE A 5" TOTAL STATION AND PRISM.

3) THIS AS-BUILT WAS PERFORMED BY

LEGEND SOILS CLASSIFICATION AbC1 SOILS DELINEATION ---- 999----**EXISTING CONTOURS** -----999 ------PROPOSED CONTOURS ----999-----EXISTING WOODS LINE production of the standard and and PROPOSED WOODS LINE YVVVV **EXISTING STRUCTURE** LIMIT OF DISTURBANCE SILT FENCE SUPER SILT FENCE FOREST CONSERVATION EASEMENT

1-1/2" BITUMINOUS

2-1/2" BITUMINOUS

6" GRADED AGGREGATE

1-1/2" BITUMINOUS

CONCRETE SURFACE

5" BITUMINOUS

Definition

CONCRETE BASE

CONCRETE SURFACE

CONCRETE BASE

BASE (GAB)

/ 🐓 / / /

6////

P-2 PAVEMENT DETAIL

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Conditions Where Practice Applies

a. The texture of the exposed subsoil/parent material is not adequate to produce

d. The soil is so acidic that treatment with limestone is not feasible. II. For the

Construction and Material Specifications

plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

grass, nutsedge, poison ivy, thistle, or others as specified.

b. The soil material is so shallow that the rooting zone is not deep enough to support

purpose of these Standards and Specifications, areas having slopes steeper than 2:1

require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans

as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a

Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand.

by the appropriate approval authority. Regardless, topsoil shall not be a mixture of

ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson

shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior

to the placement of topsoil. Lime shall be distributed uniformly over designated areas

a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of

less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used

chemicals used for weed control until sufficient time has elapsed (14 days min.) to

and approved by the appropriate approval authority, may be used in fleu of natural topsoil.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative

Stabilization — Section I — Vegetative Stabilization Methods and Materials.

Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist 1

i. When topsoiling, maintain needed erosion and sediment control practices such as diversion.

Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained,

thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can

proceed with a minimum of additional preparation and tillage. Any irregularities in the surface

resulting from topsoiling or other operations shall be corrected in order to prevent the formation

iii. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when

VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial

fertilizer, composted sludge and amendments may be applied as specified below:

c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper

Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5

a. Composted sludge shall be supplied by, or originate from, a person or persons that are

the appropriate constituents must be added to meet the requirements prior to use.

iv. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000

References: Guideline Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1, Cooperative Extension

Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

acres shall be tested to prescribed amendments and for sites having disturbed areas under 5

permitted (at the time of acquisition of the compost) by the Maryland Department of the

b. Composted sludge shall contain at least 1 percent nitrogen. 1.5 percent phosphorus. and 0.2

percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements,

d. No sod or seed shall be placed on soil which has been treated with soil sterilants or

iii.Where the subsoil is either highly acidic or composed of heavy clays, ground limestone

and worked into the soil in conjunction with tillage operations as described in the

Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative

i. On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime

Stabilization — Section I — Vegetative Stabilization Methods and Materials.

amendments required to bring the soil into compliance with the following:

b. Organic content of topsoil shall be not less than 1.5 percent by weight.

permit dissipation of phyto-toxic materials.

albeit 4" - 8" higher in elevation.

of depressions or water packets.

grading and seedbed preparation. G-21-2

Environment under COMAR 26.04.06.

acres shall conform to the following requirements:

square feet, and 1/3 the normal lime application rate.

Other soils may be used if recommended by an agronomist or soil scientist and approved

contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2"

given soil type can be found in the representative soil profile section in the Soil Survey

published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

NOT TO SCALE

, Sanjanjanja

ALTERNATIVE SECTION

TYPICAL SECTION

gradation.

vegetative growth.

AS-BUILT CERTIFICATION I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on this "AS-BUILT" Pien meet the Approved Plans and Specifications

Control (Artificiality, Principle Control (Call de C Comments were proposed or appropriately managed in (4980) least minimum met follow 21443 12.21-18

SHEET INDEX DESCRIPTION 1 ROAD PLAN AND SEDIMENT & EROSION CONTROL PLAN & DETAIL 2 FOREST CONSERVATION PLAN 3 FOREST CONSERVATION NOTES AND DETAILS 4 STORM DRAIN DRAINAGE AREA MAP AND PROFILE Omaid Mason, P.E.

