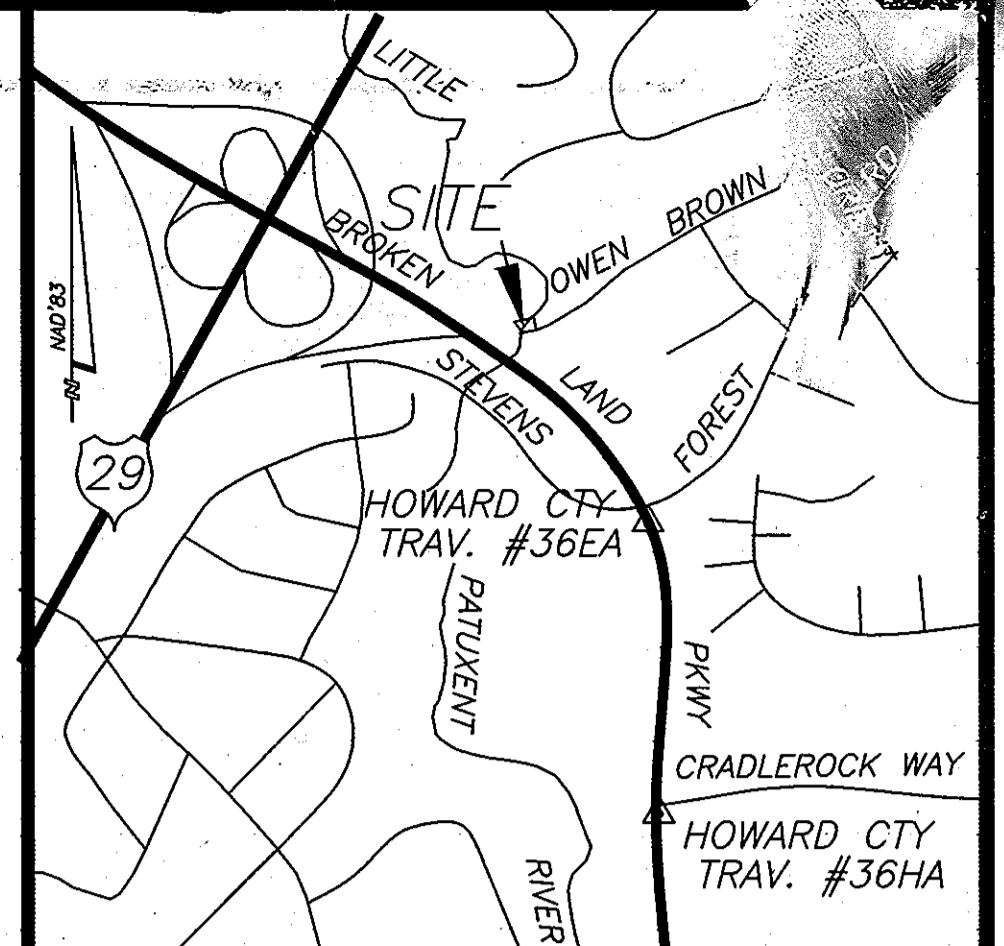
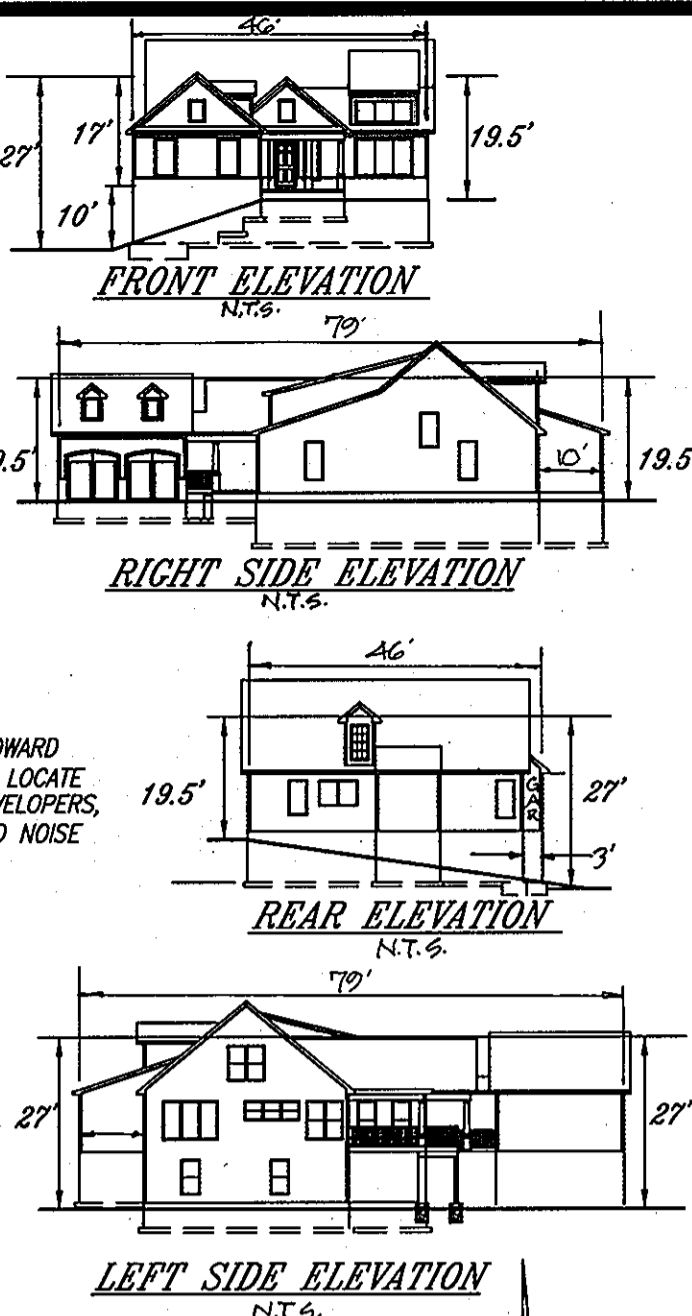


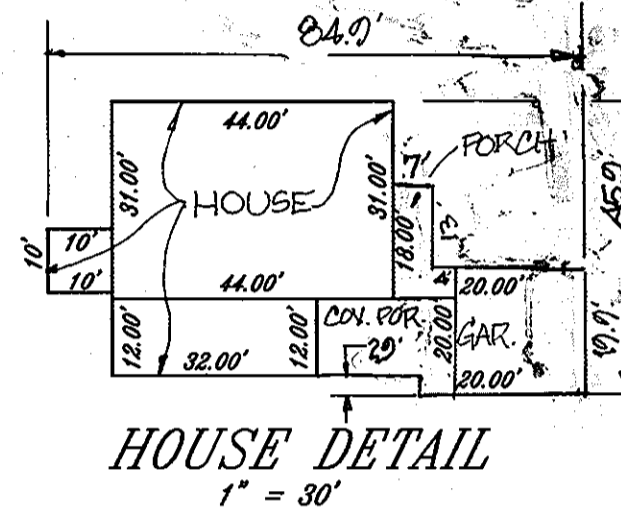
GENERAL NOTES

- THE SUBJECT PROPERTY IS ZONED R-20 PER THE 2/2/2004 COMPREHENSIVE ZONING PLAN AND THE COMP. LITE ZONING AMENDMENTS EFFECTIVE 7/28/06.
- 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 SETBACK.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE & OCCUPANCY PERMIT FOR ANY NEW DWELLING TO INSURE SAFE ACCESS FOR FIRE & EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH: 12' (16' if serving more than one residence).
 - SURFACE: 6" of compacted crusher run base w/ tar & chip coating (1-1/2" min.).
 - GEOMETRY: Max. 15% grade, max. 10% grade change, and min. 45' turning radius.
 - STRUCTURES (culverts/bridges): capable of supporting 25 gross tons (H25 loading).
 - DRAINAGE ELEMENTS: capable of safely passing 100-yr. flood with no more than 1 foot depth over driveway surface.
 - MAINTENANCE: sufficient to insure all-weather use.
- THE 65dBA NOISE CONTOUR LINE DRAWN ON THIS DEVELOPMENT PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY, 1992, AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 65dBA NOISE EXPOSURE. THE 65dBA NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALEXY DRISCOLL, BUILDERS AND FUTURE RESIDENTS THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE US DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- NO LANDSCAPE SURETY FEE IS REQUIRED.
- THE USE-IN-COMMON DRIVEWAY MAINTENANCE AGREEMENT FOR A SHARED DRIVEWAY SERVING LOTS 1, 2, & 3 WAS RECORDED IN THE HOWARD COUNTY LAND RECORDS ON 8/3/2007 IN LIBER 2996, FOLIO 414.
- 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/BUREAU OF ENGINEERING/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 AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREETS AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- THE EXISTING BOUNDARY AND TOPOGRAPHY SHOWN IS BASED ON A FIELD-RUN SURVEY BY SHANBERGER & LANE IN DECEMBER 2003 TIED TO HOWARD COUNTY CONTROL STATIONS:

