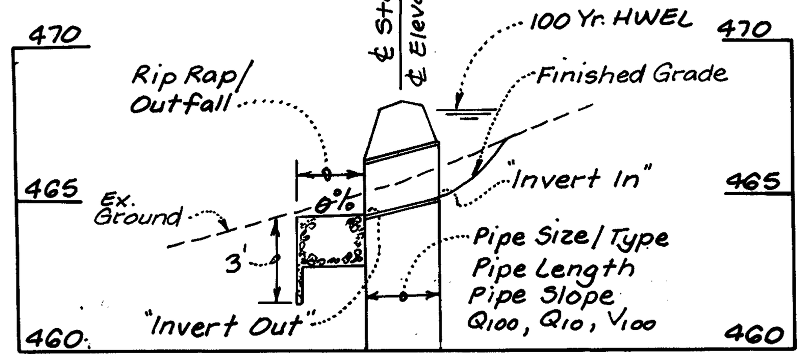
DRIVEWAY CULVERT DESIGN DATA:

CULVERT No.:	1	2	3	4
℄ LOCATION:	13+85	4+55	1+20	5+10 Private D/W
℄ ELEVATION:	459.88	468.12	463.18	476.50
SIZE:	24" x 38"	19"x30"	19"x30"	36"
PIPE TYPE:	TWIN RCPE	TWIN RCPE	RCPE	CMP
LENGTH:	25 LF	25 LF	35 LF	18 LF
INVERT IN:	456.25	465.00	460.06	472.20
INVERT OUT:	455.75	464.50	459.50	471.00
SLOPE:	2.00%	2.00%	1.60%	6.67%
Q 100:	78.3 CFS	45.8 CFS	18.5 CFS	
Q 10:	43.7 CFS	26.4 CFS	10.5 CFS	43.7 CFS
V 100:	9.58 FPS	9.15 FPS	10.40 FPS	7.00 FPS
100 YR. HWEL:	459.54	467.73	462.18	475.50
OUTFALL/RIPRAP:	22 LF, d_{50} = 19", Min. Width: 20', Class: II	20 LF, d_{50} = 19", Min. Width: 20', Class I	20 LF, d_{50} = 9.5", Min. Width: 20', Class I	20 LF, d_{50} = 9.5", Min. Width: 20', Class I

THIS AREA DESIGNATES A PRIVATE SEWAGE EASEMENT OF 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.



TYPICAL CULVERT PROFILE

Scale: 1" = 50' Horiz.
1" = 5' Vert.

HORIZONTAL CURVE DATA FOR PRIVATE USE-IN-COMMON DRIVEWAY

CURVE #1	CURVE #2	CURVE #3	CURVE #4
PC 0+86.89	PC 3+13.00	PC 3+80.65	PC 5+79.49
PT 1+53.67	PT 3+33.16	PT 4+29.29	PT 6+58.03
C_L R=50'	C_LR=50'	C_LR= 45'	C_LR=50'
L=66.78'	L=20.16'	L=48.64'	L=78.54'
T=39.44'	T=10.22'	T=27.00'	T=50'
Δ= 76°-31'-44"	Δ=23°-06'-20"	Δ=61°-55'-55"	Δ=90°