BENCH MARKS (NAD '83)

STAMPED DISC ON CONCRETE MONUMENT

BEING 38.8 SOUTHEAST OF A FIRE HYDRANT

5.6' NORTH OF THE EXISTING CONCRETE CURB

HO. CO. #38D6 (NAD '83) ELEV. 175.23

STAMPED DISC ON CONCRETE MONUMENT

148' NORTH OF THE GATE AT ATLANTIC

BEING 44' SOUTHWEST OF A LIGHT POLE &

ALONG NORTH SIDE OF WASHINGTON BLVD (RT.1)

E 1,386,524.195

E 1,384,992.262

HO. CO. #38D5 (NAD '83)

N 558,378.581

SUPPLY CO.

CMP

N 557,155.459

Date: 4-619 GENERAL NOTES

THE SUBJECT PROPERTIES ARE ZONED R-12 AND CE PER THE 7/28/06 COMPREHENSIVE ZONING PLA ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY, PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE(5) WORKING DAYS PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" @ 1-800-257-7777 AT LEAST 48 HOURS THE CONTOURS SHOWN HEREON HAVE BEEN TAKEN FROM FIELD RUN TOPOGRAPHIC SURVEYS AT 2' INTERVALS PREPARED BY BENCHMARK ENGINEERING, INC., DATED SEPTEMBER 2001.

VICINITY MAF

BOUNDARY SURVEY FOR THIS PROJECT WAS PERFORMED BY BENCHMARK ENGINEERING, INC. ON OR ABOUT APRIL, 2003. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENTS Nos. 3805 AND 3806 WERE USED FOR THIS PROJECT. WATER AND SEWER FOR THIS SUBDIVISION IS PUBLIC. SEWER & WATER CONTRACT No.

EXISTING UTILITIES SHOWN WERE LOCATED BY RECORD DRAWINGS AND FIELD LOCATIONS BY BY BENCHMARK ENGINEERING INC., DATED SEPTEMBER, 2001 10. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION ACTIVITY AND SHALL ADJUST ALL UTILITIES AND RIM ELEVATIONS AS NEEDED TO MATCH THIS PLAN.

11. THIS PROPERTY IS WITHIN THE METROPOLITAN WATER AND SEWER DISTRICT. 12. THE WETLANDS DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE ROFESSIONALS, INC. DATED JANUARY 05, 200

13. THE FOREST CONSERVATION OBLIGATION FOR THIS SUBDIVISION HAS BEEN MET BY PROVIDING AN ONSITE FOREST CONSERVATION EASEMENT CONTAINING 0.3 ACRES OF RETENTION AND 0.07 ACRES OF REFORESTATION AND A FEE-IN-LIEU PAYMENT OF \$10,236.60 TO THE HO. CO. FOREST CONSERVATION FUND FOR THE REMAINING OBLIGATION OF 0.47 ACRES OF REFORESTATION. A TRAFFIC STUDY HAS BEEN PREPARED BY TRAFFIC CONCEPTS, DATED FEBRUARY 2005. GEOTECHNICAL REPORT HAS BEEN PREPARED BY MARSHALL ENGINEERING, INC. DATED DECEMBER, 200-THE FLOODPLAIN LIMITS SHOWN ON THIS PLAN HAVE BEEN TAKEN FROM EXISTING FLOODPLAIN INFORMATION TAKEN FROM THE HOWARD COUNTY DEEP RUN FLOODPLAIN STUDY FOR THE AREA OF THIS SHALLOW RUN, TRIBUTARY D-5.

NO CLEARING GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS AND FOREST CONSERVATION EASEMENT AREAS, AND FLOODPLAIN. STORMWATER MANAGEMENT IS BEING PROVIDED UNDER SDP-06-022. . UNLESS NOTED AS "PRIVATE", ALL EASEMENTS ARE PUBLIC.

ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED. BRL INDIGATES BUILDING RESTRICTION LINE. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE BUILDERS EXPENSE.

