

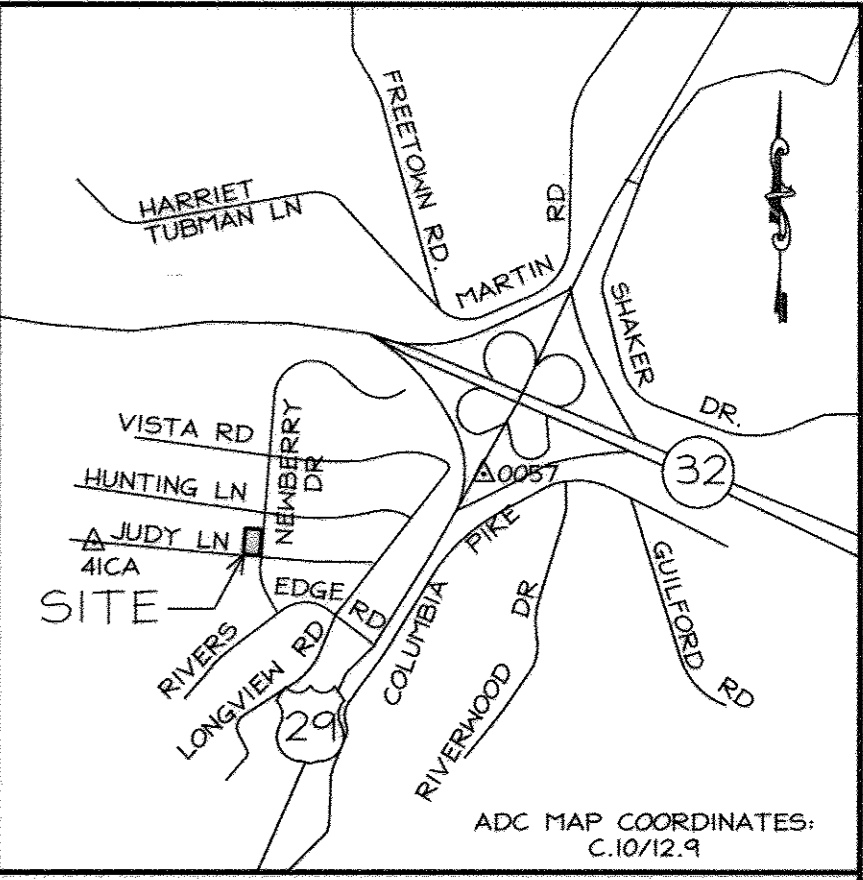
BENCH MARKS

1. #41CA Disk set on top of concrete column
N 550124.854
E 1342460.933
EL = 295.985

2. #0057 Disk set on top of concrete column
N 550835.217
E 1347017.693
EL = 399.610

SHEET INDEX

NO.	TITLE
1	Site Development Plan
2	Grading and Sediment Control Plan and Soils Map
3	Construction, Sediment Control and Landscaping Notes and Details

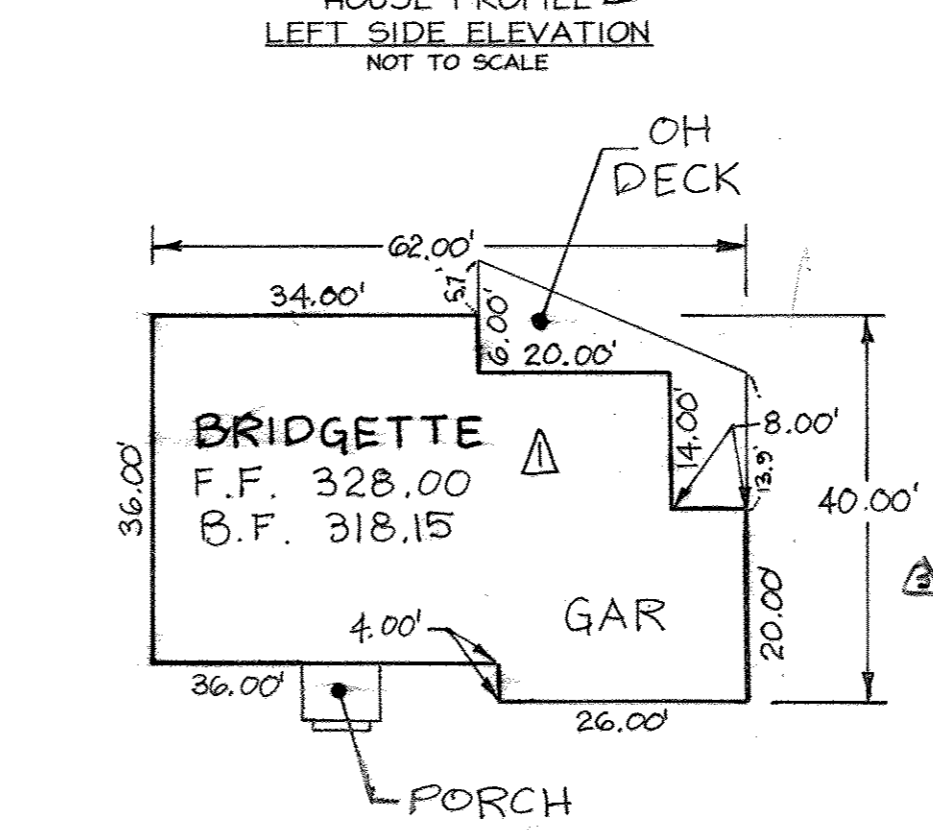
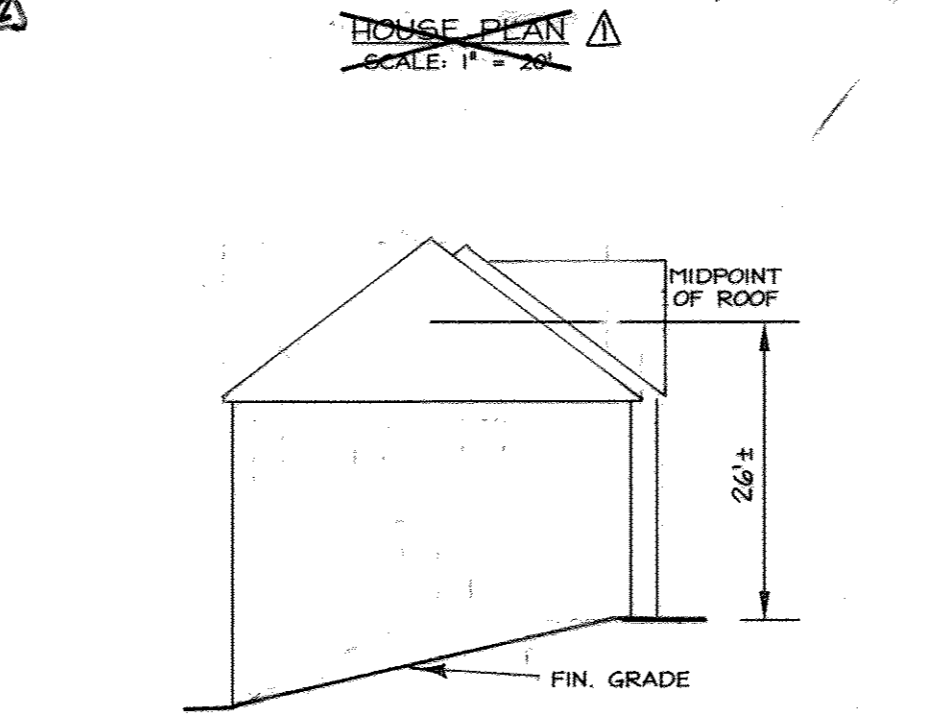
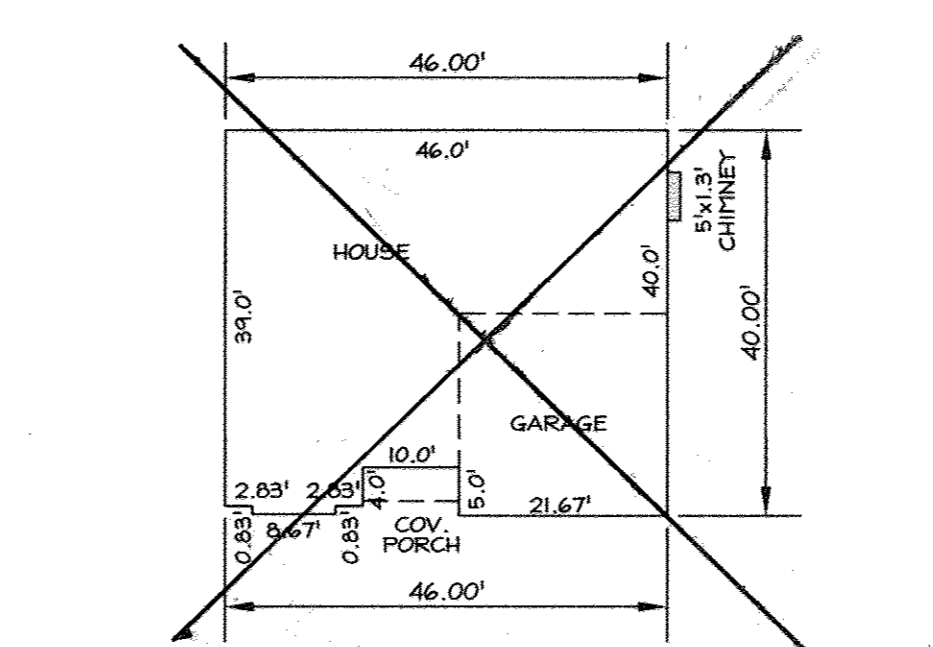