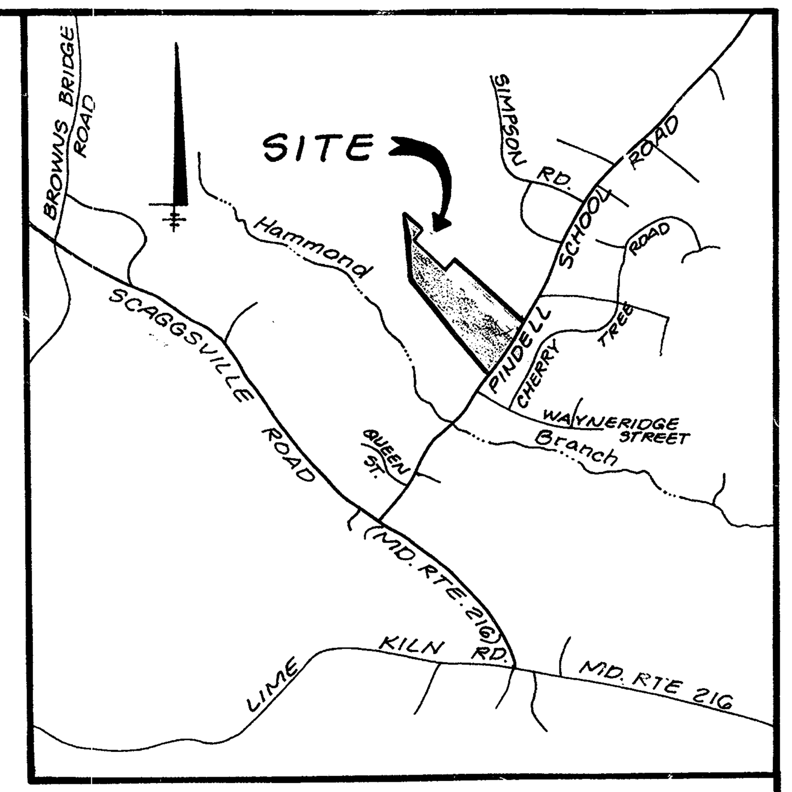
CURVE #5	CURVE #6	CURVE #7	CURVE #8
PC 8+61.71	PC 10+24.60	PC 12+71.92	PC 13+62.91
PT 9+00.30	PT 10+56.70	PT 13+09.20	PT 14+00.19
C_LR=45'	C_LR=45'	C_LR=45'	C_LR=45'
L=38.59'	L=32.09'	L=37.28'	L=37.28'
T=20.57'	T=16.76'	T=19.78'	T=19.78'
Δ=49°-08'-15"	Δ=40°-51'-45"	Δ=47°-27'-58"	Δ=47°-27'-58"