TO THE BEST OF OUR KNOWLEDGE THERE ARE NO CEMETERY LOCATIONS ON-SITE. THIS PLAN CONFORMS TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILLNo.45-2003. PREVIOUS DEPARTMENT OF PLANNING AND ZONING REFERENCE NUMBERS INCLUDE: SDP-06-022

ALL LANDSCAPING REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL AND SECTION 16.124(b)(3)(ii) OF THE SUBDIVISION REGULATIONS, AND SHALL BE PROVIDED ON THE SITE DEVELOPMENT PLAN(S) REQUIRED FOR THE DEVELOPMENT OF PARCEL A AND LOTS 1276-1279. SEE SDP-06-022. FOREST CONSERAVIION SURETY IN THE AMOUNT OF \$4,138.20 WILL BE POSTED 15 A PART OF THE DEVELOPER'S AGREEMENT FOR THE ONSITE FOREST CONSERVATION EASEMENT.

THE OWNER(S) OF LOTS 507-509, HARWOOD PARK IS/ARE RESPONSIBLE FOR THE MAINTENANCE OF THE EXISTING PRIVATE DRIVEWAY LOCATED WITHIN THE 14' PRIVATE ACCESS EASEMENT FOR LOTS 507-509 THAT IS LOCATED ON OPEN SPACE LOT 1279. BASED ON REVALO. 0093 AC./405.8 S.F. OF FOREST CONSERVATION EASEMENT AREA WILL BE ABANDONED. A FEE-IN-LIEU IN THE AMOUNT OF \$507.25 WILL BE PAID TO THEHOWARD COUNTY FOREST CONSERVATION FUND,

29 DISTURBANCE WITHIN THE STREAMBUFFER HAS BEEN ACCEPTED AS NECESSARY DISTURBANCE IN ACCORDANCE WITH SECTION SINCE IT IS NECESSARY FOR CONSTRUCTION OF A PUBLIC ROAD.

16.116 (eXt) OF THE SUBDIVISION AND LAND DEVELOPMENT RESULATIONS

SUPER SILT FENCE IS TO BE INSPECTED FREQUENTLY AND CLEANED. REPAIRED, AND/OR RE-INSTALLED IMMEDIATELY AS NECESSARY

ALL SEDIMENT CONTROL FEATURES SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS SHOWN IN THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

TEE TURN AROUND LINEAR PROFILE

SCALE: VERT. = 1"=2', HORZ. = 1"=20'

EXISTIN\$ GROUND

@ CURBLINE

"PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THESE DOCUMENTS ARE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15212 EXPIRATION DATE: 12/24/2012, THIS SEAL APPLIES ONLY TO REVISION /I/ON THIS SHEET.

OWNER: APPROVED: DEPARTMENT OF PUBLIC WORKS CHIEF, BUREAU OF HIGHWAYS APPROVED: DEPARTMENT OF PLANNING AND ZONING BALTIMORE, MD 21225-2657

6-17-17 REVISE SHARED DRIVEWAY WIDTH TO 16', REVISE CAG, STORM DRAIN PER CONSTR 1 8-6-12 ADD CAPITAL PROJECT D-1124-03 (BEECHFIELD AVE. IMPROVEMENTS) BY NOLAN AGSOC. NO DATE REVISION **BENCHMARK**

ENGINEERS A LAND SURVEYORS A PLANNERS ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418

ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6644 E-MAIL: www.benchmark@bei-civilengineering.com



BELLE GROVE CORP. 4024 BELLE GROVE ROAD

410-789-7070

DESIGN: RPS/MCR DRAFT: RPS/MCR CHECK: DAM SCALE:

324-350 AND 510-525 TAX MAP: 38, GRID: 14

PART OF PARCEL: 873 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND ROAD PLAN, GRADING

PROJECT: EUCLID CORNERS - PARCEL 'A', LOTS 1276-1278 and O/S LOT 1279

A RESUBDIVISION OF HARWOOD PARK LOTS

SEDIMENT & EROSION CONTROL PLAN. NOTES AND DETAILS PROJECT NO. 1465

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DEVELOPER

GROUND

ENGINEER'S CERTIFICATE "I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. GINEER - DONALD A. MASON, P.E. # 21443

P-2 PAVEMENT-

-STD, 7" COMB, C&G

HO, CO, STD, R-3.01

TYPICAL WIDENING SECTION

SECTION

DEVELOPER'S CERTIFICATE

ROB JONES

1/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL. AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ FT). FOR

__ 1 1/2" OVFRLAY

TOTAL CUT

TOTAL FILL

OFFSITE FILL

INSPECTION AGENCY IS MADE.