VICINITY MAP
1" = 2000'

LEGEND: (FOR ALL SHEETS)

- 538 EXISTING CONTOURS
- 540 PROPOSED CONTOURS
- G0/B2/G1/C2 SOILS BOUNDARY
- PROPERTY LINE
- EXISTING TREELINE
- PROPOSED TREELINE
- NONTIDAL WETLAND LIMIT
- 25' NONTIDAL WETLAND BUFFER
- STREAM BANK BUFFER
- DRAINAGE FLOW
- SILT FENCE
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- UNDERGROUND TELEPHONE
- PUBLIC FOREST CONSERVATION & STORMWATER MANAGEMENT CREDIT EASEMENT ABANDONED BY PLAT NO. 24638
- EXISTING PUBLIC EASEMENT
- PROPOSED SIDEWALK
- PROPOSED DECIDUOUS TREE
- PROPOSED EVERGREEN TREE
- SANITARY CLEAN OUT
- MAIL BOX
- PHONE PEDESTAL
- LIGHT POLE
- GROUND LIGHT
- EXISTING WELL
- AND ABS- IN-LIEU AMOUNT OF \$2,500.00 FOR 0.0426 AC OF SACRAMENT BANDWATER VALVE
- LANDSCAPE PERIMETER NUMBER
- ICV IRRIGATION CONTROL VALVE
- TREE PROTECTION FENCE
- FOREST CONSERVATION SIGNAGE INSTALLED UNDER F-07-171
- STABILIZED CONSTRUCTION ENTRANCE
- EROSION CONTROL MATTING

- GENERAL NOTES:**
- The subject property is zoned R-20 per the 2/2/04 Comprehensive Zoning Plan and the Comp. Site Zoning Regulations effective 7/28/06.
 - All construction shall be in accordance with the latest Standards and Specifications of Howard County Design Manual Vol. IV and current MSHA Standards & Specifications.
 - Project Background:
 - Subdivision: Keeth Estates
 - Location: 7090 (Lot 54) & 7096 (Lot 55) Newberry Drive, Columbia, Maryland 21044
 - Tax Map: Map 41, Grid 11, P10 Parcel 420
 - Election District: 5th
 - Current Deed Reference: Lot 54: L. 11425, F. 279 / Lot 55: L. 10567, F. 220
 - Plat Reference: 20319 - 20320
 - Tax ID Nos: Lot 54 - 05-280949 / Lot 55 - 05-452562
 - The Boundary shown hereon is based on a field run monumental boundary survey by LDE, Inc. dated June, 2005.
 - The topography shown hereon was field run by LDE, Inc. in June, 2005.
 - Horizontal and Vertical Datums are related to the Maryland State Plane Coordinate System (NAD 83) as projected to Howard County Control Stations Nos. 41CA & 0057.
 - Any damage caused by the contractor to existing public rights-of-way, existing paving, existing curb and gutter, existing utilities, etc. shall be corrected at the contractor's expense.
 - The existing utilities shown hereon are located from field survey and construction drawings of record. The contractor shall locate existing utilities to his own satisfaction and well in advance of any construction activities. Additionally, the contractor shall take all necessary precautions to protect all existing utilities and maintain uninterrupted service. Any damage incurred to utilities or existing features due to contractor's operation shall be repaired immediately at the contractor's expense.
 - There may be additional utilities not shown on these plans. The engineer assumes no responsibility for utility locations not shown and it shall be the responsibility of the contractor to verify the locations of all existing utilities within the limits of construction and notify the engineer of any discrepancies, prior to the start of construction.
 - Site Analysis Data:
 - a. Total Project Area: Lots 54 & 55: 44,800 s.f. / 1.03 Acres
 - b. Area of Plan Submission: 1.03 Acres +/-
 - c. Limits of Disturbed Area: 0.465 Acres +/-
 - d. Present Zoning Designation: R-20
 - e. Proposed Site and Structure Uses: One (1) SFD house on Lot 55, sidewalk, street trees on frontage of Lots 54 and 55.
 - Both Lots 54 and 55 were investigated for wetlands by LDE, Inc. in April, 2007.
 - A fee-in-lieu of providing open space was paid in the amount of \$20,000.00 under F-07-017.
 - There is an existing dwelling located on Lot 54 to remain (built 1991). No new buildings, extensions or additions to the existing dwelling are to be constructed at a distance less than the Zoning Regulations require.
 - No construction, grading or removal of existing vegetation shall occur within the forest conservation easements, wetlands or stream bank buffers. However, forest management practices, as defined in the deed of forest conservation are allowed.
 - Landscaping for this project is provided in accordance with the latest edition of the Howard County Landscape Manual. Financial surety for the required landscaping (5 shade trees and 5 evergreens) will be posted as part of this site development plan development agreement for Lots 54 and 55 in the amount of \$5,250.00. The landscape inspection fee of \$100.00 was paid with F-07-171.
 - Soils shown hereon are based on the Howard County, MD Soil Survey, sheet 23, dated 1968. See sheet 2 for soils descriptions.
 - No structures may be located within the 20 foot environmental building restriction line, wetlands or the 75 foot stream bank buffer.
 - In accordance with Section 12B of the Howard County Zoning Regulations, bay windows, chimneys or exterior stairways not more than 16 feet in width may project not more than 4 feet into any setbacks. Porches or decks, open or enclosed may project not more than 10 feet into the front or rear yard setbacks.
 - A new single family private driveway from Newberry Drive will provide vehicular access to Lot 55. See Architectural Plans for building dimensions and design details.
 - This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.
 - The contractor shall notify the Department of Public Works/Construction Inspection Division at (410) 313-1880 at least 24 hours prior to the start of work.
 - The contractor shall notify "Miss Utility" at 1-800-257-7777 at least forty-eight (48) hour prior to any excavation work.
 - Driveway shall be provided prior to issuance of a use and occupancy permit for any new dwellings to insure safe access for fire and emergency vehicles per the following minimum requirements:
 - a. Width: 12' (6' serving more than one residence);
 - b. Surface: 6" of compacted crusher run base with tar and chip coating (1-1/2" min.);
 - c. Geometry: Max. 14% grade, max. 10% grade change, minimum 45 ft. turning radius;
 - d. Structures (curbs/bridges) capable of supporting 25 gross tons (1025 loading);
 - e. Drainage Elements: capable of safely passing 100 year flood with no more than 1 ft. depth over driveway surface.
 - Maintenance: sufficient to insure all weather use.
 - This site is located within the Howard County Metropolitan District. Public water and sewer connections are available for Lots 54 & 55 via Water Contract No. 34-3957-D and Sewer Contract No. 34-4523-D. Public sewer contract No. 34-4523-D will be constructed simultaneously with the house on lot 55.
 - Stormwater Management for the proposed improvements on Lot 55 is provided via the "inlet-to-buffer stormwater credits". Lot 54 has an existing house on it to remain. Therefore, Lot 54 is exempt from stormwater management requirements.
 - Any damage to Public "Rights-of-Way" or paved public roads shall be repaired immediately at the contractor's expense in accordance with the Howard County Standards and Specifications.
 - All fill shall be rolled to a minimum degree of compaction of 95% of the dry unit weight as determined by AASHTO T-180.
 - Earthwork quantities shown on this plan are estimated and should not be used for bid purposes. Contractors should perform independent earthwork analysis for bid purposes. Deviations from these plans and specifications without prior written consent of the civil engineer may cause the work to be unacceptable.
 - The dimensioned distances shall govern if scaled and dimensioned distances on this plan are found to be in disagreement.
 - See this sheet 3 for Landscaping Schedule "A", Planting Details, Landscape Notes and Landscape Planter Summary.
 - The protection of the retained trees and vegetation within the forest conservation easements is the responsibility of the builder. If the builder removes the retained forest, the builder is responsible for replacement in accordance with the Howard County Forest Conservation Manual.
 - This subdivision plan is subject to the amended Fifth Edition of the Subdivision and Land Development Regulations per Council Bill No. 46-2003 and the Zoning Regulations as amended in August, 2006. Development or construction on Lot 55 must comply with setback and buffer regulations in effect at the time of submission of this site development plan.
 - All proposed street trees, public sidewalk, landscaped name and both public sewer main and private water and sewer house connections for Lots 54 & 55 shall be installed under this plan.
 - No grading, removal of vegetative cover or trees, or disturbance is permitted in the Forest Conservation Easements on Lots 54 & 55 and the Stream Bank Buffer and the Wetland and Buffer on Lot 55.
 - On October 3, 2006 the Designer for the Director of Planning and Zoning conducted a public hearing for Case No. AA-06-026. The purpose of the Administrative Adjustment request from Section 10B.D.4.(ii)(ii) of the Zoning Regulations was to request a reduction in the required setback from a public street Right-of-Way from 50 feet to 40 feet. The request was to reduce the 50 foot setback to 40 feet from both Judy Lane and Newberry Drive. The setback reduction request from Judy Lane was denied. The setback reduction request from Newberry Drive was approved. A 40 foot setback from the Newberry Lane Right-of-Way is shown on Lot 55 only. The setback reduction approval does not apply to Lot 54.
 - On February 12, 2008 the Planning Director approved waiver petition WP-08-062 from Section 16.120(b)(4)(iii) of the latest Howard County Land Development and Subdivision Regulations to allow the required 25' building setback from a 25' wetland buffer in a "R-20" fill subdivision" to be reduced from 35' to 20' on Lot 55.