LANDSCAPE SCHEDULE

QUANTITY	SYMBOL	BOTANICAL/COMMON NAME	SIZE
8	⊙	ACER RUBRUM 'OCTOBER GLORY' / OCTOBER GLORY RED MAPLE	2½" - 3" CAL. B&B

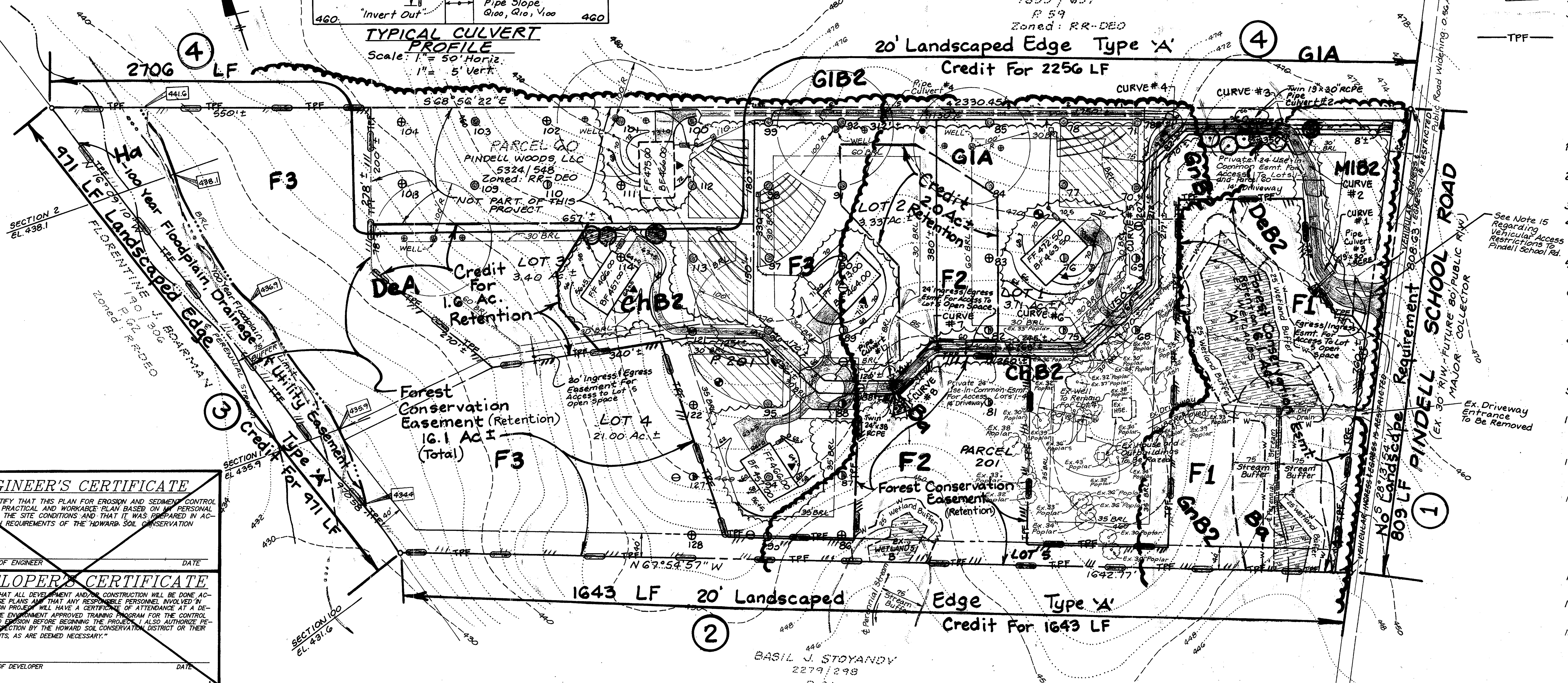
LEGEND

Symbol	Description
......472......	Ex. Ground
472	Prop. Grade
(W)	Ex. Well
(W)	Prop. Well
	Ex. Woods/Trees To Be Removed
	Ex. Woods/Trees To Be Retained
	Prop. Landscape Tree
	Forest Conservation Signage
/// ///	Forest Conservation Easement
	Ex. Non-Tidal Wetlands
	Prop. House Site w/ Front Orientation
	Prop. Sewage Disposal Area
	Soil Delineation
——TPF——	Tree Protection Fence



VICINITY MAP

Scale: 1" = 2000'



GENERAL NOTES:

1. EXISTING ZONING: RR -(RURAL/RESIDENTIAL) PER 10/18/93 COMPREHENSIVE ZONING PLAN.
2. DEED REFERENCES: PARCEL 201
3. TOTAL AREA OF PROPERTY: 32.3216 Ac.±
4. THE LOTS SHOWN COMPLY WITH THE MINIMUM LOT AREA AND OWNERSHIP WIDTH AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
5. THE TOPOGRAPHY SHOWN IS COMPILED FROM THE HOWARD COUNTY AERIAL PHOTOGRAMMETRY.
6. THE EXISTING DWELLING AND ACCESSORY BUILDINGS ON LOT 4 SHALL BE RAZED PRIOR TO RECORD PLAT SIGNATURE APPROVAL.
7. SOIL GROUP DELINEATION TAKEN FROM USDA MAP No. 28.
8. ALL PERCOLATION TESTS HAVE BEEN FIELD LOCATED. ALL EXISTING WELLS AND SEPTIC SYSTEMS HAVE BEEN SHOWN WITHIN 100 FT. OF PROPERTY BOUNDARY WHICH MAY IMPACT THIS SUBDIVISION.
9. THE EXISTING SEPTIC SYSTEM SHALL BE PROPERLY ABANDONED PRIOR TO RECORD PLAT APPROVAL.
10. ALL PROPOSED WELLS SHALL BE DRILLED PRIOR TO FINAL PLAT SIGNATURE APPROVAL. LOT 4 WILL UTILIZE THE EXISTING WELL SITE.
11. LOTS 1 THRU 4 WILL REQUIRE A PUMP SYSTEM WITH VISUAL AND AUDIBLE ALARMS FOR INSTALLATION OF THE SEPTIC SYSTEM.
12. TREE PROTECTION FENCE OR BLAZE ORANGE FENCE SHALL BE PLACED AROUND THE PERIMETER OF THE SEWAGE DISPOSAL EASEMENT PRIOR TO ANY CONSTRUCTION OF DRIVEWAY OR LOT IMPROVEMENTS TO INSURE THAT PLACEMENT OF FILL MATERIAL UPON THE EASEMENT AREA WILL NOT OCCUR.
13. THE 100 YEAR FLOODPLAIN SHOWN HEREON IS TAKEN FROM THE HAMMOND BRANCH FLOODPLAIN STUDY.
14. ALL WOODED AREAS SHALL BE PROTECTED BY TREE PROTECTION FENCE.
15. VEHICULAR INGRESS AND EGRESS IS RESTRICTED TO PINDELL SCHOOL ROAD, IN ACCORDANCE WITH DESIGN MANUAL WAIVERS APPROVED ON 2/8/01 AND / /01. ALL VEHICULAR INGRESS AND EGRESS IS RESTRICTED FOR LOTS 1 - 4 AND PARCEL 60 TO THE APPROVED ACCESS POINT SHOWN ON THE FINAL PLAT AND THIS PLAN. PARCEL 60'S VEHICULAR ACCESS TO PINDELL SCHOOL ROAD VIA THE PRIVATE USE-IN-COMMON DRIVEWAY IS MANDATORY. NO OTHER MEANS OF VEHICULAR ACCESS IS PERMITTED. THE DIRECTOR OF PLANNING AND ZONING HAS DETERMINED THAT DUE TO LIMITED INTERSECTION SITE DISTANCE AND THE DESIRABILITY TO HAVE ONLY ONE DRIVEWAY CONNECTION ONTO PINDELL SCHOOL ROAD, A MAJOR COLLECTOR ROAD, THE MAXIMUM NUMBER FOUR (4) USERS NORMALLY PERMITTED TO USE A USE-IN-COMMON DRIVEWAY CAN BE EXCEEDED BY ONE (1) FOR A TOTAL OF FIVE (5) USERS. THE DIRECTOR'S DETERMINATION IS IN COMPLIANCE WITH THE DEVELOPMENT ENGINEERING DIVISION'S POLICY INTERPRETATION.