WORKING DAY, WHICHEVER IS SHORTER.

SHORT-TERM VEGETATIVE COVER IS NEEDED.

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR

ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY

10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE

APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE

LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY AN OFF-SITE BORROW

AREA WITH AN APPROVED SEDIMENT & EROSION CONTROL PLAN AND PERMIT.

TEMPORARY SEEDBED PREPARATION

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING,

DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A

11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE

PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF

DAY 4 DAY 5 FINE GRADE REMAINDER OF DISTURBED AREA AND STABILIZE IN ACCORDANCE. WITH PERMANENT SEEDING NOTES. DAY 7

DAY

DAY 2

DAY 3

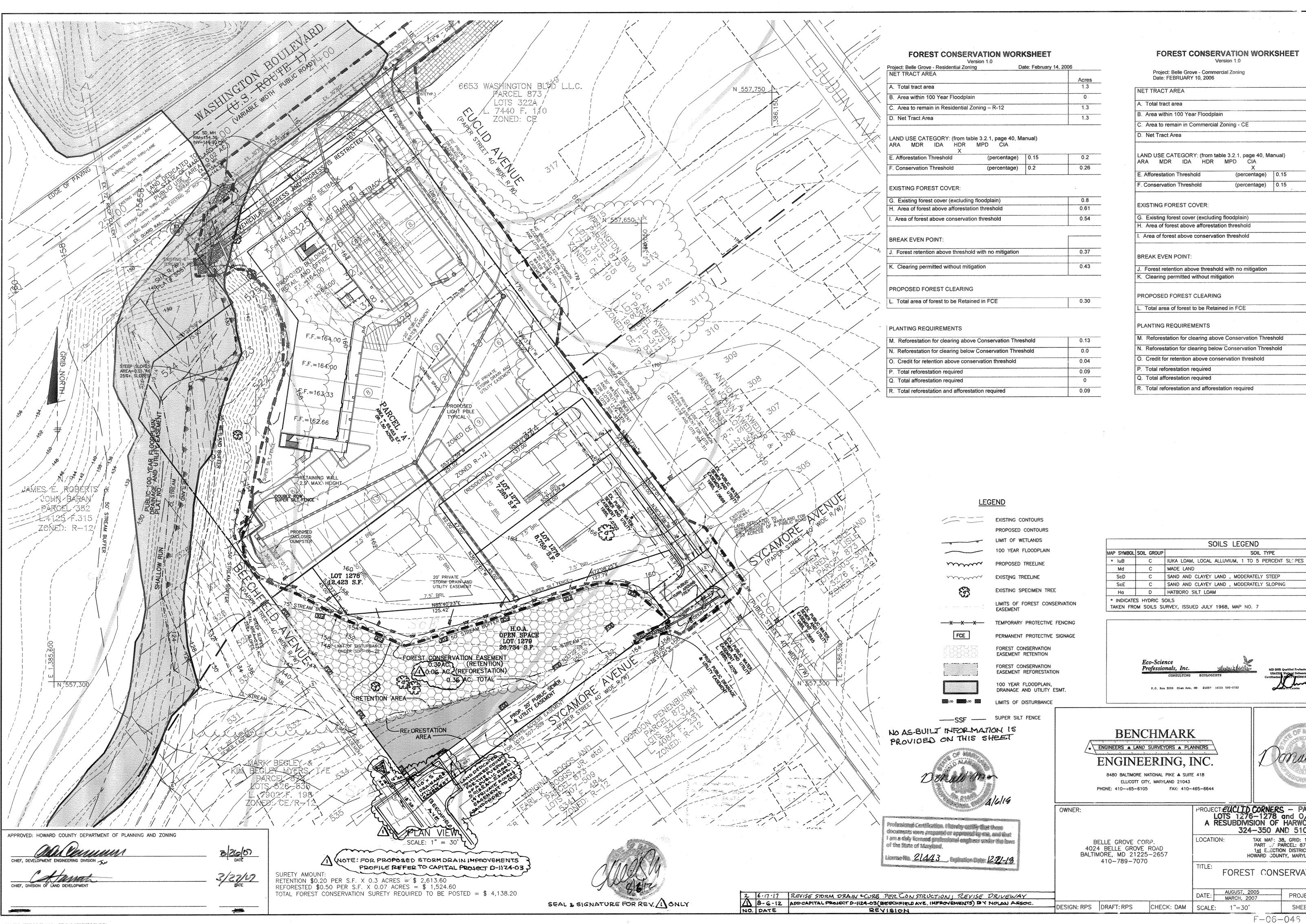
DAY 8 DAY 9

UPON APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE REMAINING SEDIMENT CONTROL DEVICES AND PERMANENTLY STABILIZE ANY REMAINING DISTURBED AREAS.