NOTE: SIDEWALK REMOVAL IS SUBJECT TO WF-16-129. THE DEVELOPER SHALL PROVIDE A FEE-IN-LIEU OF \$20,400.00 TO BE PLACED IN A DPW CAPITAL ACCOUNT.

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE STATE OF MARYLAND, LICENSE NO.: 19184, EXPIRATION DATE: 6/30/11.

SIGNED: *Bruce D. Burton*
BRUCE D. BURTON
DATE: 6/15/10

REVISIONS

No.	Date	Description
1	6/15/2010	REVISE HOUSE MODEL LOT 55 / REVISE LOT GRADING LOT 55
2	6/17/10	ABANDON PORTION OF FCE #2 AND REMOVE PROPOSED SIDEWALK
3	7/2/10	ABANDON FCE #1, REMAINDER OF FCE #2 AND FCE #3, REVISE NOTE # 34.

ADDRESS CHART

Lot No.	Street Address
54	7090 Newberry Drive (Existing house)
55	7096 Newberry Drive

Subdivision Name: Keeth Estates Section: N/A Parcel No.: P/10 420

Plat Ref.: 20319 & 20320 Grid No.: 11 Zoning: R-20 Tax Map No.: 41 Election District: 5th Census Tract: 605102

LDE, INC.
9250 Rumsey Road, Suite 106, Columbia, MD. 21045
(410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED: S.D.H. SITE DEVELOPMENT PLAN
DRAWN: G.D.W. KEETH ESTATES
CHECKED: B.D.B. Lots 54 & 55
DATE: 6/20/10 Single Family Detached Dwelling - Lot 55
Scale: 1" = 20'
Job No.: 05-020.2
File No.: SDP-10-035

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 6/15/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 7/1/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

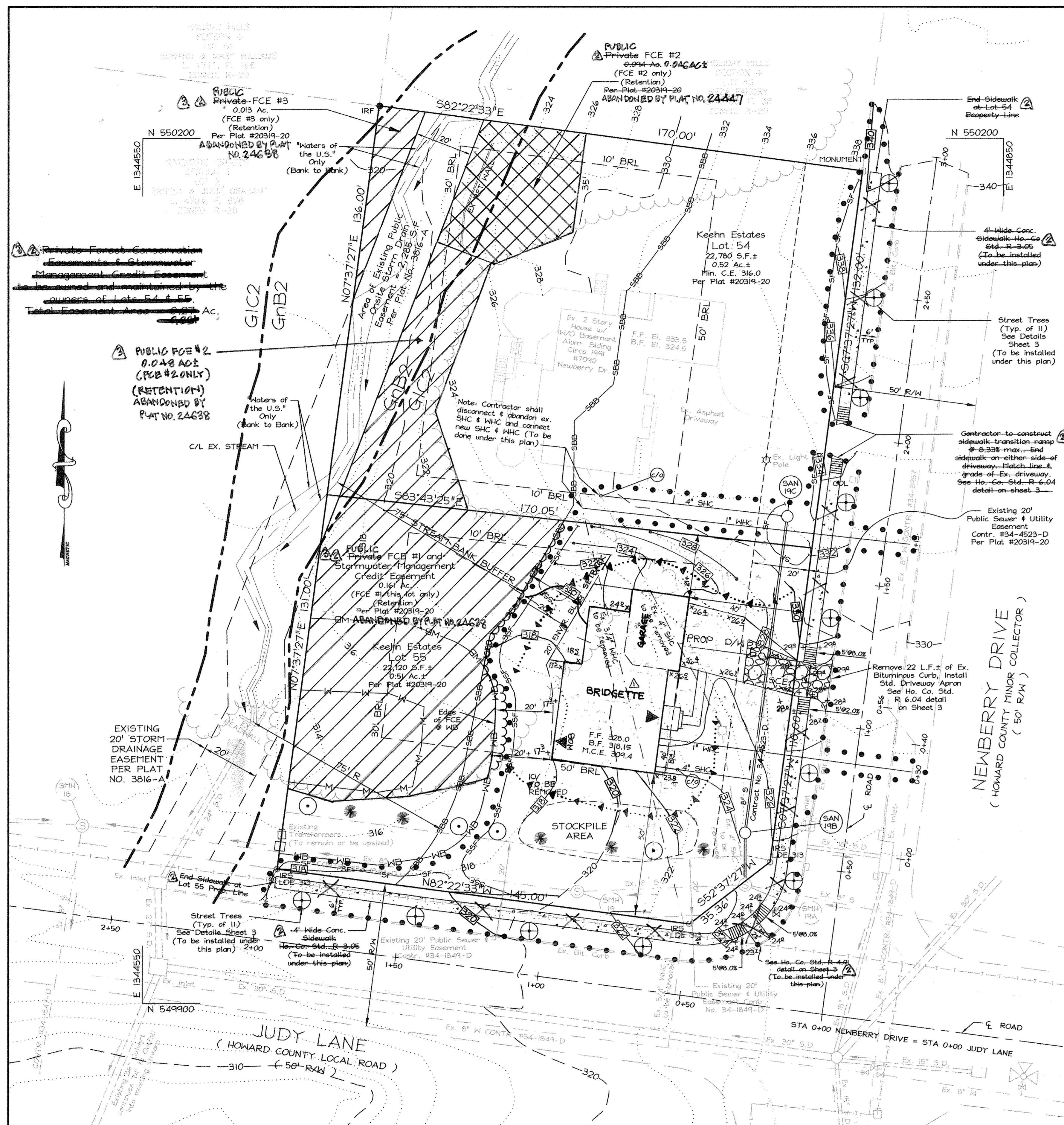
[Signature] 7/1/10
DIRECTOR DATE

DEVELOPER'S / BUILDER'S CERTIFICATION

I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Subdivision and Land Development Regulations and the Landscape Manual. I/We further certify that upon completion, a letter, accompanied by an executed One Year Guarantee of Plant Materials will be submitted to the Department of Planning and Zoning.

DEVELOPER / BUILDER: *[Signature]* DATE: 6/17/10

NOTE: If any of the proposed street trees conflict with existing electric, telephone or cable TV lines, the tree shall be relocated by the Contractor to avoid the utility and allow sufficient room for the utilities to be maintained.



GENERAL NOTES (CONTINUED FROM SHEET 1)

40. On December 14, 2006 the Planning Director approved waiver request WF-06-134 to allow the following:

A.) Section 16.117(b) to permit a Forest Conservation Easement within a residential subdivision on buildable lots, B.) Section 16.120(b)(4)(iii) to permit a Forest Conservation Easement (FCE) to be located on buildable lots less than 10 acres in size and to permit the required 35' Environmental Building Setback referenced from a Stream Bank Buffer and FCE to be reduced from 35' to 20', C.) Section 16.120(b)(4)(iii) to permit the required 35' building setback from a Perennial Stream Bank and an FCE in a "R-20 Infill Resubdivision" to be reduced from 35' to 20', D.) Section 16.132(a)(2)(1)A. to not be required to construct one-half of the full designed public road paving width along the property frontage, and E.) Section 16.133(A)(1) to not be required to install a Storm Drain System within the public road frontage improvements. Approval is subject to the following conditions: 1.) Public road truncation shall be provided at the intersection of Newberry Lane and Judy Lane on the final subdivision plat in accordance with Section 16.119(a)(5), 2.) The reduction of the 35' Environmental Building Setback to 20' applies to Lot 55 only and the 35' building setback referenced from the 75' Stream Bank Buffer and FCE will not be required on Lot 54, 3.) The Stream Bank Buffer shall be shown on Lot 54, with the existing house and improvements on Lot 54 being considered "non-conforming" and being allowed to remain. However, any future improvements, additions and / or replacement of the existing house shall not exceed the existing limits of the existing house and improvements currently located within the 75' Stream Bank Buffer. 4.) Compliance with the Department of Recreation and Parks comments to the following waiver requests: A.) Section 16.16(a)(2)(i) to permit the 75' Stream Bank Buffer referenced from a perennial stream bank in a residential zoning district to be reduced to a 50' buffer, B.) Section 16.134(A)(1)(i) to not be required to install sidewalks along the public road frontage, C.) Section 16.135(a) to not be required to install street lighting in accordance with the Design Manual of the Director of the DPZ, D.) Section 16.136 to not be required to provide street trees in accordance with Subdivision Regulations Section 16.124 and the Landscape Manual.

41. No structures may be located within the 20' Environmental Building Setback Line or the 75' Stream Bank Buffer.

42. At the time of installation, all shrubs and shade trees listed hereunder and approved for this site shall be of the proper height and size requirements in accordance with the Howard County Landscape Manual. In addition no substitutions or relocations of required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from the approved Landscape Plan accompanying this plat may result in denial or delay in the release of the landscape surety until such time as all required materials are planted and / or revisions are made to the applicable plans and certificates.