HORIZONTAL: NAD83, VERTICAL: NAD83	HOWARD COUNTY MONUMENT NO. 36EA	EL. 354.928	N 556,996,8037
HOWARD COUNTY MONUMENT NO. 36HA	EL. 292.286	E 1,354,335,2939	N 555,118,6240
BENCHMARK: NAIL SET	TRaverse No. 1	EL. 324.25	E 1,354,381,4089
BENCHMARK: NAIL SET	TRaverse No. 2	EL. 294.05	
- WATER IS PUBLIC (CONTRACT #710-D-W)
- SEWER IS PUBLIC (CONTRACT #319 W&S)
- EXISTING UTILITIES SHOWN HEREON WERE FIELD-LOCATED, WHERE POSSIBLE, AND SHOWN PER AVAILABLE PLANS OF RECORD IN OTHER CASES.
- WATER AND SEWER SERVICE TO THESE LOTS WILL BE GRANTED UNDER THE PROVISIONS OF SECTION 18.122.B OF THE HOWARD COUNTY CODE.
- PUBLIC WATER AND SEWER ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS AVAILABLE AT THAT TIME.
- FOREST CONSERVATION REQUIREMENTS FOR THIS LOT HAVE BEEN SATISFIED WITH F-05-36 BY A FEE IN LIEU PAYMENT OF \$217,000 FOR 0.10 AC± REFORESTATION OBLIGATION, AND RETENTION OF 0.26 AC± ON SITE IN A FOREST CONSERVATION EASEMENT ON OPEN SPACE LOT 3.
- EXISTING PAVED DRIVEWAY ENTRANCE TO REMAIN.
- THIS LOT IS SUBJECT TO THE CONDITIONS OF WP-05-063 WHICH ON 3/24/05 APPROVED WAIVERS OF SECTION 16.116(c)(3) (to permit part of the required 75' stream buffer on Lot 2) AND OF SECTION 16.120(b)(4)(ii)(c) (to permit a 17-foot setback from the stream buffer for house construction on Lot 2 rather than the required 35-foot setback to the building envelope). WP-05-063 REQUIRES THAT ANY FUTURE HOUSE ADDITIONS OR EXTENSIONS COMPLY WITH THE REDUCED 17' BRL, AND ANY FUTURE DECKS MAY PROJECT 10' OVER THE REDUCED BRL.
- STORMWATER MANAGEMENT FOR THIS LOT IS BEING PROVIDED BY USING STORMWATER MANAGEMENT CREDITS:
 - NATURAL AREA CONSERVATION CREDIT.
 - SHEET FLOW TO BUFFER CREDIT IN CONJUNCTION WITH A PROPOSED LEVEL SPREADER. (The level spreader is privately maintained.)
- PERIMETER LANDSCAPING FOR LOT 2 SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL AS SHOWN ON A REQUEST FOR ALTERNATIVE COMPLIANCE ON FILE WITH F-05-36. THE LANDSCAPING PROPOSED IN THIS SUBMISSION IS THE SAME AS THAT PROPOSED WITH F-05-36.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY LINE AND NOT ONTO THE PIPESTEM LOT DRIVEWAY.
- THERE ARE NO WETLANDS OR STREAMS OR FOREST CONSERVATION AREAS ON THIS LOT. THERE IS A STREAM BUFFER THROUGH PART OF THIS LOT. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, OR PLACEMENT OF NEW STRUCTURES IS PERMITTED WITHIN THE STREAM BUFFER.
- THE AREAS SHOWN HEREON ARE NOT EXACT BUT ARE ROUNDED TO THE NEAREST 1 SQUARE FOOT AND THE NEAREST 0.0001 ACRE.
- B.R.L. DESIGNATES BUILDING RESTRICTION LINE
- ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- DUE TO THE ORIENTATION OF THE HOUSE ON LOT 2, ANY ADDITION OF A PORCH OR DECK CANNOT ENROACH INTO THE 10' SIDE BRL.



VICINITY MAP
SCALE: 1"=2000'
ADC MAP 15, GRID H9



HOUSE DETAIL
1"=30'

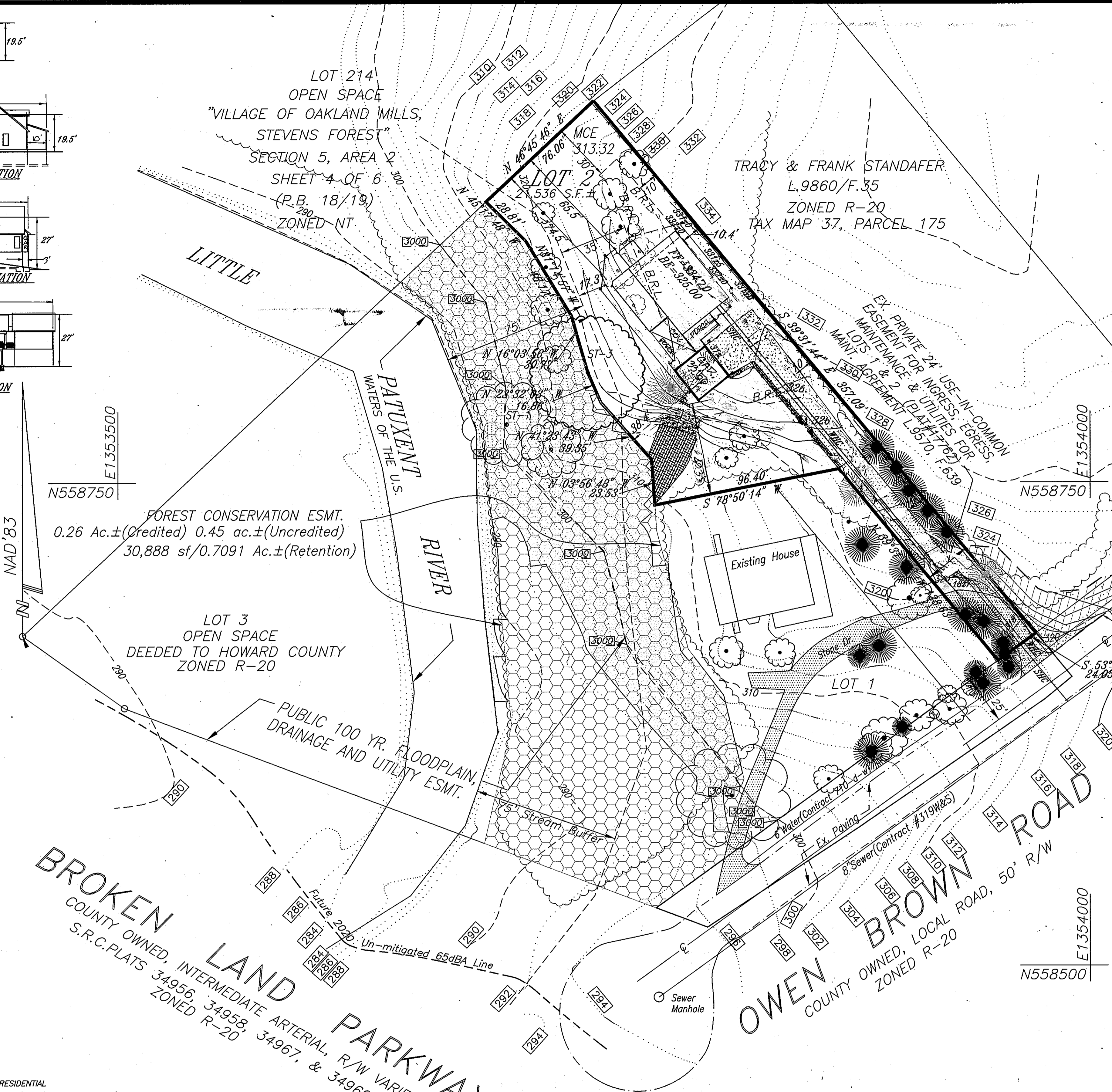
- LEGEND:**
- DESIGNATES LIMITS OF DISTURBANCE
 - DESIGNATES SOIL TYPE BOUNDARY
 - DESIGNATES SILT FENCE
 - DESIGNATES EX. FOREST CONSERVATION ESMT.
 - DESIGNATES EX. DRIVEWAY
 - DESIGNATES PROPOSED DRIVEWAY
 - DESIGNATES SLOPES >15% OR USE-IN-COMMON ACCESS ESMT.
 - DESIGNATES EXISTING CONTOUR
 - DESIGNATES PROPOSED CONTOUR

ADDRESS CHART

LOT NO.	STREET ADDRESS
2	9836 OWEN BROWN ROAD

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL
LOTS 1, 2, & 3 DUGGAN PROEPRTY	N/A	2/315
L/F 2996/414	GRID # 8 ZONE R-20 TAX MAP 36	ELECT. DISTRICT 6 CENSUS TRACT 6069.01
WATER CODE:	SEWER CODE:	



BROKEN LAND PARKWAY
COUNTY OWNED, INTERMEDIATE ARTERIAL, R/W VARIES
S.R.C. PLATS 34956, 34958, 34967, & 34969

OWEN BROWN ROAD
COUNTY OWNED, LOCAL ROAD, 50' R/W

SITE ANALYSIS DATA CHART

- A. TOTAL PROJECT AREA: 21,536 S.F.±
- B. AREA OF PLAN SUBMISSION: 21,536 S.F.±
- C. LIMIT OF DISTURBED AREA: 12,968 S.F.±
- D. PRESENT ZONING DESIGNATION: R-20
- E. EXISTING AND PROPOSED USE: VACANT/SINGLE FAMILY RESIDENTIAL
- F. FLOOR SPACE: PROPOSED (TOTAL) 4146 S.F.(2338 1 FLOOR) + (1848 2nd FLOOR)
- G. TOTAL NUMBER OF UNITS ALLOWED: 1
- H. TOTAL NUMBER OF UNITS PROPOSED ON SUBMISSION: 1
- I. NUMBER OF EMPLOYEES: N/A
- J. NUMBER OF PARKING SPACE REQUIRED: 2
- K. NUMBER OF PARKING SPACE PROVIDED: 2
- L. OPEN SPACE: NONE
- M. AREA OF RECREATIONAL OPEN SPACE: NONE
- N. BUILDING COVERAGE: 2,338 SQ.FT.± OR 10.86% OF GROSS AREA
- O. APPLICABLE DPZ FILE REFERENCES: F-05-36, WP-05-63
- P. N/A

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	PLAN VIEW
2	GRADING, EROSION & SEDIMENT CONTROL PLAN & DETAILS
3	LANDSCAPING PLAN/SOILS MAP
4	STORMWATER MANAGEMENT PLAN
5	STORMWATER MANAGEMENT DETAILS

OWNER/BUILDER:
ROBERT & SUSAN DUGGAN
9840 OWEN BROWN ROAD
COLUMBIA, MD. 21045
(410) 997-4793

DESIGNED: GSS
DRAWN: GSS
CHECKED: GSS
DATE: 3/13/2007

SITE DEVELOPMENT PLAN
LOT 2 DUGGAN PROPERTY
SINGLE FAMILY DWELLING
PLAT NUMBER 17762 LIBER 2996/FOLIO 414
TAX MAP 36 GRID 8 PARCEL 315
6TH ELECTION DIST. HOWARD COUNTY MARYLAND
SCALE: 1"=30'
NOVEMBER 11, 2006

SCALE: 1"=30'
DRAWING: 0314sdp1
JOB NO.: 03-14
COUNTY FILE #'S: F-05-36, WP-05-63

SHEET 1 OF 5

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER: [Signature] DATE: 3/14/07

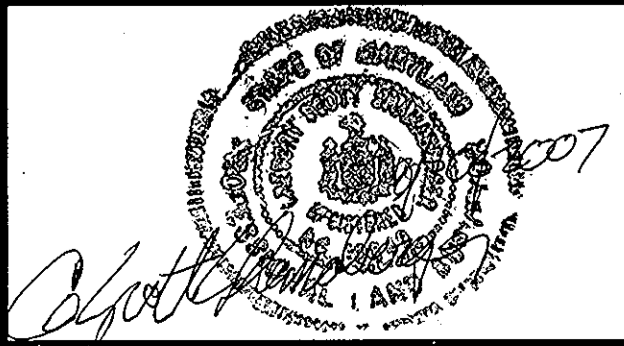
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] DATE: 3/14/07

CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] DATE: 3/14/07

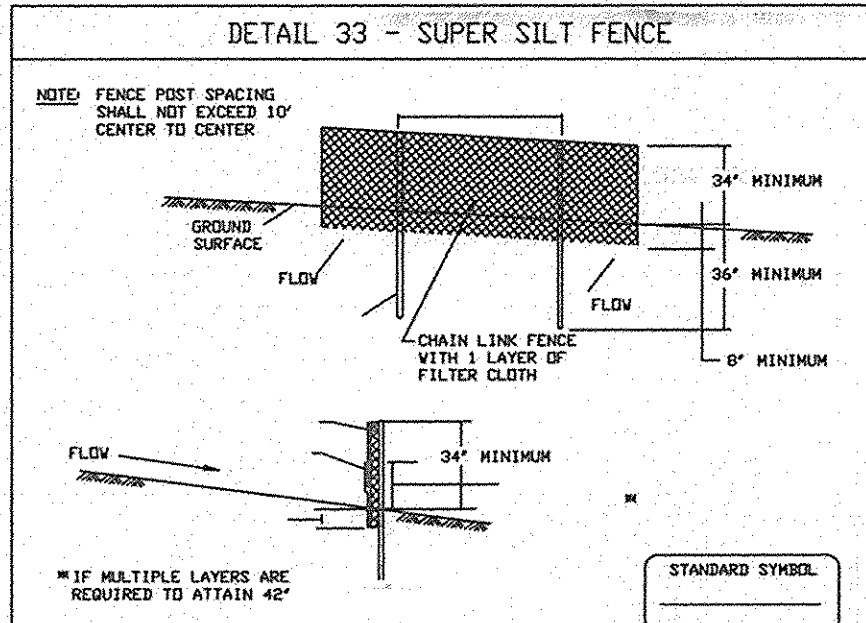
DIRECTOR: [Signature] DATE: 3/14/07

SHANBERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 201
ELLCOTT CITY, MD., 21043
(410)-461-9563
home@shanlane.com



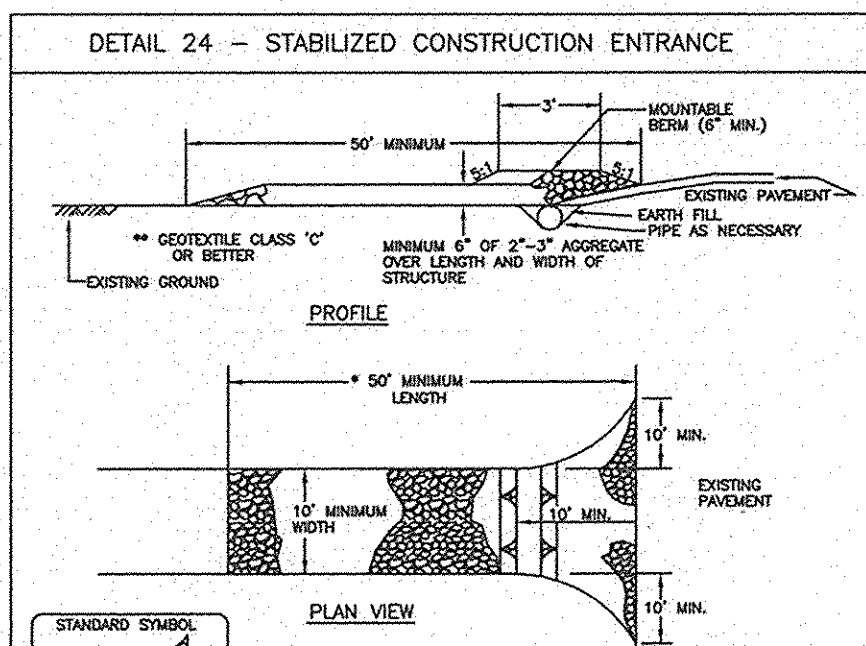
REVISED GRADING & HOUSE TO REFLECT AS-BUILT CONDITIONS 11/21/08

BY	NO.	REVISION	DATE



- CONSTRUCTION SPECIFICATIONS**
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Detention for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
 - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 - Filter cloth shall be embedded a minimum of 6" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and fastened.
 - Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
 - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class P:

Tensile Strength	50 lbs/in (min.)	Test MSMT 509
Tensile Modulus	80 lbs/in (min.)	Test MSMT 509
Flow Rate	0.3 gal/minute (max.)	Test MSMT 502
Filtering Efficiency	75% (min.)	Test MSMT 302
- U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE 28-2, MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, WATER MANAGEMENT ADMINISTRATION



- CONSTRUCTION SPECIFICATIONS**
- LENGTH - minimum of 50' (50' for single residence lot).
 - WIDTH - 10' minimum, should be placed at the existing road to provide a turning radius.
 - GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. THE PLAN APPROVAL, AND THE USE OF STABILIZED CONSTRUCTION ENTRANCES TO USE GEOTEXTILE.
 - STONE - QUARRIED AND/OR TO 3" OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
 - SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNDABLE BERM WITH 2:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SETTED ACCORDING TO THE SLOPING WITH THE USE OF A HIGH SPOT AND HAS NO UNDESIRABLE SLOPING TO THE ENTRANCE. THE USE OF A HIGH SPOT AND HAS NO UNDESIRABLE SLOPING TO THE ENTRANCE. THE USE OF A HIGH SPOT AND HAS NO UNDESIRABLE SLOPING TO THE ENTRANCE.
 - LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.
- U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE F-17-3, MARYLAND DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, WATER MANAGEMENT ADMINISTRATION

- 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 (113-1825).
 - ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
 - FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 1:1.
 - 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
 - ALL SEDIMENT TRAPS/DIAPHRAGMS MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER. SIGNS SHALL BE MAINTAINED AND REPAIRED AS NECESSARY. SEE HOWARD COUNTY EROSION MANUAL FOR FENCING REQUIREMENTS.
 - 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 FOR PERMANENT SEEDING AND MULCHING (201). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING PRACTICES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
 - ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 - SITE ANALYSIS:

TOTAL AREA OF SITE	21,536 SF
AREA DISTURBED	12,932 SF
AREA TO BE PROTECTED OR PAVED	4,802 SF
AREA TO BE TEMPORARILY STABILIZED	3,802 SF
TOTAL CUT	467 CY
TOTAL FILL	467 CY
 - OPERATE WASTE/BORROW AREA LOCATION, SITE WITH AN APPROVED AND ACTIVE GRADING PERMIT.
 - 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 DEPT SEDIMENT CONTROL INSPECTOR.
 - ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON THE COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL. BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE MAINTAINED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS OBTAINED.
 - TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
 - THE TOTAL AMOUNT OF SUPER SILT FENCE = 245 LF.

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED. SEEDING PREPARATION: LOOSEN UPPER 3 INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS - USE THE FOLLOWING SCHEDULES:

- PREPARED - APPLY 2 TONS PER ACRE DOMOLIC LIMESTONE (20 LBS./SQUARE FEET) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (20 LBS./1000 SQUARE FEET) BEFORE SEEDING. HARROW OR DISC AND UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 400 LBS. PER ACRE 30-0-0 UREA-FORM FERTILIZER (80 LBS./1000 SQUARE FEET).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOMOLIC LIMESTONE (20 LBS./1000 SQUARE FEET) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (20 LBS./1000 SQUARE FEET) BEFORE SEEDING. HARROW OR DISC WHO UPON THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THRU APRIL 30, AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/2 BUSHEL PER ACRE OF ANNUAL RYE (12 LBS./1000 SQUARE FEET) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (37 LBS./1000 SQUARE FEET) FOR THE PERIOD NOVEMBER 1 THRU FEBRUARY 28. PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQUARE FEET) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OF 218 GAL PER ACRE (5 GAL./1000 SQUARE FEET) OF EMULSIFIED ASPHALT FLAT AREAS ON SLOPES 6 FT. OR HIGHER, USE 348 GAL PER ACRE (6 GAL./1000 SQUARE FEET) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS DISCING OR OTHER RESEEDINGS.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED. SEEDING PREPARATION: LOOSEN UPPER 3 INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS - USE THE FOLLOWING SCHEDULES:

- PREPARED - APPLY 2 TONS PER ACRE DOMOLIC LIMESTONE (20 LBS./SQUARE FEET) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (20 LBS./1000 SQUARE FEET) BEFORE SEEDING. HARROW OR DISC AND UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 400 LBS. PER ACRE 30-0-0 UREA-FORM FERTILIZER (80 LBS./1000 SQUARE FEET).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOMOLIC LIMESTONE (20 LBS./1000 SQUARE FEET) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (20 LBS./1000 SQUARE FEET) BEFORE SEEDING. HARROW OR DISC WHO UPON THREE INCHES OF SOIL.

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MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQUARE FEET) OF UNROTTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OF 218 GAL PER ACRE (5 GAL./1000 SQUARE FEET) OF EMULSIFIED ASPHALT FLAT AREAS ON SLOPES 6 FT. OR HIGHER, USE 348 GAL PER ACRE (6 GAL./1000 SQUARE FEET) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS DISCING OR OTHER RESEEDINGS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS 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-SSCS 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, LOAMY SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRICULTURIST OR A 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 CONCRETS, STONES, SLAG, COARSE FRACTIONALS, BRICKS, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1" AND 1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMAUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, PLANTAIN NY, THISTLE, OR OTHERS AS SPECIFIED.
 - 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. LIME 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 200 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

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 - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, LOAMY SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRICULTURIST OR A 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 CONCRETS, STONES, SLAG, COARSE FRACTIONALS, BRICKS, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1" AND 1/2" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMAUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, PLANTAIN NY, THISTLE, OR OTHERS AS SPECIFIED.
 - 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. LIME 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 200 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

TOPSOIL APPLICATION

- WHEN TOPSOILING MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRAZE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
- GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE PREVIOUSLY BEEN ESTABLISHED, SHALL BE MAINTAINED, ALBERT 4"-8" HIGHER IN ELEVATION.
- TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SEEDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDING PREPARATION.

SEQUENCE OF CONSTRUCTION

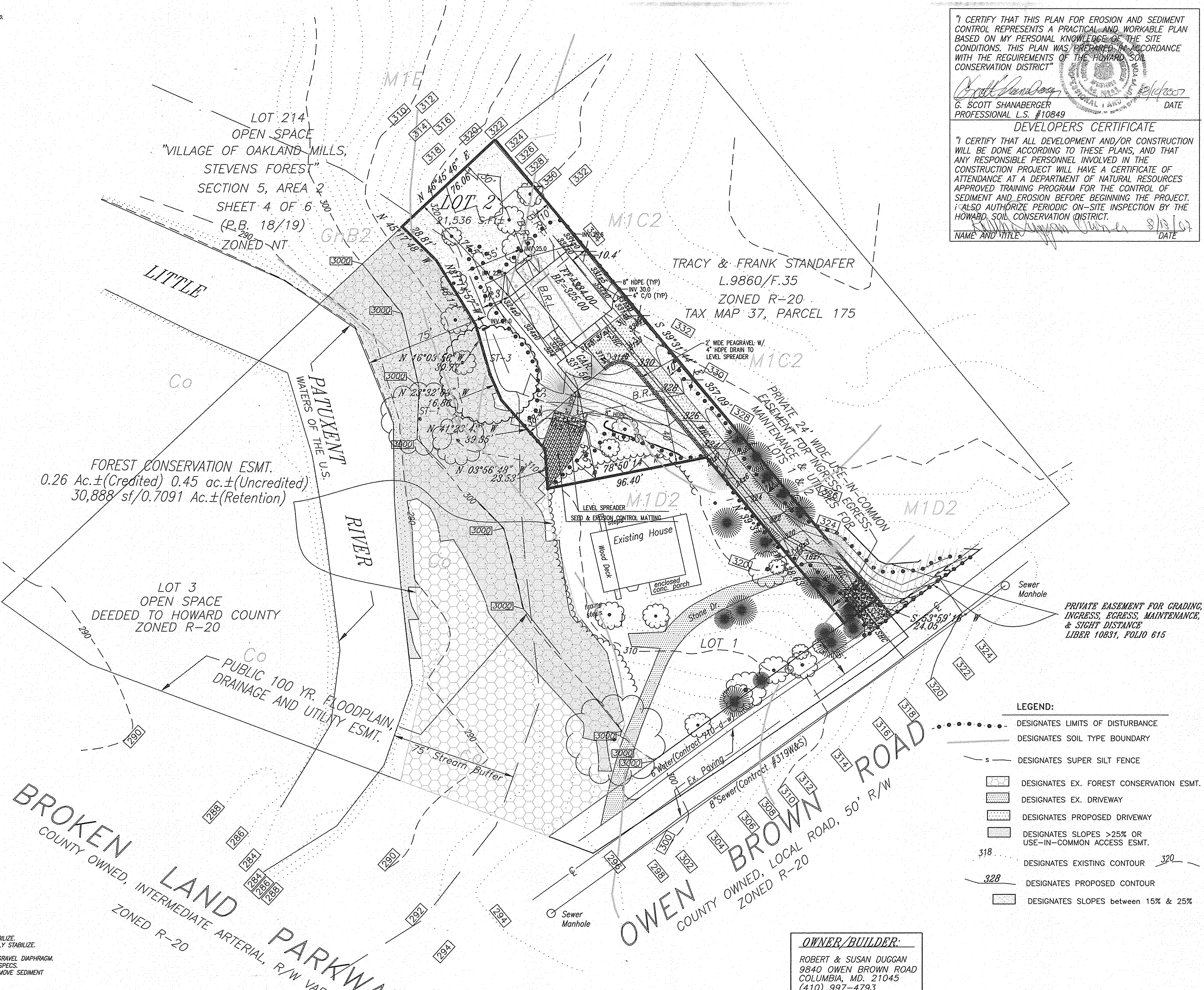
- OBTAIN GRADING PERMIT.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE.
- EXCAVATE FOR FOUNDATIONS, ROUGH GRADE AND TEMPORARILY STABILIZE.
- CONSTRUCT HOUSE, UTILITIES, AND DRIVEWAY.
- CONSTRUCT LEVEL SPREADER, ROOF DRAIN SYSTEM, & PEA GRAVEL DIAPHRAGM.
- FINAL GRADE AND STABILIZE IN ACCORDANCE WITH STDS. & SPECS.
- UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT AND EROSION CONTROL DEVICES AND STABILIZE.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 8/24/07

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 9/14/07

DIRECTOR DATE 9/21/07



"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"

G. SCOTT SHANABERGER
PROFESSIONAL L.S. #10849

DATE 8/21/07

DEVELOPERS CERTIFICATE

"I 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 NATURAL RESOURCES 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."

NAME AND TITLE: Robert & Susan Duggan
DATE: 8/21/07

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

DATE 8/23/07

DATE 8/23/07

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

DATE 8/23/07

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 201
ELLCOTT CITY, MD, 21043
(410)-461-9563
home@shanlane.com

DATE 8/24/07

DATE 9/14/07

DATE 9/21/07

BY	NO.	REVISION	DATE

DESIGNED GSS
CHECKED GSS
DATE 3/13/2007

EROSION & SEDIMENT CONTROL PLAN
LOT 2 DUGGAN PROPERTY
SINGLE FAMILY DWELLING

PLAT NUMBER 17762 LIBER 2996/FOLIO 414
TAX MAP 36 GRID 8 PARCEL 315
6TH ELECTION DIST. HOWARD COUNTY MARYLAND
SCALE: 1"=30' NOVEMBER 11, 2006

SCALE 1"=30'
DRAWING 0314sdp2
JOB NO. 03-14
COUNTY FILE #'S F-05-36 WP-05-63

SHEET 2 OF 5

GENERAL NOTES

- THE SUBJECT PROPERTY IS ZONED R-20 PER THE 2/2/2004 COMPREHENSIVE ZONING PLAN, AND THE COMPLETE ZONING AMENDMENTS EFFECTIVE 7/29/06.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- NO LANDSCAPE SURETY FEE IS REQUIRED.
- THE USE-IN-COMMON DRIVEWAY MAINTENANCE AGREEMENT FOR LOT 1 & 2 WAS RECORDED IN THE HOWARD COUNTY LAND RECORDS ALONG WITH THE RECORDING OF F-05-36.
- THE EXISTING BOUNDARY AND TOPOGRAPHY SHOWN IS BASED ON A FIELD-RUN SURVEY BY SHANBERGER & LANE IN DECEMBER 2003 TIED TO HOWARD COUNTY CONTROL STATIONS:
 HORIZONTAL: NAD83, VERTICAL: NAVD29
 HOWARD COUNTY MONUMENT NO. 36EA EL.354.928 N 556,986.8037 E 1,394,335.2439
 HOWARD COUNTY MONUMENT NO. 36HA EL.292.286 N 555,116.6240 E 1,394,331.4089
 BENCHMARK: NAIL SET TRVERSE NO. 1 EL. 324.25
 BENCHMARK: NAIL SET TRVERSE NO. 2 EL. 294.05
- FOREST CONSERVATION REQUIREMENTS FOR THIS LOT HAVE BEEN SATISFIED WITH F-05-36 BY A FEE IN LIEU PAYMENT OF \$2178.00 FOR 0.10 AC± REFORESTATION OBLIGATION, AND RETENTION OF 0.26 AC± ON SITE IN A FOREST CONSERVATION EASEMENT ON OPEN SPACE LOT 3.
- EXISTING PAVED DRIVEWAY ENTRANCE TO REMAIN.
- THIS LOT IS SUBJECT TO THE CONDITIONS OF WP-05-063 WHICH ON 3/24/05 APPROVED WAIVERS OF SECTION 16.116(a)(3) (to permit part of the required 75' stream buffer on Lot 2) AND OF SECTION 16.120(b)(4)(ii)(G) (to permit a 17-foot setback from the stream buffer for house construction on Lot 2 rather than the required 35-foot setback to the building envelope).
- STORMWATER MANAGEMENT FOR THIS LOT IS BEING PROVIDED BY USING STORMWATER MANAGEMENT CREDITS:
 - NATURAL AREA CONSERVATION CREDIT.
 - SHEET FLOW TO BUFFER CREDIT IN CONJUNCTION WITH A PROPOSED LEVEL SPREADER.
- PERIMETER LANDSCAPING FOR LOT 2 SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL AS SHOWN ON A REQUEST FOR ALTERNATIVE COMPLIANCE ON FILE WITH F-05-36. THE LANDSCAPING PROPOSED IN THIS SUBMISSION IS THE SAME AS THAT PROPOSED WITH F-05-36.
- THERE ARE NO WETLANDS OR STREAMS OR FOREST CONSERVATION AREAS ON THIS LOT. THERE IS A STREAM BUFFER THROUGH PART OF THIS LOT. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, OR PLACEMENT OF NEW STRUCTURES IS PERMITTED WITHIN THE STREAM BUFFER.
- B.R.L. DESIGNATES BUILDING RESTRICTION LINE

Soil Protection Zone Notes

- The Soil Protection Zone shall include all areas contained inside the Limit of Disturbance.
- Where possible, the Soil Protection Zone shall extend to the drip line of specimen trees. For other groups of trees, the zone shall be the drip line or 40% of the height of the tree, whichever is greater.
- No construction activity is permitted within the Soil Protection Zone.
- If soil has been compacted or grading has taken place in the vicinity of the Soil Protection Zone, root pruning shall be implemented per Root Pruning detail, shown on this plan.
- Root pruning shall occur prior to the beginning of construction.
- Where the Soil Protection Zone must encroach inside the Critical Root Zone of a tree, soil disturbance shall be mitigated with vertical mulching, radial trenching, or another method approved by the ERI Forest Conservation Professional.
- Prior to construction, the Limits of Disturbance shall be marked and the ERI Professional shall determine which trees will need preventative treatment or removal.
- Tree maintenance and removal shall be undertaken by a qualified MD Tree Expert to ensure damage to surrounding trees is minimized.
- Brush and limbs removed for construction shall be chipped and spread at the edge of the Soil Protection Zone to a depth of 6 inches. This shall occur outside the Soil Protection Zone where compaction could impact otherwise unprotected Critical Root Zone.

SCHEDULE A PERIMETER LANDSCAPE EDGE

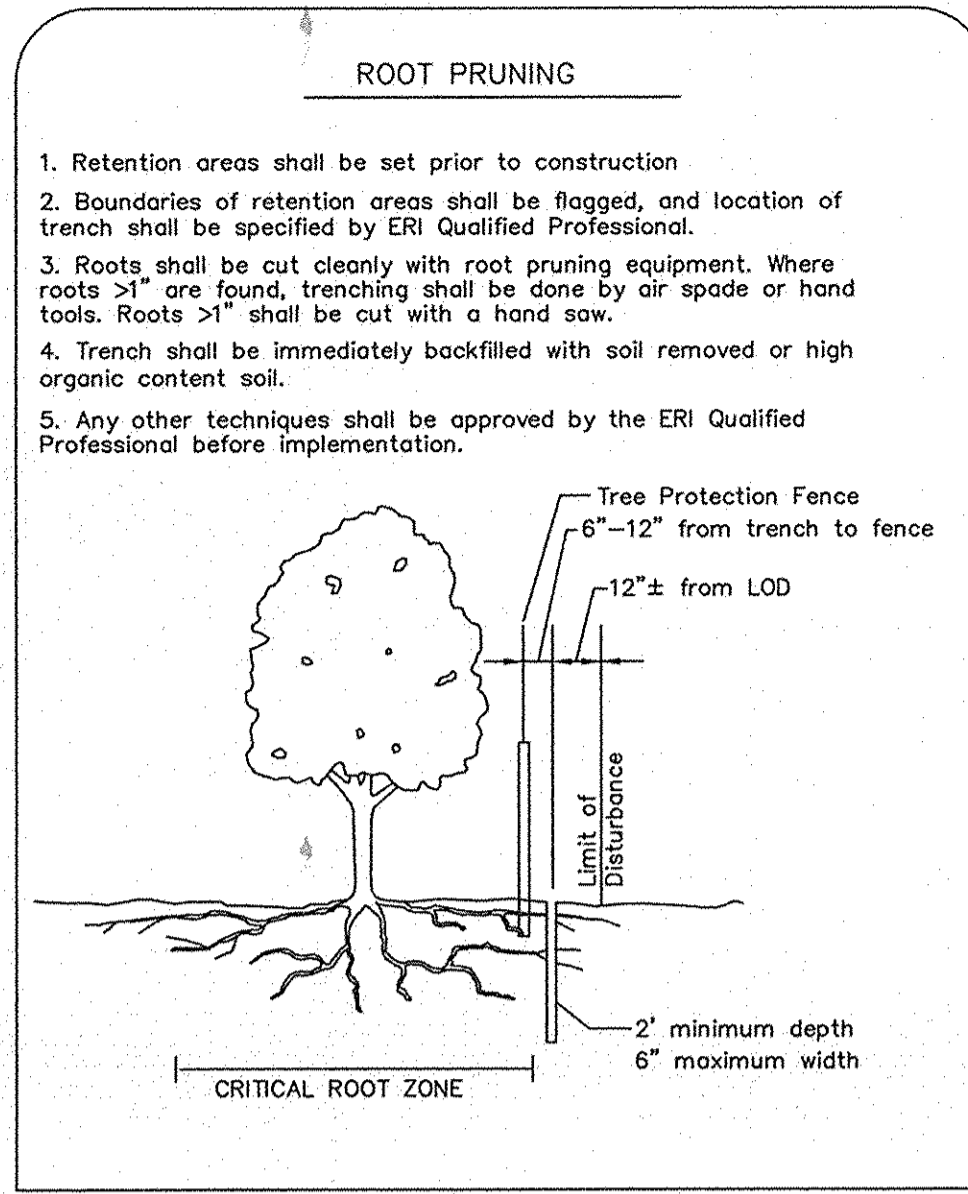
CATEGORY	P-1	P-2	P-3
LANDSCAPE TYPE	NONE	A	A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	24'	357'	76'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	X	YES 337' WOODS*	YES 76' WOODS
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	X	NO	NO
NUMBER OF PLANTS REQUIRED			
SHADE TREES		0	X
EVERGREEN TREES	X	0	
SHRUBS		0	
NUMBER OF PLANTS PROVIDED			
SHADE TREES		0	
EVERGREEN TREES	X	0	X
OTHER TREES (2:1 SUBSTITUTION)		0	
SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)		0	

* Existing forested area and individual trees satisfy the perimeter obligation. 2 Existing shade trees and 4 existing evergreen trees have been retained; see plan for locations

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

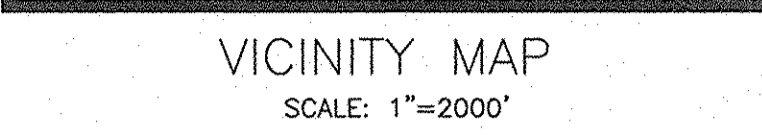
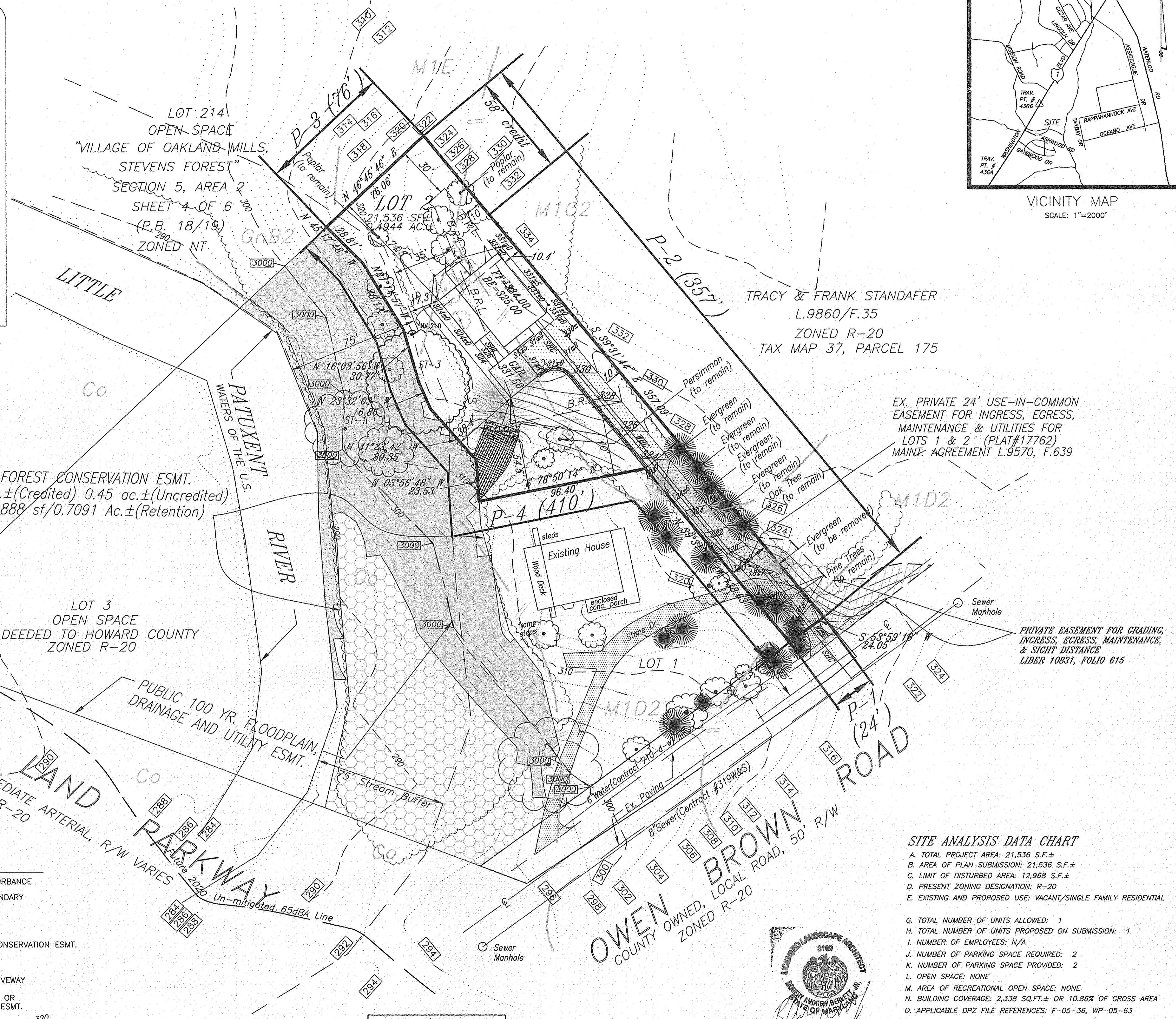
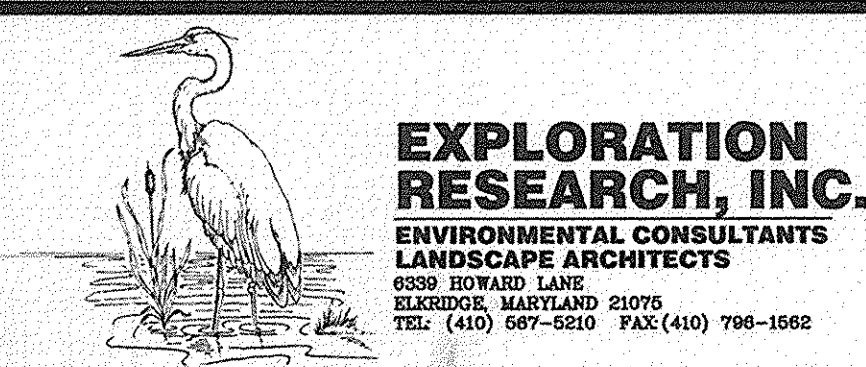
CHIEF, DEVELOPMENT ENGINEERING DIVISION & DATE
 8/24/07
 C. HAMILTON
 CHIEF, DIVISION OF LAND DEVELOPMENT
 9/1/07
 M. KYLE
 9/12/07
 DIRECTOR



- Retention areas shall be set prior to construction
- Boundaries of retention areas shall be flagged, and location of trench shall be specified by ERI Qualified Professional.
- Roots shall be cut cleanly with root pruning equipment. Where roots >1" are found, trenching shall be done by air spade or hand tools. Roots >1" shall be cut with a hand saw.
- Trench shall be immediately backfilled with soil removed or high organic content soil.
- Any other techniques shall be approved by the ERI Qualified Professional before implementation.

LEGEND:

- DESIGNATES LIMITS OF DISTURBANCE
- DESIGNATES SOIL TYPE BOUNDARY
- DESIGNATES SILT FENCE
- DESIGNATES EX. FOREST CONSERVATION ESMT.
- DESIGNATES EX. DRIVEWAY
- DESIGNATES PROPOSED DRIVEWAY
- DESIGNATES SLOPES >15% OR USE-IN-COMMON ACCESS ESMT.
- DESIGNATES EXISTING CONTOUR
- DESIGNATES PROPOSED CONTOUR



EX. PRIVATE 24' USE-IN-COMMON EASEMENT FOR INGRESS, EGRESS, MAINTENANCE & UTILITIES FOR LOTS 1 & 2 (PLAT#17762) MAINT. AGREEMENT L.9570, F.639

PRIVATE EASEMENT FOR GRADING, INGRESS, EGRESS, MAINTENANCE, & SIGHT DISTANCE LIBER 10831, FOLIO 615

SITE ANALYSIS DATA CHART

- A. TOTAL PROJECT AREA: 21,536 S.F.±
- B. AREA OF PLAN SUBMISSION: 21,536 S.F.±
- C. LIMIT OF DISTURBED AREA: 12,968 S.F.±
- D. PRESENT ZONING DESIGNATION: R-20
- E. EXISTING AND PROPOSED USE: VACANT/SINGLE FAMILY RESIDENTIAL
- G. TOTAL NUMBER OF UNITS ALLOWED: 1
- H. TOTAL NUMBER OF UNITS PROPOSED ON SUBMISSION: 1
- I. NUMBER OF EMPLOYEES: N/A
- J. NUMBER OF PARKING SPACE REQUIRED: 2
- K. NUMBER OF PARKING SPACE PROVIDED: 2
- L. OPEN SPACE: NONE
- M. AREA OF RECREATIONAL OPEN SPACE: NONE
- N. BUILDING COVERAGE: 2,338 SQ.FT.± OR 10.86% OF GROSS AREA
- O. APPLICABLE DP2 FILE REFERENCES: F-05-36, WP-05-63

OWNER/BUILDER:
 ROBERT & SUSAN DUGGAN
 9840 OWEN BROWN ROAD
 COLUMBIA, MD. 21045
 (410) 997-4793

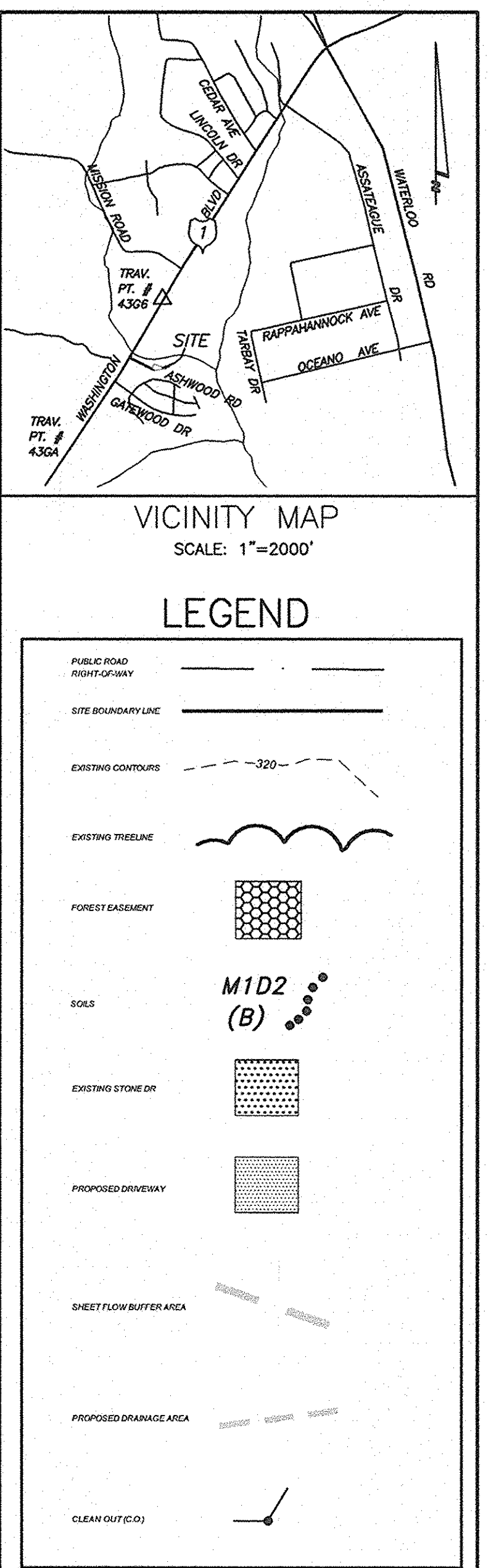
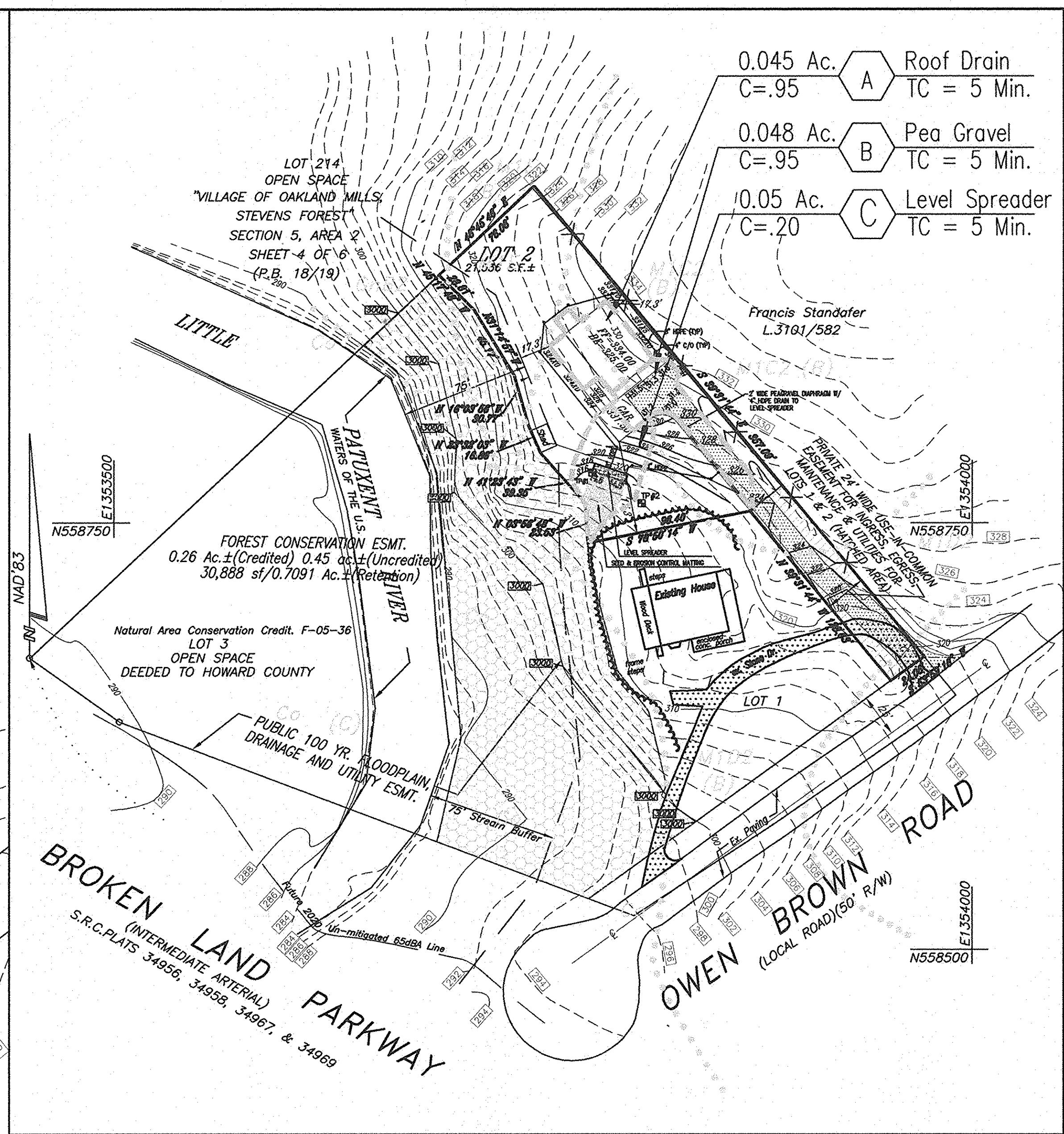
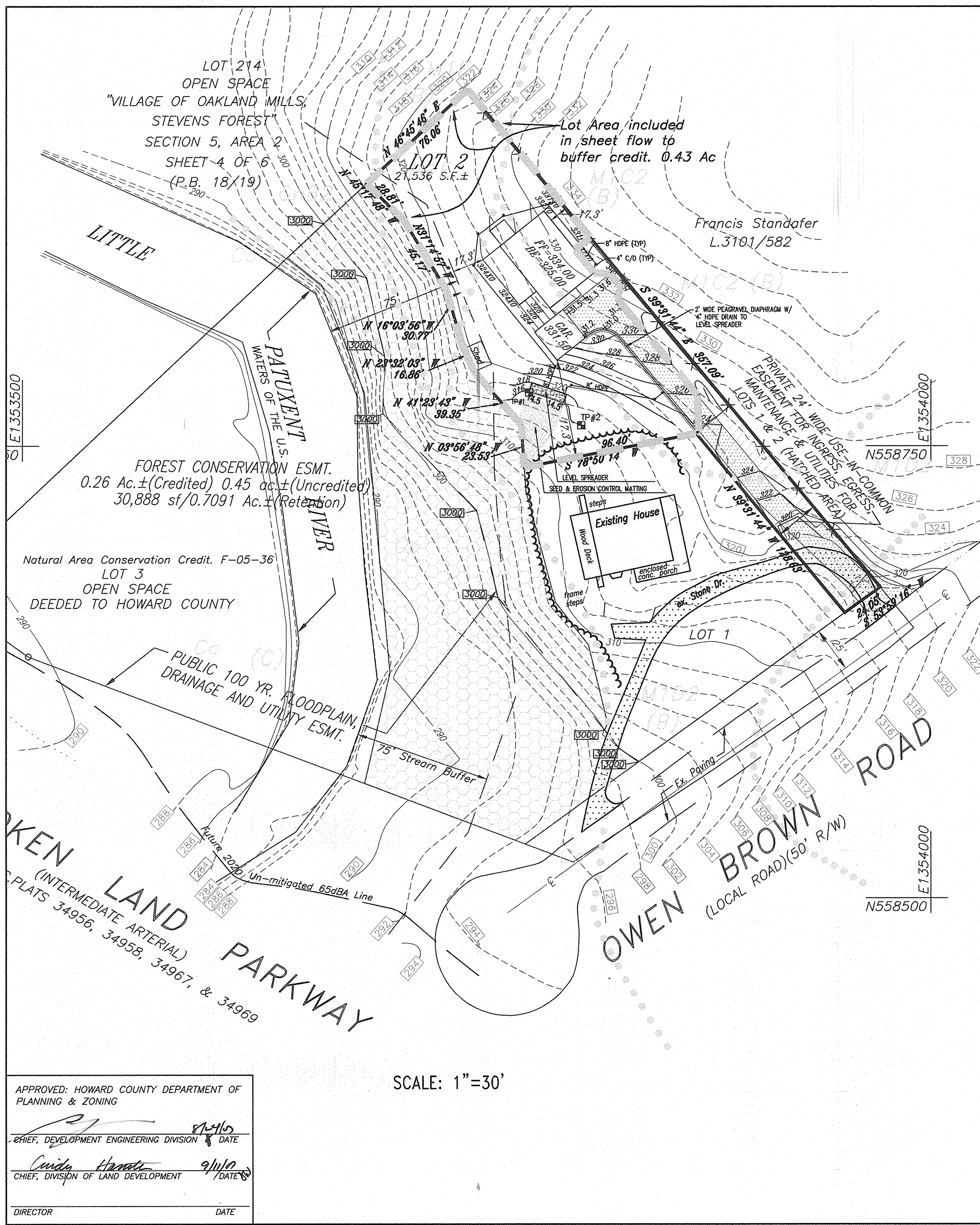
DESIGNED	DATE
GSS	3/13/2007
DRAWN	
GSS	
CHECKED	
AB	
DATE	

LANDSCAPE PLAN
LOT 2 DUGGAN PROPERTY
 SINGLE FAMILY DWELLING

PLAT NUMBER 17762 LIBER 2996/FOLIO 414
 TAX MAP 36 GRID 8 PARCEL 315
 6TH ELECTION DIST. HOWARD COUNTY MARYLAND
 SCALE: 1"=30' JUNE 6, 2007

SCALE
1"=30'
DRAWING
0314sdp3
JOB NO.
03-14
COUNTY FILE #S
F-05-36 WP-05-63

SHEET
 3
 OF
 5



DUGGAN PROPERTY 04056MD JUNE 2004

TABLE 2
TEST PIT DATA

Test Pit No.	Depth (Ft.) From	Depth (Ft.) To	Soil Descriptions and Remarks
TP-66 (41)	0	0.8	Topsoil/Roots
	0.8	1.5	Brown moist of SAND, and clayey silt, trace rock frags (SM) (Sandy Loam)
	1.5	3.2	Brown and tan moist to damp of SAND, little silt (SM) (Loamy Sand)
TP-67 (42)	0	0.5	Topsoil/Roots
	0.5	2.5	Brown moist SILT & CLAY, some of sand, trace rock frags (ML) (Loam)
TP-68 (43)	2.5	4.0	Brown and tan damp of SAND, some silt, trace rock frags (SM) (Sandy Loam)
	4.0	4.5	Brown and tan damp ROCK FRAGS to ROCK, trace sand (Decomposed Rock)

Backhoe refusal at 9.4'
At completion, hole dry and caved at 9.4'

Backhoe refusal at 4.5'
At completion, hole dry and caved at 4.5'

- Summary:
- Total Area of Lot 2 = 0.50 Ac±
 - Lot Area Credit for Sheet Flow to Buffer = 0.43 Ac±
 - Total Area to Level Spreader = 0.143 Ac
 - Impervious to Level Spreader Area = 0.093 Ac± (4,051 sf)
 - CPv is not required.
 - WQv and Groundwater Recharge are Provided by Sheet Flow to Buffer Credit.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[Signature] 8/10/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 9/11/07
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DIRECTOR DATE

OWNER/BUILDER:
ROBERT & SUSAN DUGGAN
90840 OWEN BROWN ROAD
COLUMBIA, MD. 21045

THE BASE SHEET AND SURVEY WERE PREPARED BY
SHANBERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 201
ELLCOTT CITY, MD., 21043
(410)-461-9563

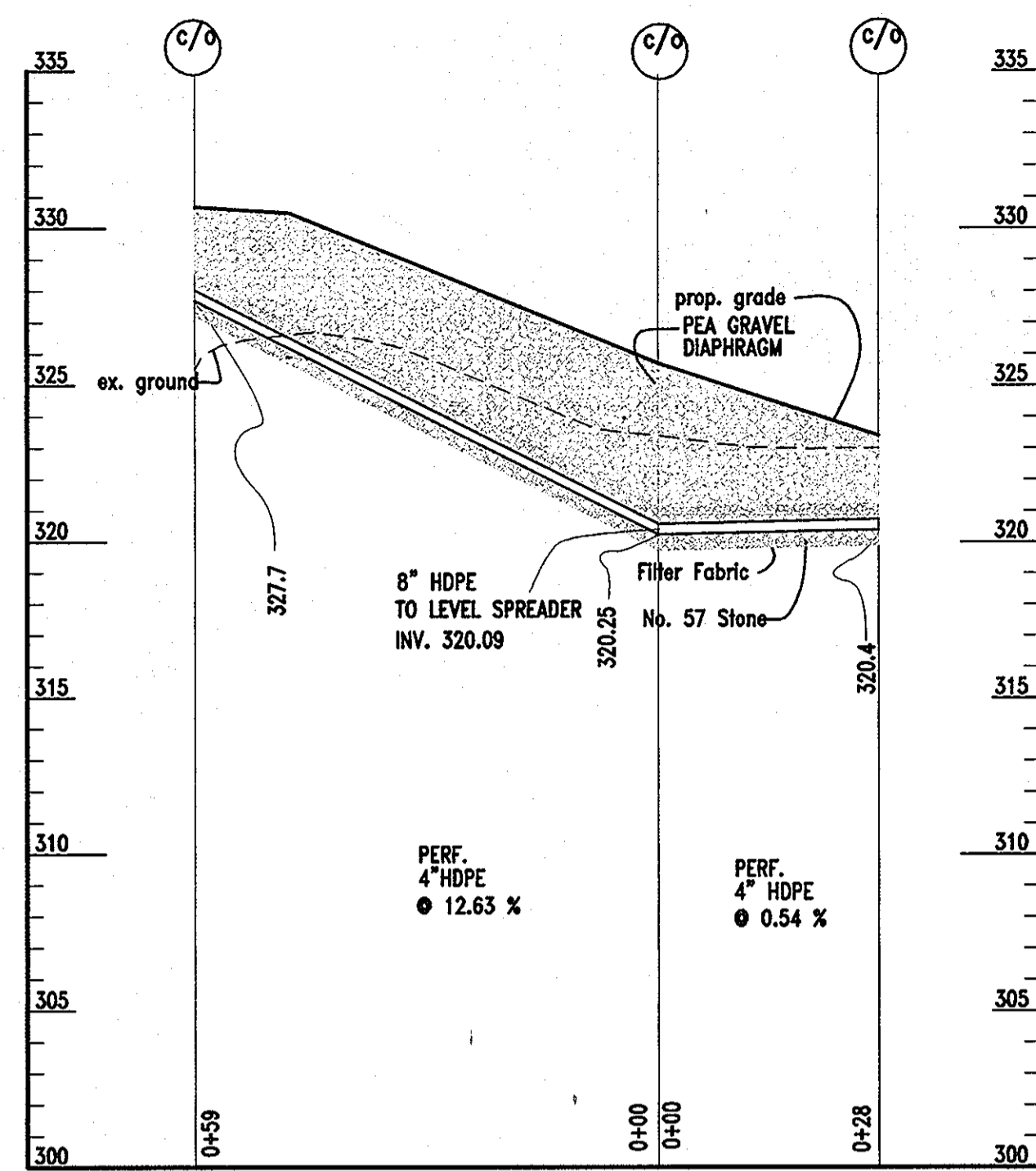
Tesseract
Tesseract Sites, Inc.
401 Washington Ave., Suite 303
Towson, Maryland, 21204
p. 410.321.7600
f. 410.321.7601

Stormwater Management Plan
LOT 2 DUGGAN PROPERTY
PLAT NUMBER 17762
LIBER 2996/FOLIO 414
TAX MAP 36 GRID 8 PARCEL 315
6TH ELECTION DIST. HOWARD COUNTY MD

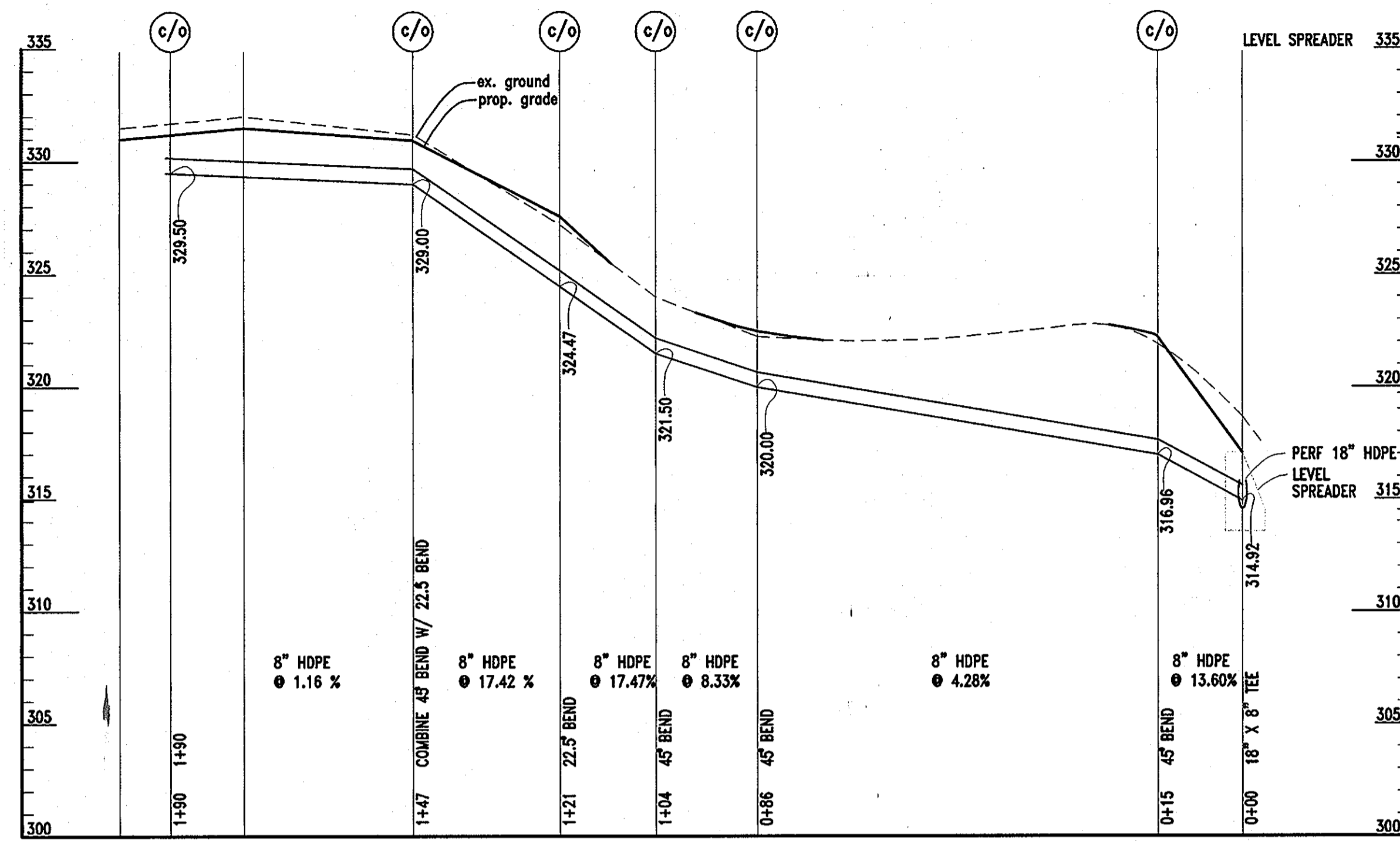
Date: August 10, 2007
Proj. No. 07006
Scale: AS SHOWN

Sheet 4 of 5

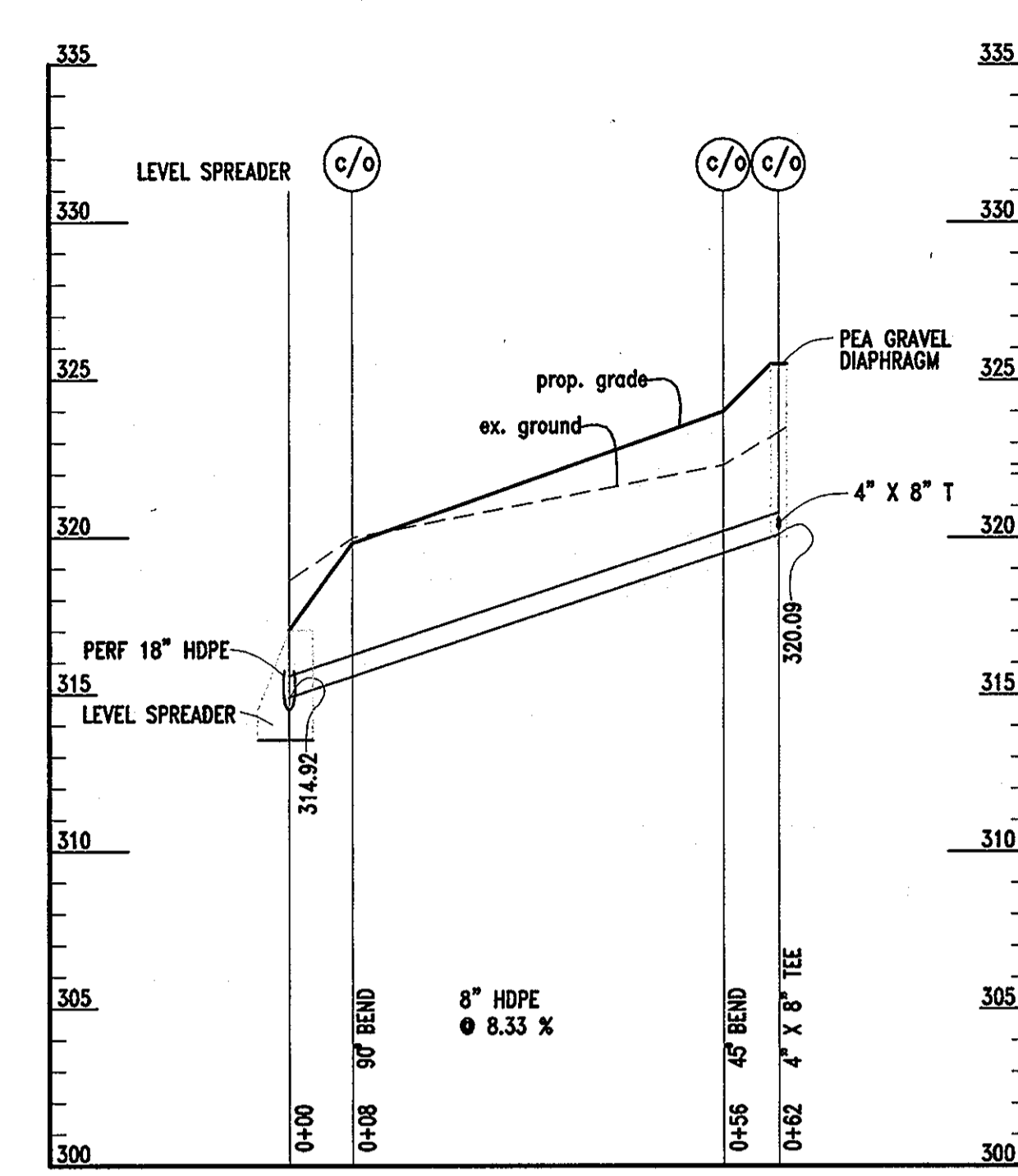
COUNTY FILE NO.'S
F-05-36
WP-05-63



PEA GRAVEL DIAPHRAGM PROFILE



ROOF DRAIN PROFILE

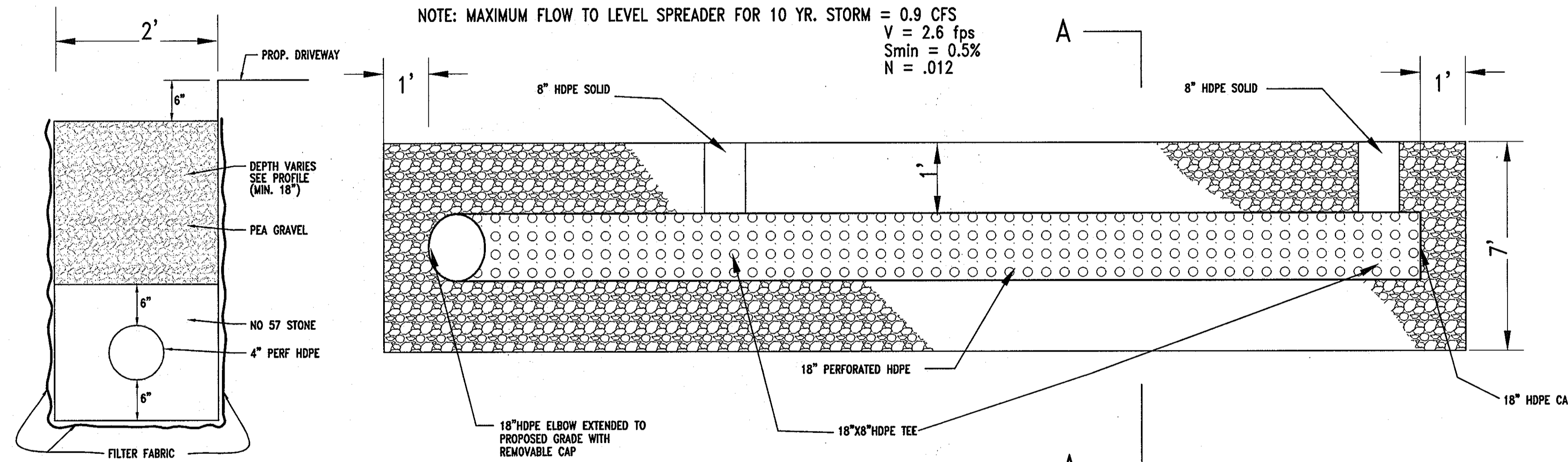


PROFILE FROM PEA GRAVEL DIAPHRAGM TO LEVEL SPREADER

1 STORM DRAIN PROFILES

SCALES: HORIZ.: 1" = 20'
VERT.: 1" = 5'

PIPE SCHEDULE		
SIZE	TYPE	LENGTH
4"	HDPE (PERF)	87LF
8"	HDPE (SOLID)	252LF
18"	HDPE	20 LF



TYPICAL SECTION PEA GRAVEL DIAPHRAGM

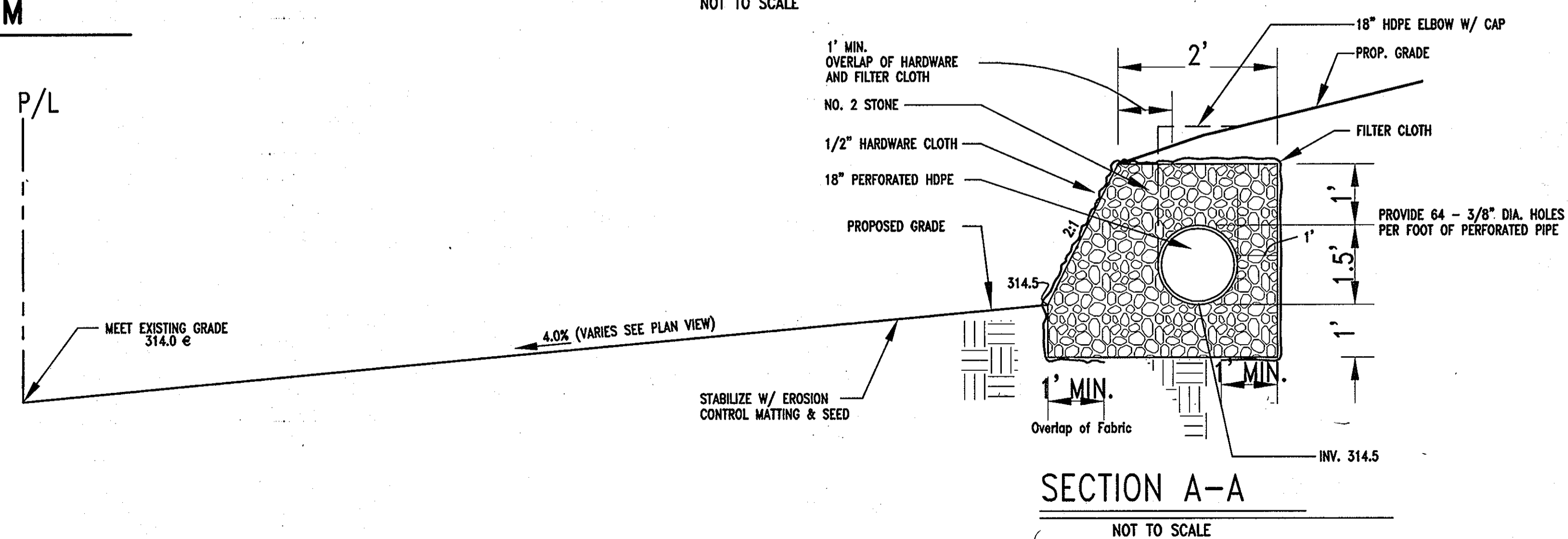
PLAN VIEW

MAINTENANCE SCHEDULE FOR LEVEL SPREADER

- 1.) INSPECT LEVEL SPREADER AFTER EACH MAJOR STORM EVENT.
- 2.) CORRECTIVE MAINTENANCE IS REQUIRED IF STONE DOES NOT DRAIN DOWN WITHIN 96 HOURS.
- 3.) REMOVE DEBRIS AND TRASH FROM FACE OF STONE AS NEEDED.
- 4.) INSPECT AND MAKE REPAIRS TO STRUCTURE ANNUALLY.

NOTES

- 1.) ALL HDPE FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
- 2.) CONTRACTOR SHALL CONNECT ALL ROOF DRAINS TO 8" HDPE (EXCEPT THOSE DISCHARGING ON THE DRIVEWAY).

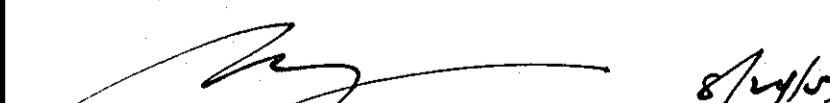

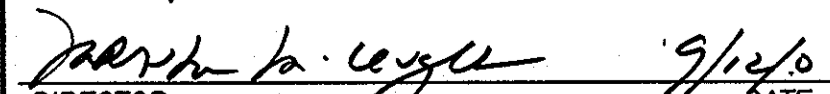


SECTION A-A

2 LEVEL SPREADER

NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF

 8/24/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 9/1/05
 CHIEF, DIVISION OF LAND DEVELOPMENT (DATE)
 9/12/05
 DIRECTOR DATE



Stormwater Management Details
LOT 2 DUGGAN PROPERTY
 PLAT NUMBER 17762
 LIBER 2996/FOLIO 414
 TAX MAP 36 GRID 8 PARCEL 315
 6TH ELECTION DIST. HOWARD COUNTY MD

Date: June 6, 2007
 Proj. No. 07006
 Scale: AS SHOWN