BENCHMARK ENGINEERING, INC.

CHIEF, DEVELOPMENT ENGINEERING DIVISION

AS SHOWN SHEET 1 OF 4 F-06-046



FOREST CONSERVATION WORKSHEET

| | | | Acres |
|---|-----------------------------------|---|--------------------|
| A. Total tract area | | | 1.52 |
| B. Area within 100 Year Floodplain C. Area to remain in Commercial Zoning - CE D. Net Tract Area | | | 0.16 |
| | | | 1.52 |
| | | | 1.36 |
| LAND USE CATEGORY: (from table 3 ARA MDR IDA HDR M | 3.2.1, page 40, Ma PD CIA X | anual) | |
| E. Afforestation Threshold | (percentage) | 0.15 | 0.2 |
| F. Conservation Threshold | (percentage) | 0.15 | 0.2 |
| | | | |
| G. Existing forest cover (excluding flo H. Area of forest above afforestation t | | , , , , , , , , , , , , , , , , , , , | 0.42 |
| Area of forest above conservation the second s | II estiluid | | 0.22 |
| BREAK EVEN POINT: | | | |
| J. Forest retention above threshold with no mitigation | | | 0.24 |
| K. Clearing permitted without mitigation | n . | Address - American Chemical Artificia y and American Artificia - American | 0.16 |
| | | | |
| PROPOSED FOREST CLEARING | | | |
| | in FCE | | 0.0 |
| L. Total area of forest to be Retained | in FCE | | 0.0 |
| L. Total area of forest to be Retained PLANTING REQUIREMENTS | | shold | 0.0 |
| L. Total area of forest to be Retained PLANTING REQUIREMENTS M. Reforestation for clearing above C | onservation Three | | |
| L. Total area of forest to be Retained PLANTING REQUIREMENTS M. Reforestation for clearing above C N. Reforestation for clearing below Co | onservation Three | | 0.05 |
| L. Total area of forest to be Retained PLANTING REQUIREMENTS M. Reforestation for clearing above C N. Reforestation for clearing below Co O. Credit for retention above conserve | onservation Three | | 0.05 |
| O. Credit for retention above conserve | onservation Three | | 0.05 0.4 0.0 |



PROJECT: EUCLID CORNERS - PARCEL 'A',
LOTS 1276-1278 and 0/S LOT 1279
A RESUBDIVISION OF HARWOOD PARK LOTS
324-350 AND 510-528 TAX MAP: 38, GRID: 13 PART OF PARCEL: 873 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FOREST CONSERVATION PLAN PROJECT NO. 1465

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FOREST PROTECTION PROCEDURES - Preconstruction Phase

- The edge of the woods to be protected will be marked (staked or flagged) in the field per the limits of forest conservation easement shown in the approved site development plan prior to the start of construction activity. All areas within protective easement are to be considered "off limits" to any construction activities. The optional protective fencing shall be installed at the outside edge of forested areas and should be combined with sediment control devices when possible. The limit of the critical root zone and therefore the location of the protective devices is to be determined as follows:
 - Edge of Forested Area 1 foot of protective radius/inch of DBH or an eight foot protective radius, whichever is greater.

Critical Root Zone for the forest on this site is an average of 12 feet from the trunk of the tree. Critical root zones for Specimen Tree #1 and #2 are 34' and 30'.