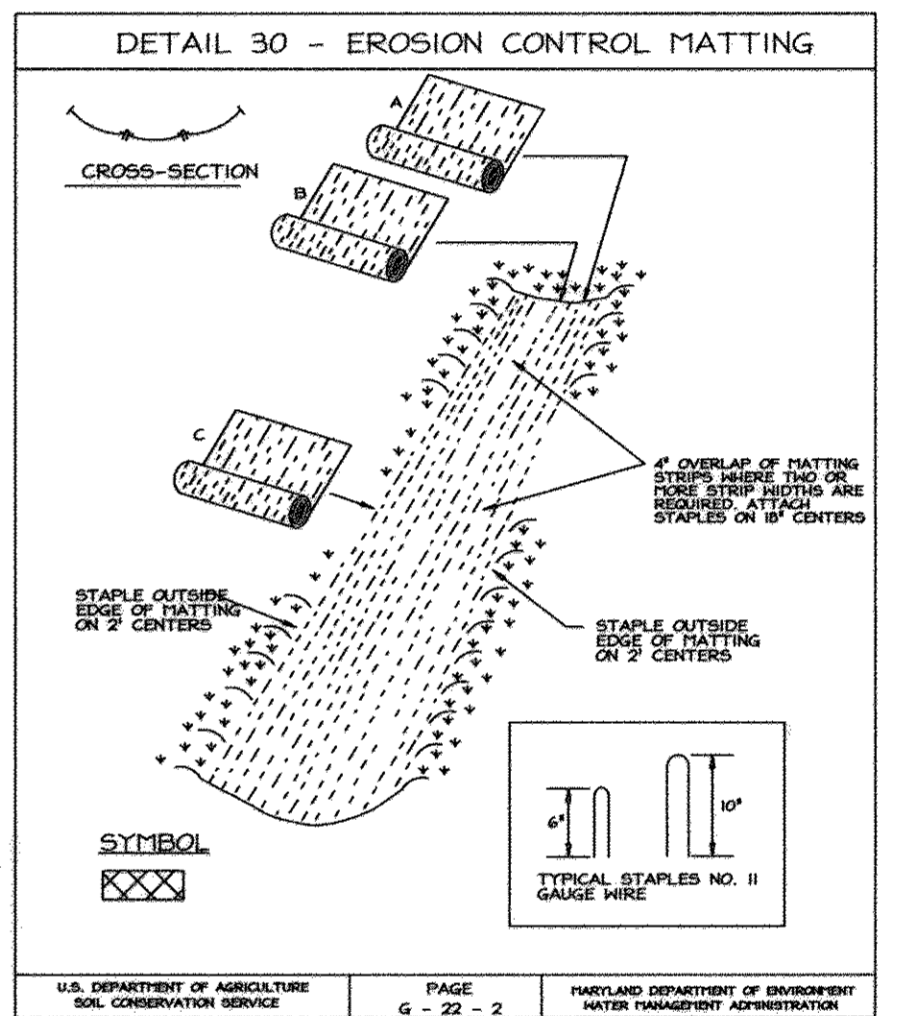
43. The "Private Forest Conservation and Stormwater Management Credit Easement" on Lots 55 and the Private Forest Conservation Easement on Lot 54 shall be owned and maintained by the property owners.

44. Public water and sewer drawings for this resubdivision, Contract No. 34-4523-D were approved on April 11, 2008.

45. Financial surety for the public sidewalk along the Newberry Drive and Judy Lane subdivision frontages shall be provided with this site development plan.

46. Water and sewer house connections for each lot must be installed under the W/S House connection program administered by the Bureau of Utilities (if not covered under the agreement for Contract No. 34-4523-D). Contact Mr. George Abbott at 410-313-3472.

47. The contractor shall maintain water and sewer service to Lot 54 during all phases of construction.



EROSION CONTROL MATTING

Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a trench, 6" in width and 2" in depth and use a tamper to conform to the channel cross-section. Secure with a row of staples, about 2' apart, from the trench edge to the center of the matting.
2. Staple the 4' overlap in the channel center using an 18" spacing between staples.
3. Before stapling the outer edges of the matting, make sure the matting is anchored and in firm contact with the soil.
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the next strip by 4', shipping channel. Reinforce the overlap with a double row of staples spaced 2' apart in a staggered pattern on either side.
6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area affected by the flow must be keyed-in.

SOILS LEGEND

HYDROLOGIC SOIL GROUP	SOIL SYMBOL	DESCRIPTION	REMARKS
B	G1C2	Glenet Loam, 8% - 15% slopes, moderately eroded.	-
C	GnB2	Glenville silt loam, 3% - 8% slopes, moderately eroded.	-

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Bruce D. Burton 6/15/10
SIGNATURE OF ENGINEER DATE

DEVELOPER'S CERTIFICATE

I HAVE CERTIFIED THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

John K. Robinson 6/17/10
SIGNATURE OF DEVELOPER DATE

REVISIONS

No.	Date	Description
1	6/15/2010 LDE, INC.	REVISE HOUSE MODEL LOT 55 / REVISE LOT GRADING LOT 55
2	6/16/10	ABANDON PORTION OF FCE #2 AND REMOVE PROPOSED SIDEWALK
3	6/18/10	ABANDON FCE #1, REMAINDER OF FCE #2 AND FCE #3

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

W. J. ... 6/15/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

K. ... 6/15/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

M. ... 6/15/10
DIRECTOR DATE

John K. Robinson 6/17/10
HOWARD SOIL CONSERVATION DISTRICT DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE STATE OF MARYLAND, LICENSE NO. 19184, EXPIRATION DATE: 6/30/11.

SIGNED *Bruce D. Burton* 6/15/10
BRUCE D. BURTON DATE

LDE, INC.
9250 Rumsey Road, Suite 106, Columbia, MD. 21045
(410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED: S.D.H.
DRAWN: G.D.W.
CHECKED: B.D.B.
DATE: 6/20/10

GRADING AND SEDIMENT CONTROL PLAN AND SOILS MAP
SCALE: 1" = 20'
DRAWING: 2 of 3
JOB NO.: 05-020.2
FILE NO.: SDFP-10-035

OWNER: Lot 54
Pat & Naomi Keehn
7090 Newberry Drive
Columbia, MD 21044

OWNER/DEVELOPER: Lot 55
Tom & Kelly Keehn
12609 Paternal Gift Drive
Highland, MD 20777
301-370-3462

STANDARD SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction. (315-1955).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", and revisions thereto.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within 7 calendar days after permanent sediment control structures, dikes, perimeter slopes and all slopes greater than 2:1, 3:1 or 4:1 are to be established or graded areas of the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, (Section G) For permanent seeding, sod, temporary seeding, and mulching. Temporary stabilization with mulch alone can only be done when recommended seeding does not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operable condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total Area of Site	1.025	Acres
Area Disturbed	0.426	Acres
Area to be roofed or paved	0.10	Acres
Area to be vegetatively stabilized	0.299	Acres
Total Cut	450	Cu. Yds.
Total Fill	450	Cu. Yds.
Offsite waste area location	N/A	
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities in excess of three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

- SEEDBED PREPARATION:** Loosen upper three inches of soil by raking, disking, or other acceptable means before seeding, if not previously loosened.
- SOIL AMENDMENTS:** In lieu of soil test recommendations, use one of the following schedules:
- PREFERRED** -- Apply 2 tons per acre dolomitic limestone (92 lb/1000sq. ft.) and 600 lb per acre 10-10-10 fertilizer (14 lb/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lb per acre 30-0-0 ureaform fertilizer (9 lb/1000sq. ft.).
 - ACCEPTABLE** -- Apply 2 tons per acre dolomitic limestone (92 lb/1000sq. ft.) and 1000 lb per acre 10-10-10 fertilizer (20 lb/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

- SEEDING** -- For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (14 lb/1000sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs per acre (14 lb/1000sq. ft.) of Kentucky 31 Tall Fescue and 2 lbs. per acre (.20 lb/1000sq. ft.) of creeping lovegrass. During the period of October 16 thru 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 Kentucky 31 Tall Fescue and mulch 2 tons of straw well anchored straw.

- MULCHING** -- Apply 1 1/2 to 2 tons per acre (70 to 90 lb/1000sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2 1/2 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 340 gallons per acre (8 gal/1000sq. ft.) for anchoring.

MAINTENANCE -- Inspect all seeding areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

- SEEDBED PREPARATION** -- Loosen upper three inches of soil by raking, disking, or other acceptable means before seeding, if not previously loosened.
- SOIL AMENDMENTS:** -- Apply 600 lbs per acre 10-10-10 fertilizer (14 lb/1000sq. ft.).
- SEEDING** -- For periods March 1 thru April 30, and from August 15 thru October 15 seed with 2-1/2 bushels per acre of annual ryegrass (3.2 lb/1000sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre (.27 lb/1000sq. ft.) of creeping lovegrass. For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

MULCHING -- Apply 1 1/2 to 2 tons per acre (70 to 90 lb/1000sq. ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2 1/2 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 340 gallons per acre (8 gal/1000sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