SOILS LEGEND

SYMBOL	NAME	SLOPE/CHARACTERISTICS
Ba	Baile Silt Loam	
ChB2	Chester Silt Loam	3 to 8% Moderately Eroded
DeA	Delanco Silt Loam	0 to 3%
DeB2	Delanco Silt Loam	3 to 8% Moderately Eroded
GlA	Glenelg Loam	0 to 3%
GlB2	Glenelg Loam	3 to 8% Moderately Eroded
GnB2	Glenville Silt Loam	3 to 8% Moderately Eroded
Ha	Hatboro Silt Loam	
MlB2	Manor Loam	3 to 8% Moderately Eroded

PERCOLATION TEST LEGEND

- ⊕ FAILED PERCOLATION TEST
- PASSED PERCOLATION TEST
- PERCOLATION TEST HELD FOR WET SEASON
- PASSED PERCOLATION TEST 3/24/00
- ⊖ VISUAL FOR WATER TABLE DETERMINATION 3/24/00 (Fail)

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — DATE

DEVELOPER'S CERTIFICATE

"I/WE 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 PERIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER — DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING

Chief, Development Engineering Division — 8/3/01 Date

Chief, Division of Land Development — 8/9/01 Date

Director — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING, ENVIRONMENTAL DIVISION

SIGNATURE — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.

HOWARD COUNTY HEALTH OFFICER — 8/21/00 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

NATURAL RESOURCE CONSERVATION SERVICE — DATE

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

HOWARD SOIL CONSERVATION DISTRICT — DATE

STATE OF MARYLAND BRUCE DAVID BURTON No. 19184 REGISTERED PROFESSIONAL ENGINEER

7/23/01

DENNIS J. LaBARE, M.S., & ASSOCIATES
Environmental Consulting Services
8903 Flagstone Circle
Randallstown, MD 21133

- Wetland Delineations & Mitigation
- Stream Assessment & Restoration
- Water Quality Monitoring
- Macroinvertebrate Taxonomy
- Forest Stand Delineations
- Forest Conservation Plans

Qualified Professional, MDFCA
Ph/Fax (410) 922-7476

DEVELOPER'S/BUILDER'S CERTIFICATE

We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. We further certify that upon completion a Certificate of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Owner — 7/12/01 Date