Construction activities expressly prohibited within the preservation areas are:

Placing or stockpiling backfill or top soil in protected

Felling trees into protected areas Driving construction equipment into or through protected

Burning in or in close proximity to protected areas Stacking or storing supplies of nay kind

Concrete wash-off areas. Conducting trenching operations Grading beyond the limits of disturbance Parking vehicles or construction equipment

Removal of root mat or topsoil Siting and construction of: Utility lines Access roads Impervious surfaces Stormwater management devices Staging areas

- Protective fencing (see Figure "Protective Fencing") shall be the responsibility of the general contractor. The general contractor shall affix signs to the fencing at 25' minimum intervals indicating that these areas are "Forest Retention Area" (see Figure "Signage"). The general contractor shall take great care to assure the restricted areas are not violated and theat root systems are protected from smothering, flooding, excessive wetting from dewatering operations, off-site runoff, spillage, and drainage or solutions containing materials hazardous to tree roots.
- 4) The general contractor shall be responsible for any tree damaged or destroyed within the preservation areas whether caused by the contractor, his agents, employees, subcontractors, or licensees.
- 5) Foot traffic shall be kept to a minimum in the protective areas.
- 6) All trees which are not to be preserved within fifty feet of any tree preservation areas are to be removed in a manner that will not damage those trees that are designated for preservation. It is highly recommended that tree stumps within this fifty foot area be ground out with a stump grinding machine to minimize damage.
- The general contractor shall designate a "wash out" area onsite for concrete trucks which will not drain toward a protected area
- A pre-construction meeting shall be held with local authorities before any disturbance has taken place on site.

FOREST PROTECTION PROCEDURES - Construction Phase

Forest and tree conditions should be monitored during construction and corrective measures taken when appropriate.

The following shall be monitored:

- Soil compaction Root injury - prune and monitor; consider crown reduction
- Limb injury prune and monitor
- Flooded conditions drain and monitor; correct problem Drought conditions — water and monitor; correct problem Other stress signs — determine reason, correct, and

FOREST PROTECTION PROCEDURES - Post Construction Phase

The following measures shall be taken:

- 1) Corrective measures if damages were incurred due to negligence:
 - Stress reduction
 - Removal of dead or dying trees. This may be done only if trees pose an immediate safety hazard.
- 2) Removal of temporary structures:
 - No burial of discarded materials will occur onsite within the conservation area.
 - No open burning within 100 feet of a wooded area.
 - All temporary forest protection structures will be removed after construction.
 - Remove temporary roads by removing stone or broadcasting mulch; pre-construction elevation should be maintained.
 - e) Aerate compacted soil.
 - Replant disturbed sites with trees, shrubs and/or herbaceous plants.
 - Retain signs for retention areas or specimen trees.
 - h) A County official shall inspect the entire site.
- 3) Future protection measures:
 - Howard County and the developer shall arrange for the dedication of an appropriate forest conservation easement at a later date.

FOREST PROTECTION PROCEDURES - Preconstruction Phase

Stress Reduction and Protection of Specimen Trees Isolated from Forest Retention Areas and General Forest Retention Areas (as they may apply)

Isolated specimen trees that are to be preserved will be examined to determine if stress reduction techniques are needed. Protective measures and their evaluation criteria are provided on this plan only if they are employed herein.

Root Pruning

Evaluation Criteria

Will the critical root zone be affected by construction activities such as grade changes, digging for foundations and roads or utility installation?

Design Considerations

- Prune prior to construction as shown on the plan (see Figure "Root Pruning Detail.")
- Prune root with a clean cut using proper pruning equipment such as a vibratory knife.
- Exact location of pruning trench should be identified, and immediately backfilled to cover exposed roots after pruning with soil removed other topsoil, peat moss, or other suitable material or with other high organic soil.
- For trees over 15" in diameter, root pruning may be done up to one year in advance of construction.
- Tree(s) will be monitored for signs of stress.

Crown Reduction or Pruning

Evaluation Criteria

Has the root system been significantly reduced (>30%) or are there dead, damaged, or diseased limbs?

Design Considerations

- Reduce only at specified times of the year: Flowering trees - only after flowering and before bud Non-Flowering trees — in late winter, early spring or
- mid summer No more than 1/3 of the crown should be removed at one time using acceptable pruning methods (see Figure "Crown
- Reduction Detail") Monitor for signs of stress

Watering

Evaluation Criteria

Will construction activities alter the hydrology of the site? Has or will root pruning occur?