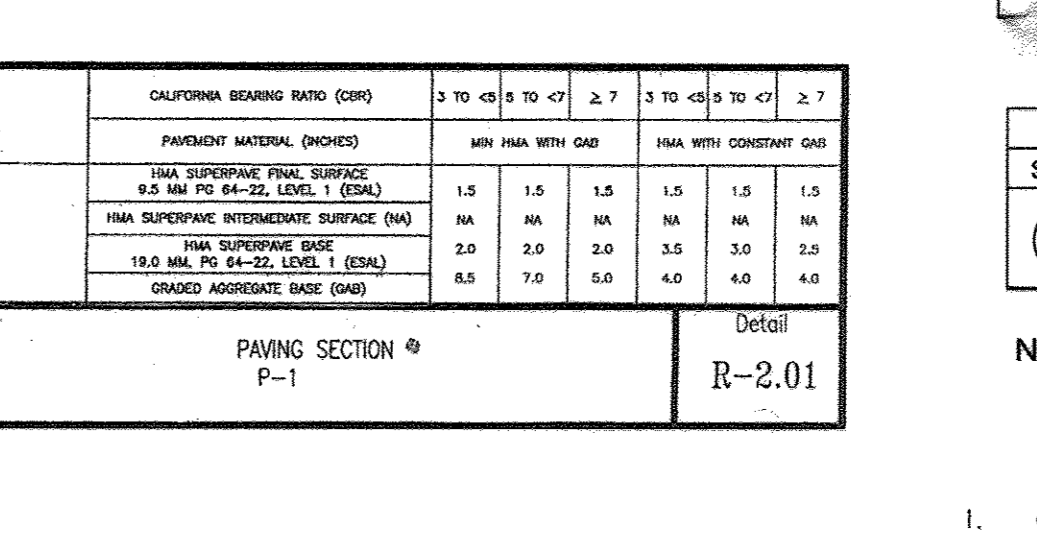
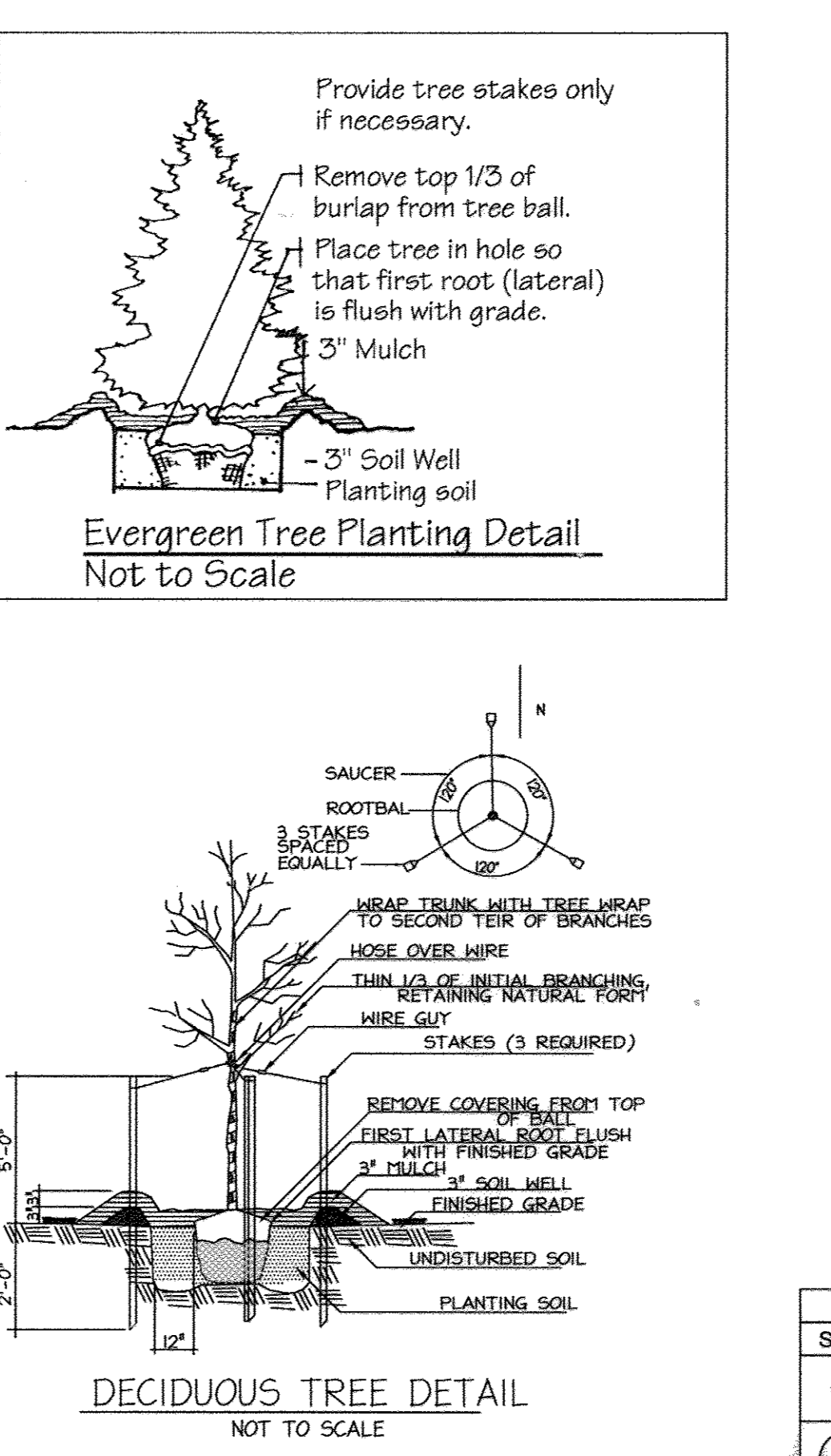
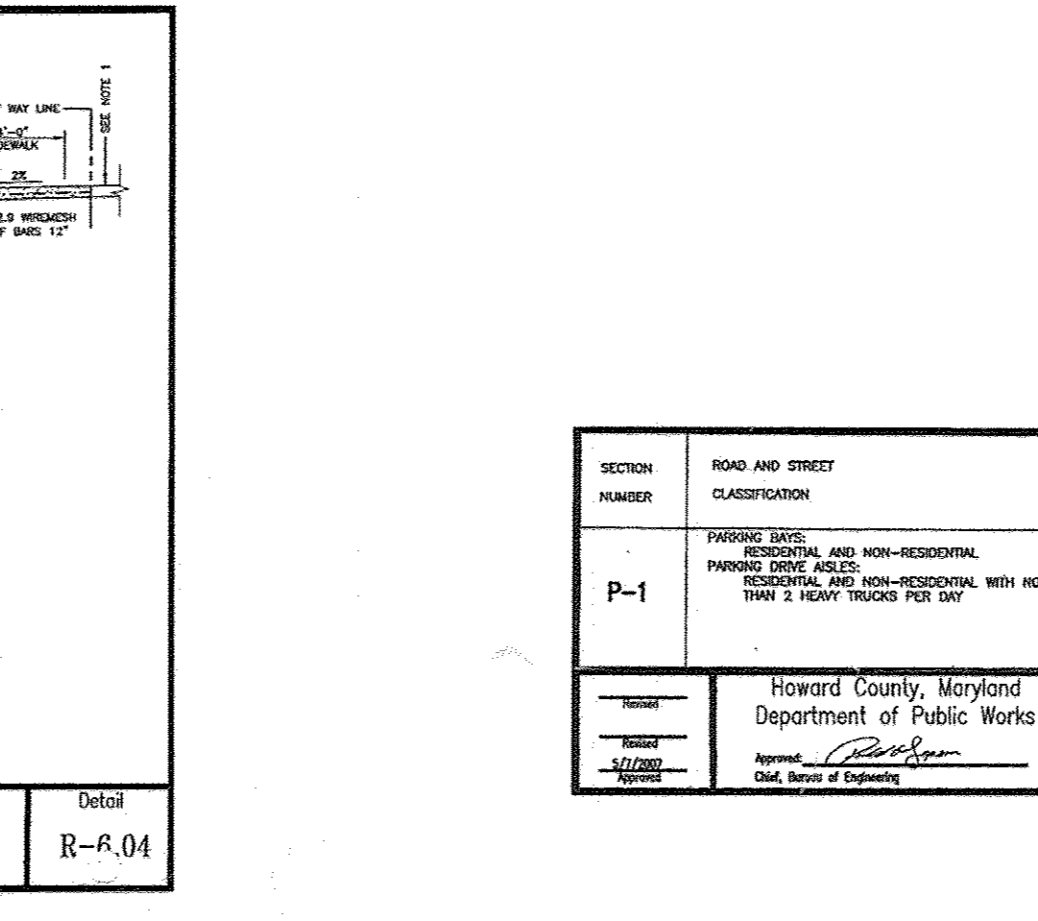