Owner — Date

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

DESIGNED: BDB	LANDSCAPING / FOREST CONSERVATION PLAN	SCALE: 1" = 100'
DRAWN: KBW	**PINDELL CROSSING** LOTS 1 - 5	DRAWING: 1 of 2
CHECKED: BDB	TAX MAP 41 PARCEL 201, 5th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND	JOB NO. 99-060
DATE 7/2001	DEVELOPER: PINDELL WOODS, LLC, 8835-P Columbia 100 Parkway, Columbia, MD 21045 (410) 730-0810	FILE NO. F01-63

F01-63

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)

1.) The edge of the woods to be protected will be marked (staked or flagged) in the field per the limits of disturbance shown on this approved Final Construction Plan prior to the start of construction activity. All areas within protective fences are to be considered "off limits" to any construction activities. The protective fencing shall be installed at the outside edge of forested areas and specimen trees to be retained 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:

Isolated Specimen Trees - 1.5 feet of protective radius per inch of DBH

Edge of Forested Area - 1 foot of protective radius/inch of DBH or an eight foot protective radius, which ever is greater.

2.) Construction activities expressly prohibited within the preservation areas are:

Placing or stockpiling backfill or top soil in protected areas
Falling trees into protected area
Driving construction equipment into or through protected areas
Burning in or in close proximity to protected areas
Stacking or storing supplies of any 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

3.) 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" or "Specimen Tree" (see Figures "Signage"). The general contractor shall take great care to assure the restricted areas are not violated and that root systems are protected from smothering, flooding, excessive wetting from de-watering operations, off-site run-off, 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, sub-contractors, 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.

7.) The general contractor shall designate a "wash out" area on-site for concrete trucks which will not drain toward a protected area.

8.) A pre-construction meeting shall be held with local authorities before any disturbance has taken place on site.

FOREST PROTECTION PRODCEDURES – CONSTRUCTION PHASE

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

The following shall be monitored:

a.) Soil compaction
b.) Root injury – prune and monitor; consider crown reduction
c.) Limb injury – prune and monitor
d.) Flooded conditions – drain and monitor; correct problem
e.) Drought conditions – water and monitor; correct problem
f.) Other stress signs – determine reason, correct and monitor

FOREST PROTECTION PROCEDURES - POST CONSTRUCTION PHASE

The following measures shall be taken:

1.) Corrective measures if damages were incurred due to negligence:

a.) Stress reduction

b.) Removal of dead or dying trees. This may be done only if trees pose an immediate safety hazard

2.) Removal of temporary structures:

a.) No burial of discarded materials will occur on-site within the conservation area.

b.) No open burning within 200 feet of a wooded area.

c.) All temporary forest protection structures will be removed after construction.

d.) Remove temporary roads by removing stone or broadcasting mulch; pre-construction elevation should be maintained.

e.) Aerate compacted soil.

f.) Replant disturbed sites with trees, shrubs and/or herbaceous plants.

g.) Retain signs for retention areas or specimen trees.

g.) A County official shall inspect the entire site.

HOWARD COUNTY FOREST CONSERVATION WORKSHEET

Setterholm Property - **Prelminary**
3 Sept 00

ACRES (1/10 acre)

I. BASIC SITE DATA

GROSS SITE AREA	32.3
AREA WITHIN 100 YEAR FLOODPLAIN	1.3
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE)	–
	–
NET TRACT AREA	31.0
LAND USE CATEGORY (R-RLD, R-RMD,R-S, C/I/O, I)	R-RLD

II. INFORMATION FOR CALCULATIONS

A.	NET TRACT AREA	31.0
B.	REFORESTAT ION THRESHOLD (_50_%x A)	15.5
C.	AFFORESTATION MINIMUM (_20_ % x A)	6.2
D.	EXISTING FOREST ON NET TRACT AREA	29.5
E.	FOREST AREAS TO BE CLEARED	11.1
F.	FOREST AREAS TO BE RETAINED (Includes 3.6 acres of credit for Forest Retained on Lots 1-3)	18.4

IV. REFORESTATION CALCULATIONS

A.	Net Tract Area	31.0
B.	Reforestation Threshold (_50_ % X A)	15.5
C.	Existing Forest on Net Tract Area	29.5
D.	Forest Areas to Be Cleared	11.1
E.	Forest Areas to Be Retained	18.4
F.	Forest Areas Cleared **Above** Reforestation Threshold (D - F, if F equals or is greater than B, Alternate 1) (D - B, if F is less than B, Alternate 2)	11.1
G.	Forest Areas Cleared **Below** Reforestation Threshold (B - F, **if applicable**)	—
H.	Forest Areas Retained **Above** Reforestation Threshold (F - B, Retention Credit, **if applicable**)	2.9