Design Considerations

- Water only as necessary
- Monitor for signs of stress (see Figure "Tree Planting and Maintenance Čalendar")

Fertilizing

Evaluation Criteria

Is or will be tree(s) be under stressful conditions? Has or will

Design Considerations

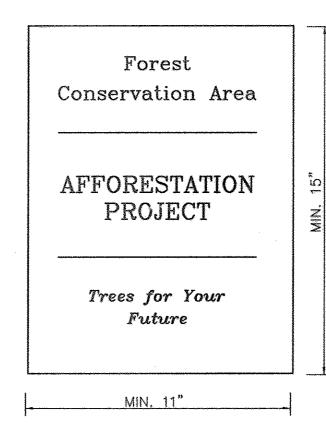
- Use low nitrogen and slow release fertilizers. Apply in late fall or early spring (see Figure "Tree
- Planting and Maintenance and Calendar") For small trees (<3" in diameter), use punch hole method or pressurized injection method (see Figure "Application of
- Fertilizers by Injection." For larger trees (>3" diameter), use punch hole method or pressurized injuction method (see Figure "Application of Fertilizers by Injection.")
- Do not apply fertilizer any closer than 3' from tree trunk
- for pressurized injection method. Monitor for signs of stress.

FOREST RETENTION AREA

MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS PROHIBITED

VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE HOWARD COUNTY FOREST CONSERVATION ACT OF 1992

MIN. 11"



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PLANTING SCHEDULE

Planting units Required: 70

| Qty | Species | Size | Spacing | Total FCA Units |
|-----|----------------------------------|--|----------------|--------------------|
| 7 | Acer rubrum - Red maple | 2-3' whip | 11' o.c. | |
| 7 | Nyssa sylvatica - Black gum | 2-3' whip | 11' o.c. | |
| 7 | Platanus occidentalis - Sycamore | 2-3' whip | 11' o.c. | |
| 7 | Ulmus rubra - Slippery Elm | 2-3' whip | 11' o.c. | |
| 7 | Quercus palustris - Pin oak | 2-3' whip | 11' o.c. | |
| 35 | Total wh | Total whip plantings x 2 units /tree = FCA unit credit | | |
| | | Tota | al Unit Credit | 70 |

Planting Notes:

Planting density based on 700 planting units per acre. 2" caliper trees = 7 planting units, 1" caliper trees = 3.5 planting units, whips with shelter = 2 planting units.

** - These species should not be planted within the wetland limits.

1" caliper trees should be staggered along the outer perimeter of the planting area to serve as demarcation of the boundary. The trees should be no closer than 15 foot spacing.

Planting shall be made in a curvilinear fashion along contour. The planting should avoid a grid appearance but should be spaced to facilitate maintenance

Multiflora rose/heavy brush removal/control may be required prior to installation of planting.

menenement BASED ON REV. 1 0.0093/405.8 S.F. OF FOREST CONSERVATION -EASEMENT AREA WILL BE ABANDONED A FEE-IN-LIEU IN THE AMOUNT OF \$ 507, 25 WILL BE PAID TO THE HOWARD COUNTY FOREST CONSERVATION BUDD

 $\stackrel{\wedge}{\sim}$

SYCAMORE

BLACK GUM

RED MAPLE

PIN OAK

RANDOM PLANTING DETAIL

SLIPPERY ELM

 \bigcirc

TO BE PLANTED IN

PATTERN

RANDOM DISTRIBUTION

 \bigcirc

FCE Reforestation Area - 0.10 acres

Planting units Provided: 70

| Qty | Species | Size | Spacing | Total FCA Units |
|-----|--|-----------|----------------|--------------------|
| 7 | Acer rubrum - Red maple | 2-3' whip | 11' o.c. | |
| 7 | Nyssa sylvatica - Black gum | 2-3' whip | 11' o.c. | |
| 7 | Platanus occidentalis - Sycamore | 2-3' whip | 11' o.c. | |
| 7 | Ulmus rubra - Slippery Elm | 2-3' whip | 11' o.c. | |
| 7 | Quercus palustris - Pin oak | 2-3' whip | 11' o.c. | |
| 35 | Total whip plantings x 2 units /tree = FCA unit credit | | | 70 |
| | | Tota | al Unit Credit | 70 |

All whips are required to be installed with tree shelters per Howard County FCA

Eco-Science P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752

ANCHOR POSTS SHOULD BE

MIN. 2" STEEL "U" CHANNEL OR 2"x2" TIMBER, 6" LENGTH

→ 8 FEET MAXIMUM --

- ANCHOR POSTS MUST BE

INSTALLED TO A DEPTH OF

2. BOUNDARIES OF RETENTION AREA WILL BE ESTABLISHED AS PART OF THE

4. AVOID DAMAGE TO CRITICAL ROOT ZONE. DO NOT DAMAGE OF SEVER LARGE

FOREST CONSERVATION PLAN REVIEW PROCESS.