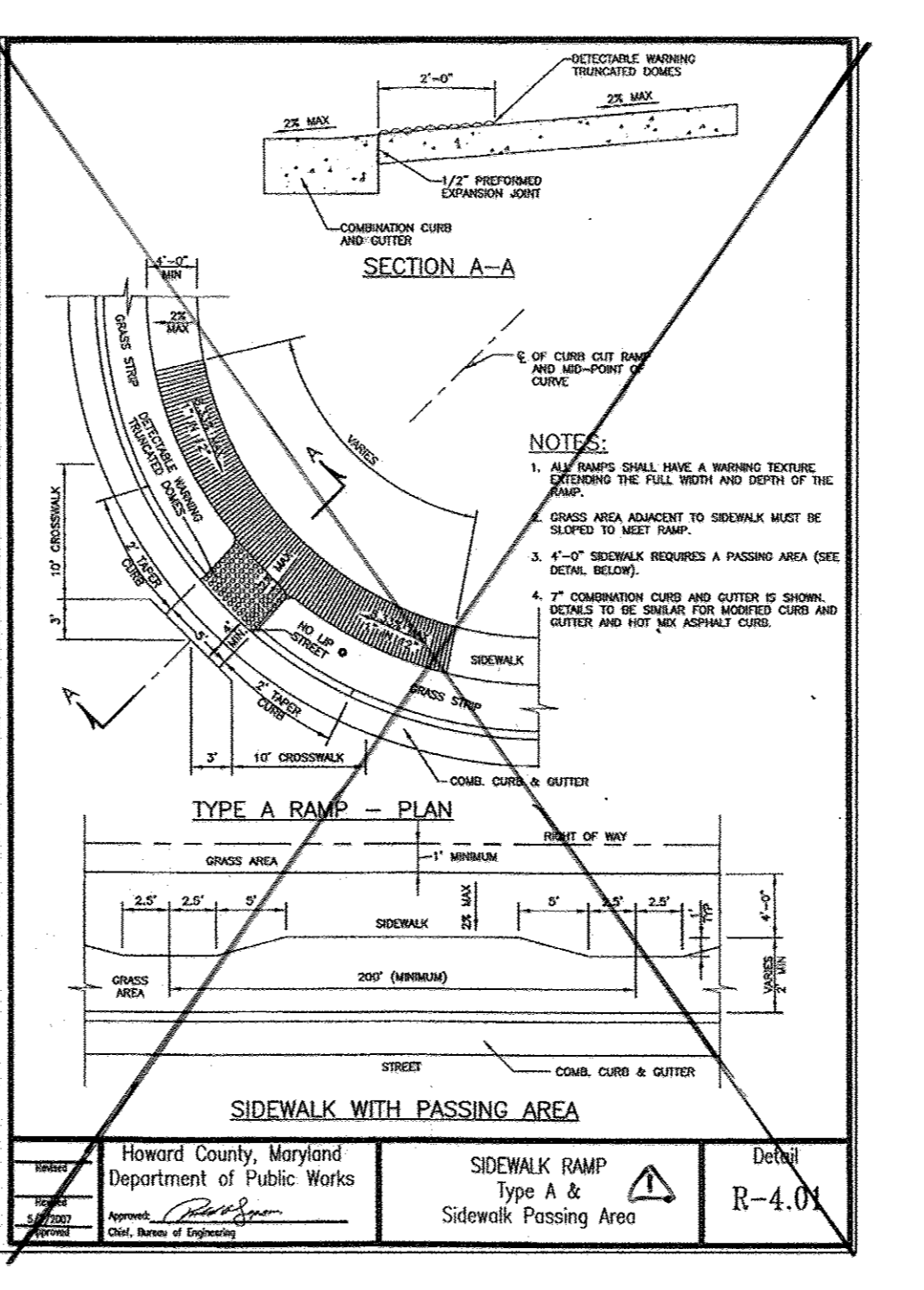
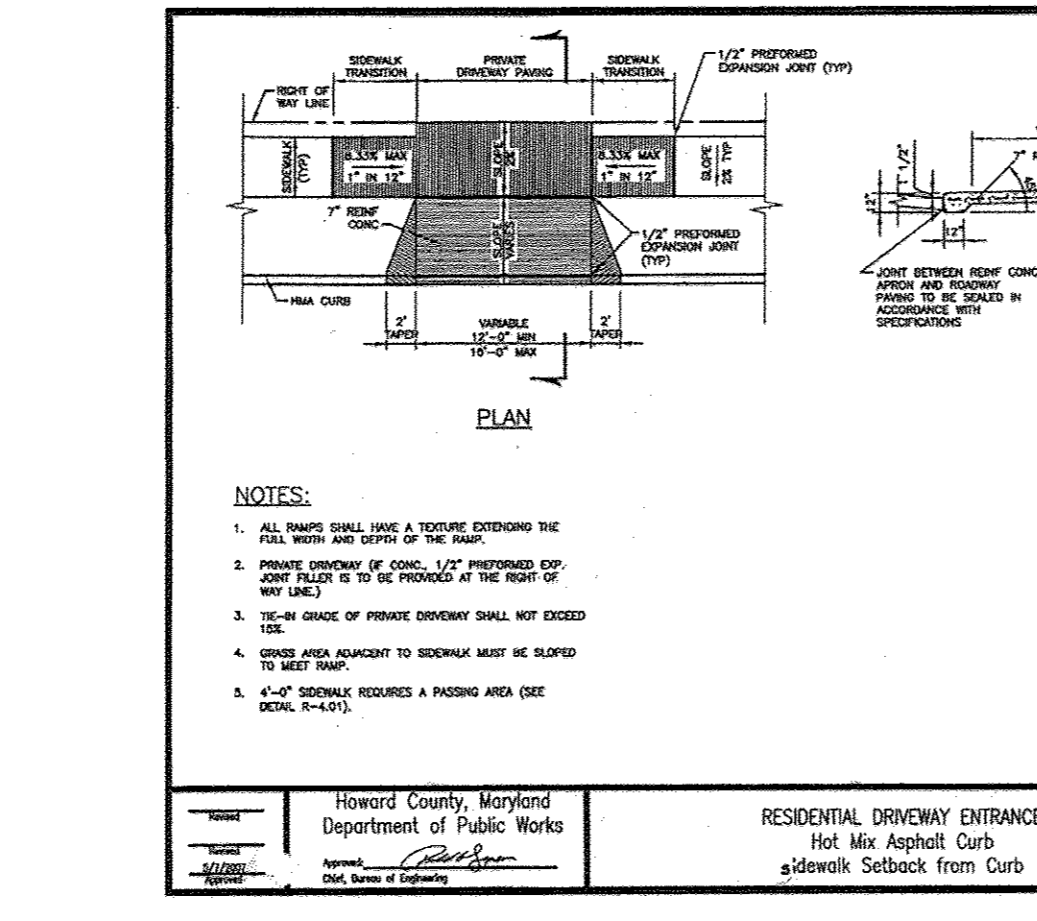
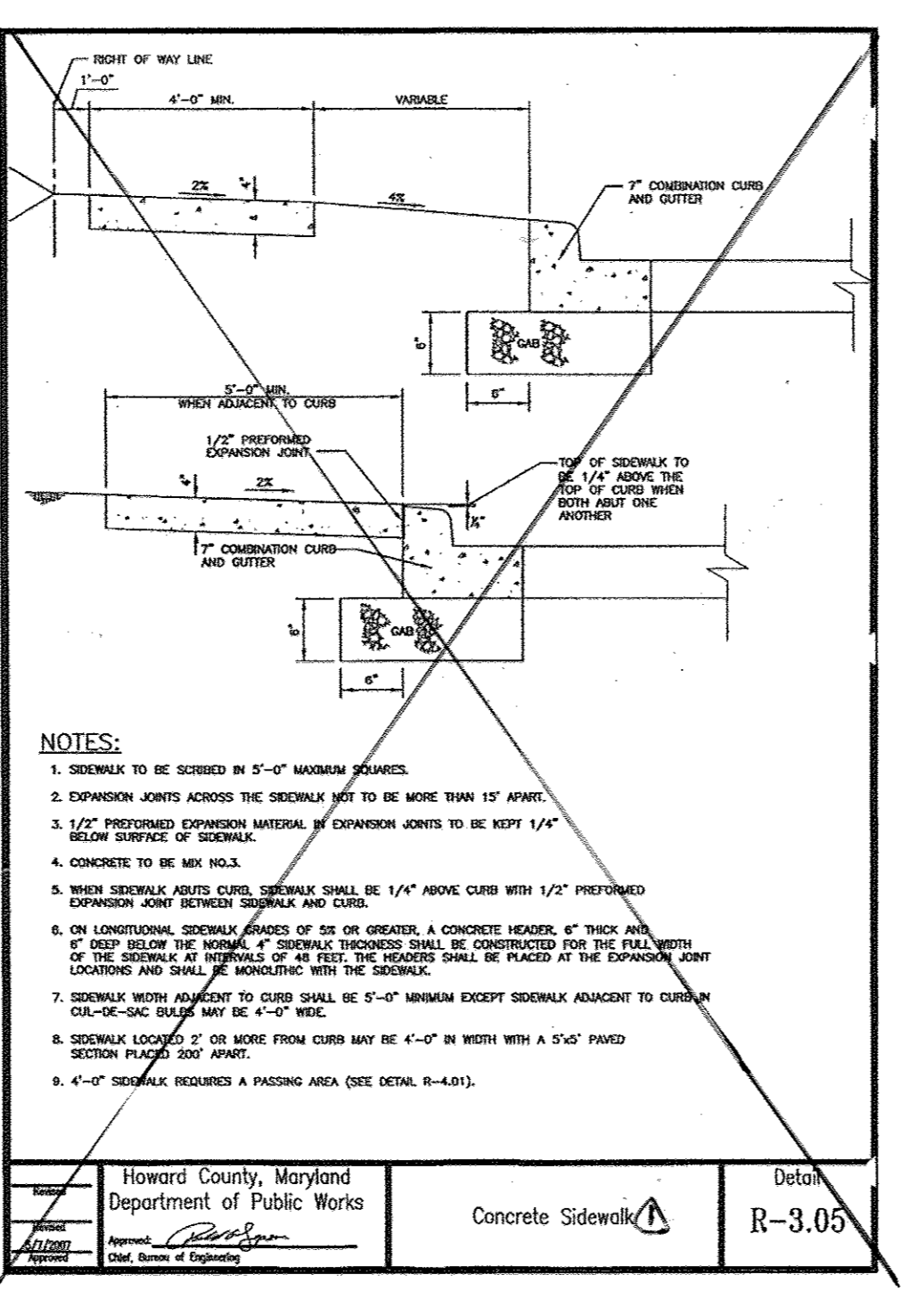
SILT FENCE

Silt Fence Design Criteria	
Slope Steepness	(Minimum) Silt Fence Length
Flatter than 50:1	unlimited
50:1 to 10:1	125 feet
10:1 to 5:1	100 feet
5:1 to 3:1	75 feet
3:1 to 2:1	50 feet
2:1 and steeper	25 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum silt fence length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

2.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

- Definition:** Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.
- Purpose:** To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
- Conditions Where Practices Apply:**
- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - The original soil is too disturbed to contain material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
 - For the 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.
- Construction and Material Specifications:**
- Topsoil salvaged from the existing site may be used provided that it meets the standards set forth in these specifications. Typically, the depth of topsoil to be salvaged for a 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.
 - Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of clumps, stones, slag, coarse fragments, gravel, sticks, trash, or other materials larger than 1 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutcracker, poison ivy, thistle, or other noxious species.
 - Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1000 square feet) prior to the placement of topsoil. Limestone shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
 - For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
 - For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - 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.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having sulfate sulfur content greater than 5000 parts per million shall not be used.
 - No soil or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
 - Topsoil substitution or amendment, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.



SCHEDULE A PERIMETER LANDSCAPE EDGE

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type	B	A
Linear Feet of Roadway-Frontage/Perimeter	184 L.F.	131 L.F. (170 L.F. Interior line exempt)
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	NO	YES - 131 L.F.
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	NO	NO
Number of Plants Required (Shade Trees, Evergreen Trees, Shrubs)	1:50 = 4 1:40 = 5	1:60 - Obligation met with existing vegetation
Number of Plants Provided (Shade Trees, Evergreen Trees, Other Trees (2:1 substitution), Shrubs (10:1 substitution), Credits below if needed)	4 5	N/A

LANDSCAPE PERIMETER TABLE

PERIMETER NO.	LINEAR FOOTAGE	EDGE TYPE	ADJACENT LAND USE
1	**170 L.F.	N/A	SFD
2	**110 L.F.	N/A	SFD
3	184 L.F.	A	SFD
4	131 L.F.	A	SFD

TOTAL LENGTH: **595 L.F.

*Note: This lot line is interior to the resubdivision and is exempt from the perimeter landscape requirements.
 **Note: Perimeter # 2 is exempt from the landscaping requirements, as the proposed house will face toward Newbury Drive.
 ***Note: The total length shown above includes perimeter No. 1 & 2 see above note.

Credit for Existing Vegetation and Exemptions:
 1) Perimeter # 1 - 170 L.F. - exempt
 2) Perimeter # 2 - 110 L.F. - exempt
 3) Perimeter # 3 - 184 L.F. - No credit
 4) Perimeter # 4 - 131 L.F. - credit

LANDSCAPE SCHEDULE

SYMB.	COMMON NAME	BOTANICAL NAME	QTY	SIZE	REMARKS
(Symbol)	White Pine	Pinus strobus	5	5 ft. - 6' HT	B#B
(Symbol)	Red Sunset Red Maple	acer rubrum	4	2 1/2" - 3" Cal B&B	B#B

STREET TREE SCHEDULE

SYMB.	COMMON NAME	BOTANICAL NAME	QTY	SIZE	REMARKS
(Symbol)	Pin Oak	Quercus palustris	11	2 1/2" - 3" Caliper	B & B

Note: The total road frontage for the resubdivision is 426 L.F. Street trees required at a ratio of 1:40. Therefore, 426 / 40 = 11 Trees

LANDSCAPE PLAN GENERAL NOTES

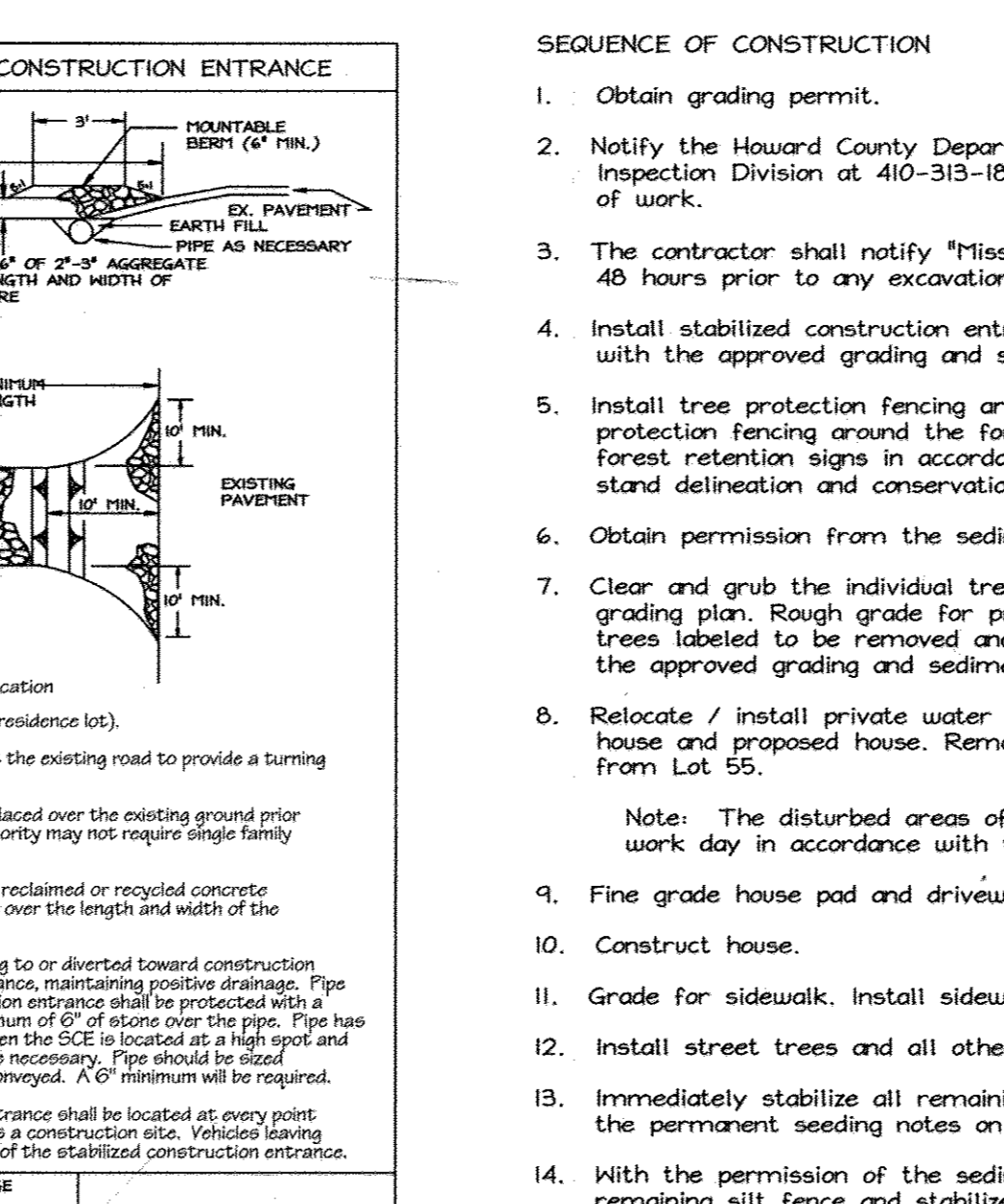
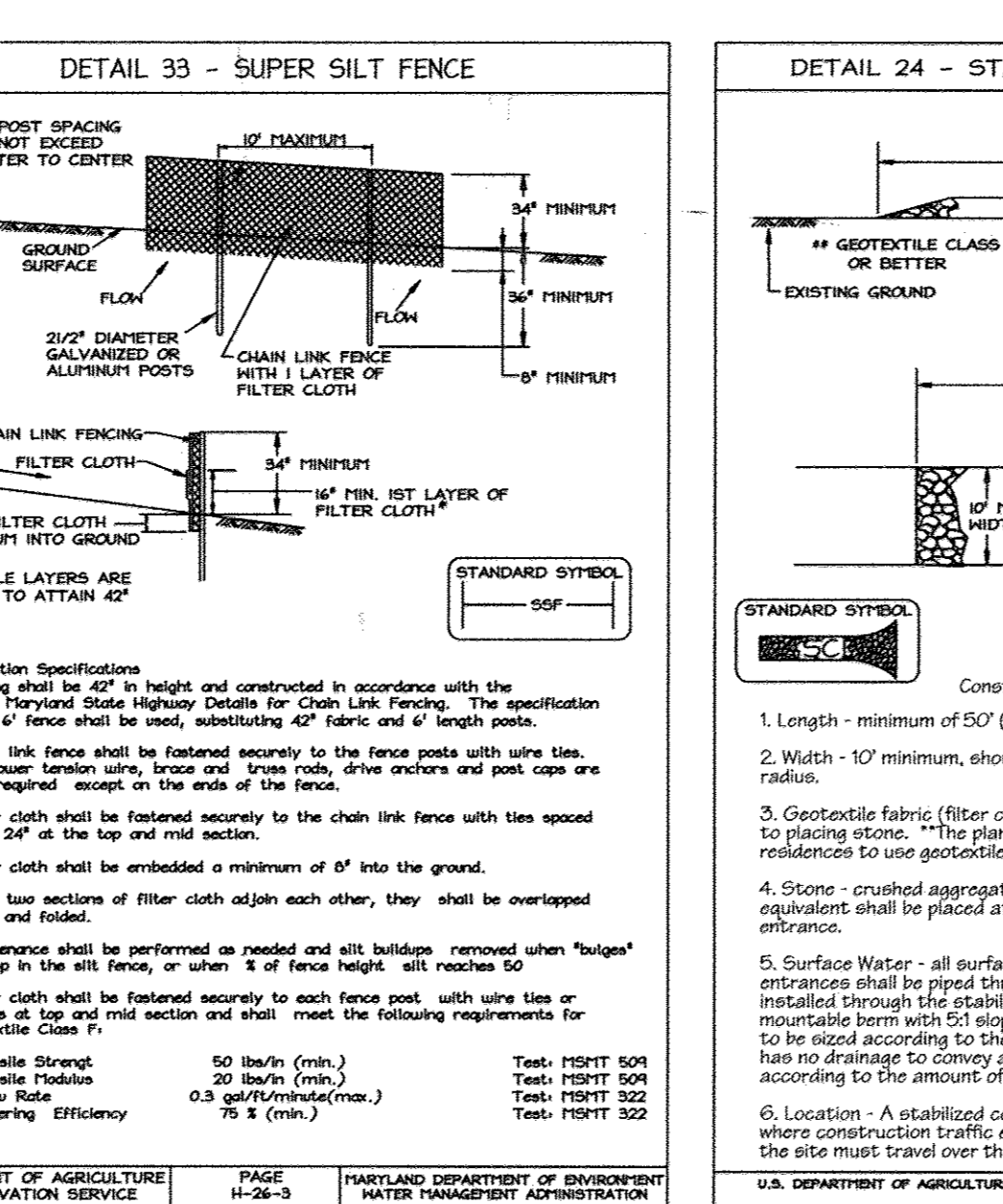
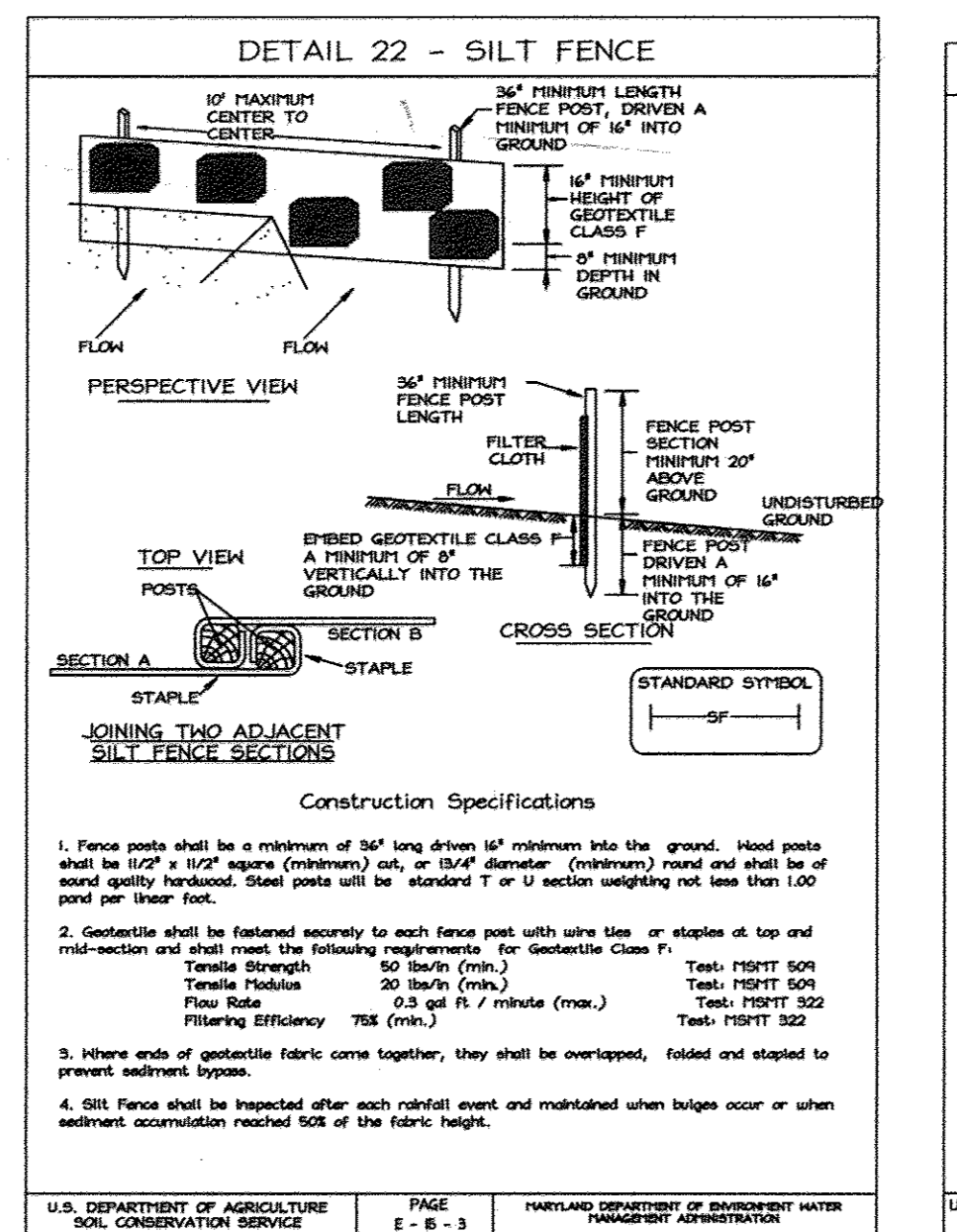
- Contractor shall contact "Miss Utility" (800-257-7777) and shall verify the location of all underground utilities within the project area prior to installation of plant material.
- Proposed locations of plant material shall be staked in the field by the contractor for approval by owner's representative prior to planting.
- Plant material and beds shall receive a minimum 3-inch depth of mulch.
- All areas disturbed by planting operations shall be repaired by the contractor to the satisfaction of the owner's representative.
- Quantities of trees, evergreens, and shrubs noted on the plant list are based upon the graphic symbols shown on the drawings.
- Contractor shall provide and install these items based upon graphic symbol quantities. Contact owner's representative if a difference is found between the quantities noted in the plant list and the symbol count of plant materials shown on the drawings.
- Quantities of groundcovers, perennials, annuals, bulbs, and ornamental grasses shall be as noted in the plant list regardless of the number of graphic symbols shown on the drawings.
- All plant materials shall be nursery grown and shall comply with the American standard for nursery stock (ansi z60.1), latest edition, published by the American association of nurserymen.
- All trees to conform to the American association of nurserymen's standards: section 1.1.2 - height of branching, all trees to be matched.
- All plant materials to be full heavy specimens.
- All areas within the limit of disturbance either on pavements, walks, walls and planting beds shall be seeded lawn.
- Landscaping for this project is provided in accordance with the latest edition of the Howard County Landscape Manual. Financial surety for the required landscaping (15 shade trees and 5 evergreens) will be posted as part of the developer agreement for Lots 55 and (54 for street tree installation) in the amount of \$5,250.00. The landscape inspection fee of \$100.00 was paid with F07-171.

SEQUENCE OF CONSTRUCTION

- Obtain grading permit. 1 Day
 - Notify the Howard County Department of Public Works/Construction Inspection Division at 410-313-1880 at least 24 hours prior to the start of work. 1 Day
 - The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done. 1 Day
 - Install stabilized construction entrance and silt fence in accordance with the approved grading and sediment control plan. 1 Day
 - Install tree protection fencing around all trees to remain, install tree protection fencing around the forest conservation easements and install forest retention signs in accordance with the approved simplified forest stand delineation and conservation plan. (F07-171) 2 Days
 - Clear and grub the individual trees shown to be removed on the approved grading plan. Rough grade for proposed driveway and house. Remove trees labeled to be removed and rough grade site in accordance with the approved grading and sediment control plan. 3 Days
 - Relocate / install private water and sewer lines for both the existing house and proposed house. Remove existing automatic sprinkler system from Lot 55. 3 Days
 - Note: The disturbed areas of the site shall be stabilized at the end of each work day in accordance with the temporary seeding notes on sheet 3. 3 Days
 - Fine grade house pad and driveway. Install driveway base. 4 Days
 - Construct house. 3-1/2 Months
 - Grade for sidewalk. Install sidewalk in accordance with the approved plan. 3 Days
 - Install street trees and all other landscaping. 2 Days
 - Immediately stabilize all remaining disturbed areas in accordance with the permanent seeding notes on sheet 3. 1 Day
 - With the permission of the sediment control inspector, remove the remaining silt fence and stabilized construction entrance. 1 Day
 - Install surface paving for new private driveway. 1 Day
 - With the permission of the sediment control inspector, remove any remaining sediment control devices, and stabilize any remaining disturbed areas in accordance with the permanent seeding notes on sheet 3. 1 Day
- TOTAL ESTIMATED CONSTRUCTION TIME: 5 Months

REVISIONS

No.	Date	Description
1	4/6/17	REMOVE SIDEWALK, HDGP RAMP DETAILS



Professional Certification

Steven D. Heiss
 Qualified Professional, MDFCA

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SEDIMENT CONTROL DIVISION.

Signature: [Signature]
 Date: 6/17/10

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SEDIMENT CONTROL DIVISION.

Signature: Bruce D. Burton
 Date: 6/15/10

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY 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 FIELDING ON-SITE INSPECTIONS BY THE HOWARD COUNTY SEDIMENT CONTROL DIVISION OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Signature: [Signature]
 Date: 6/17/10

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE STATE OF MARYLAND, LICENSE NO. 19184, EXPIRATION DATE: 6/30/11

SIGNED: Bruce D. Burton
 BRUCE D. BURTON
 DATE: 6/15/10

LDE, INC.
 9250 Rumsey Road, Suite 106, Columbia, MD. 21045
 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax)

DESIGNED	CONSTRUCTION, SEDIMENT CONTROL & LANDSCAPING NOTES & DETAILS	SCALE
S.D.H.	KEEHN ESTATES	1" = 20'
DRAWN	JOB NO.	FILE NO.
G.D.W.	05-020.2	SDP-10-035
CHECKED	DATE	
B.D.B.	6/20/10	

OWNER - Lot 54
 Paul & Nellie Keen
 7030 Newbury Drive
 Columbia, MD 21044

OWNER/DEVELOPER - Lot 55
 Tom & Nellie Keen
 12528 Federal Gate Drive
 Highland, MD 20777
 301-370-3460