SELECT THE ALTERNATIVE THAT APPLIES:

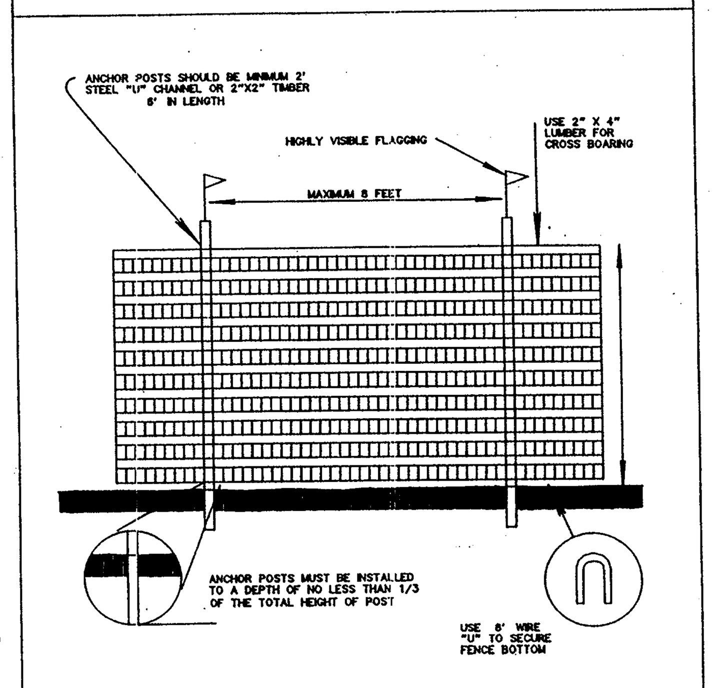
1. CLEARING ABOVE THE THRESHOLD ONLY

If forest areas to be retained equal or are greater than the reforestation threshold (if F equals or is greater than B), the following calculations apply:

Reforestation for clearing above threshold G x 1/4 11.1 x 0.25	2.8
Credit for forest areas retained above threshold I = Retention Credit 18.4 - 15.5	2.9
Total Reforestation required (G x 1/4) - I	0

If the total reforestation requirement is equal to or less than 0, no reforestation is required. The obligation is addressed by credit for retention above the threshold.

Blaze Orange Plastic Mesh (TPF)



NOTES
1. Forest protection device only.
2. Retention Area will be set as part ofthe review process.
3. Boundaries of Retention Area should be staked and flagged prior to installing device
4. Root damage should be avoided.
5. Protective signage may also be used.
6. Device should be maintained throughout construction.

WOODLAND CONSERVATION MANUAL | EXHIBIT K – 8 | PRINCE GEORGES COUNTY, MD

——TPF——TPF—— Tree Protection Fence Plan View

Signage

Sign Location Plan View

Min 11" / Min 15"