6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

DISTURBANCE AND USE OF THESE AREAS.

PROTECTIVE LAND COVENANTS.

INTERVALS ALONG ALL FCE LIMITS.

CONSERAVTION EASEMENT

WHICHEVER IS GREATER.

EASEMENTS.

ROOTS WHEN INSTALLING POSTS

AND FOREST CONSERVATION MANUAL, 1991.

5. PROTECTIVE SIGNS ARE REQUIRED.

FCP NOTES

NO LESS THAN 1/3 OF THE TOTAL HEIGHT OF THE POST.

NOTES:

1. BLAZE ORANGE OF BLUE PLASTIC MESH FENCE FOR FOREST PROTECTION DEVICE ONLY.

3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.

ADAPTED FROM PRINCE GEORGE'S COUNTY, MARYLAND, WOODLAND CONSERVATION MANUAL

1. ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON

THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE

2. THE FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO

FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD

COUNTY CODE, FOREST CONSERVATION ACT. NO CLEARING, GRADING,

OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION

EASEMENTS; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED

IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO

3. FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE

4. LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE

THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY,

DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DPZ.

6. NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC.

SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION

TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES

LIMITS OF DISTURBANCE OCCURRING WITHIN 50 FEET OF THE PROPOSED

BY PROVIDING AN ONSITE FOREST CONSERAVTION EASEMENT CONTAINING

FUND FOR THE REMAINING OBLIGATION OF 0.47 ACRES OF REFORESTATION.

FOREST CONSERVATION SURETY IN THE AMOUNT OF \$4,138.20 WILL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR THE ONSITE FOREST

0.3 ACRES OF RETENTION AND 0.07 ACRES OF REFORESTATION AND A

THE FOREST CONSERVATION OBLIGATION FOR THIS SUBDIVISION HAS BEEN MET

FEE-IN-LIEU PAYMENT OF \$10,236.60 TO THE HO. CO. FOREST CONSERAVTION

FCE LIMITS. PERMANENT SIGNAGE WILL BE POSTED AT A 50-100 FOOT

DURING CONSTRUCTION. THE FENCING SHALL BE INSTALLED ALONG

5. THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR

IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN

PLASTIC MESH TREE PROTECTION FENCE

HIGHLY VISIBLE

USE 2"x4" LUMBER

FOR CROSS BRACING

-USE 8" WIRE "U"

TO SECURE FENCE

1. She St. 1



8480 BALTIMORE NATIONAL PIKE ▲ SUITE 418 ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6644



PROJECT: EUCLID CORNERS— PARCEL 'A',
LOTS 1276—1278 and O/S LOT 1279
A RESUBDIVISION OF HARWOOD PARK LOTS OWNER: 324-350 AND 510-525 TAX MAP: 38, GRID: 13 PART OF PARCEL: 873 BELLE GROVE CORP. 4024 BELLE GROVE ROAD 1st ELECTION DISTRICT BALTIMORE, MD 21225-2657 HOWARD COUNTY, MARYLAND 410-789-7070 FOREST CONSERVATION PLAN AUGUST, 2005 PROJECT NO. 1465

DESIGN: RPS | DRAFT: RPS CHECK: DAM 3 OF 4 SCALE: 1"=30"

NO AS-BUILT INFORMATION IS PROYIDED ON THIS SHEET



21443 12-21-19

FLOODPLAIN NOTE:

PORTIONS OF THE SITE OCCURRING WITHIN THE 100 YEAR FLOODPLAIN ARE NOT INCLUDED AS PART OF THE NET TRACT AREA ON THE SITE. FOREST CONSERVATION EASEMENT WILL BE PROTECTED BY THE EASEMENT RESTRICTIONS BUT HAVE NOT BEEN CREDITED TOWARD THE



AREAS OF FLOODPLAIN FOREST OCCURRING WITHIN THE LIMITS OF A PROJECTS FCA OBLIGATIONS.

1 8-6-12 APP CAPITAL PROJECT D-1124-03(BEECHPIELD AVE, IMPROVENENTS) BY NOLAN ASSOC.

REVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE