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
PROGRAM

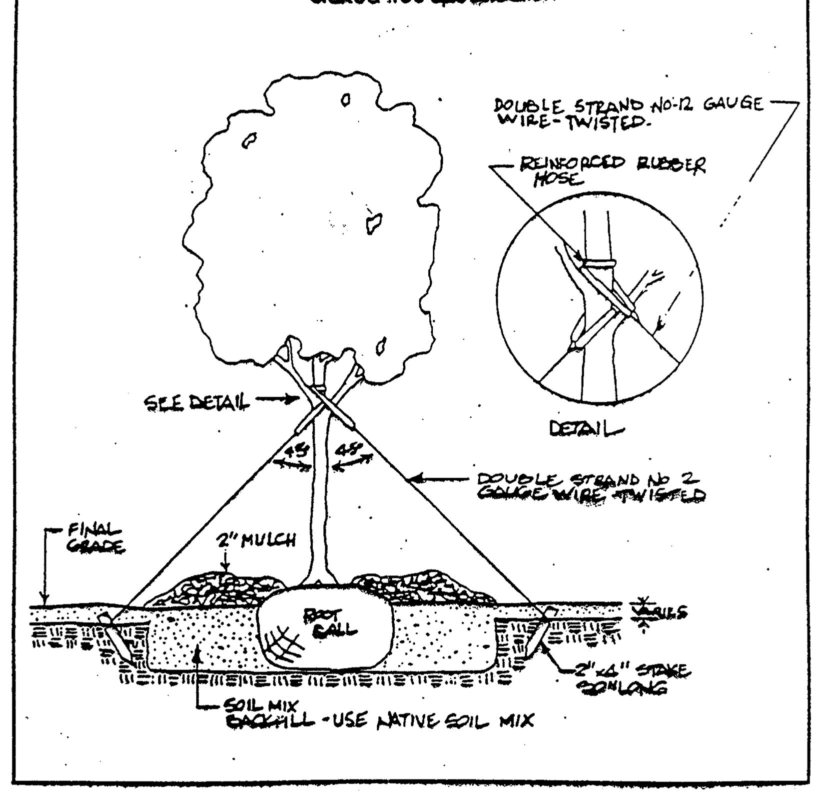
SCHEDULE A
PERIMETER LANDSCAPE EDGE

Category	Adjacent to Roadways	Adjacent to Perimeter Properties		
Landscape Type	1 N/A	2 A	3 A	4 A
Linear Feet of Roadway Frontage/Perimeter	809	1643	971	2706
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	N/A	Yes 1643	Yes 971	Yes 2256
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	N/A	N/A	N/A	N/A
Number of Plants Required Shade Trees Evergreen Trees Shrubs	— — —	0 — —	0 — —	8 — —
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution) (Describe plant substitution credits below if needed)	— — — — —	0 — — — —	0 — — — —	8 — — — —

Comments ________________

Note: Complex projects may require expansion of the schedule to accommodate multiple land uses on-site or on adjacent properties.

Staked Tree Specification



...Staking of trees may be used only when transplanting in areas of high winds for trees larger than eight feet in height. Stakes and wires should be removed after the first growing season.

NOTES:

1. The Forest Conservation Easement has been established to fulfill the requirements of Section 16.1200 of the Howard County Code / Forest Conservation Act. No clearing, grading or construction are permitted within the easement; however forest management practices as defined in the Deed of Forest Conservation Easement are permitted. The Forest Conservation obligation is met by Retention on site. The Forest Conservation Easement shown on this plan for 18.4 acres is for development of lots 1 thru 4 only. 14.8acres of Retention Easement will be placed on lots 4. 3.6 acres of Retention Credit is provided on lots 1, 2 and 3. No Surety is required for Forest Conservation due to the projects Minor Subdivision status with all obligations being fulfilled through retention.
2. This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and Landscape Manual. Landscape surety of $ 2,400.00 shall be posted prior to issuance of the Grading Permit.

DENNIS J. LaBARE, M.S., & ASSOCIATES
Environmental Consulting Services
8903 Flagstone Circle
Randallstown, MD 21133

- Wetland Delineations & Mitigation
- Stream Assessment & Restoration
- Water Quality Monitoring
- Macroinvertebrate Taxonomy
- Forest Stand Delineations
- Forest Conservation Plans

Qualified Professional, MDFCA
Ph./Fax (410) 922-7476

APPROVED: DEPARTMENT OF PLANNING & ZONING

Chief, Development Engineering Division — Date 8/1/01

Chief, Division of Land Development — Date 8/9/01

Director — Date

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

NATURAL RESOURCE CONSERVATION SERVICE — DATE

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HOWARD SOIL CONSERVATION DISTRICT — DATE

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SIGNATURE OF DEVELOPER — DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. We further certify that upon completion a Certificate of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Owner — Date 7/17/01

Owner — Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING, ENVIRONMENTAL DIVISION

SIGNATURE — DATE

STATE OF MARYLAND — BRUCE DAVID BOSTON — No. 19184 — REGISTERED — PROFESSIONAL ENGINEER
7/23/01

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

DESIGNED: BDB	LANDSCAPING / FOREST CONSERVATION PLAN DETAILS and SPECIFICATIONS	SCALE: As Shown
DRAWN: KBW	**PINDELL CROSSING** LOTS 1-5	DRAWING: 2 of 2
CHECKED: BDB	TAX MAP 41 PARCEL 201 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	JOB NO. 99-060
DATE 7/2001	DEVELOPER PINDELL WOODS, LLC 8835-P Columbia 100 Parkway Columbia, MD 21045 (410) 730-0810	FILE NO. F01-63

F01-63

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	1 ⚠	2 ⚠	3 ⚠	4
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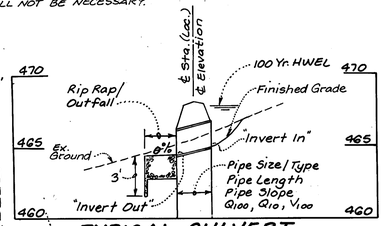

TYPICAL CULVERT PROFILE

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1" = 5' Vert.

HORIZONTAL CURVE DATA FOR PRIVATE USE-IN-COMMON DRIVEWAY

CURVE #1	CURVE #2	CURVE #3	CURVE #4
PC 0+86.89	PC 3+13.00	PC 3+80.65	PC 5+79.49
PT 1+53.67	PT 3+33.16	PT 4+29.29	PT 6+58.03
C_L R=50'	C_LR=50'	C_LR= 45'	C_LR=50'
L=66.78'	L=20.16'	L=48.64'	L=78.54'
T=39.44'	T=10.22'	T=27.00'	T=50'
Δ= 76°-31'-44"	Δ=23°-06'-20"	Δ=61°-55'-55"	Δ=90°

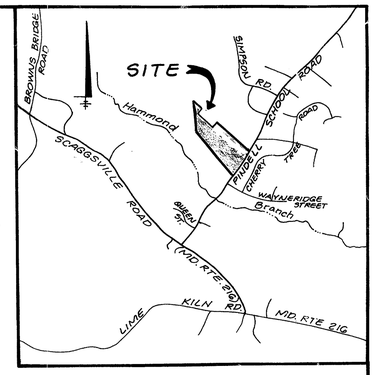
CURVE #5	CURVE #6	CURVE #7	CURVE #8
PC 8+61.71	PC 10+24.60	PC 12+71.92	PC 13+62.91
PT 9+00.30	PT 10+56.70	PT 13+09.20	PT 14+00.19
C_LR=45'	C_LR=45'	C_LR=45'	C_LR=45'
L=38.59'	L=32.09'	L=37.28'	L=37.28'
T=20.57'	T=16.76'	T=19.78'	T=19.78'
Δ=49°-08'-15"	Δ=40°-51'-45"	Δ=47°-27'-58"	Δ=47°-27'-58"

LANDSCAPE SCHEDULE

QUANTITY	SYMBOL	BOTANICAL / COMMON NAME	SIZE
8	⊛	ACER RUBRUM 'OCTOBER GLORY' OCTOBER GLORY RED MAPLE	2½" - 3" CAL. B&B

LEGEND

- 472 — Ex. Ground
- 472 — Prop. Grade
- Ex. Well
- Prop. Well
- Ex. Woods / Trees To Be Removed
- Ex. Woods / Trees To Be Retained
- Prop. Landscape Tree
- Forest Conservation Signage
- Forest Conservation Easement
- Ex. Non-Tidal Wetlands
- Prop. House Site w/ Front Orientation
- Prop. Sewage Disposal Area
- Soil Delineation
- TPF — Tree Protection Fence



VICINITY MAP

Scale: 1" = 2000'

GENERAL NOTES:

1. EXISTING ZONING: RR-(RURAL/RESIDENTIAL) PER 10/18/93 COMPREHENSIVE ZONING PLAN.
2. DEED REFERENCES: PARCEL 201
3. TOTAL AREA OF PROPERTY: 32.321G Ac.±
4. THE LOTS SHOWN COMPLY WITH THE MINIMUM LOT AREA AND OWNERSHIP WIDTH AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
5. THE TOPOGRAPHY SHOWN IS COMPILED FROM THE HOWARD COUNTY AERIAL PHOTOGRAMMETRY.
6. THE EXISTING DWELLING AND ACCESSORY BUILDINGS ON LOT 4 SHALL BE RAZED PRIOR TO RECORD PLAT SIGNATURE APPROVAL.
7. SOIL GROUP DELINEATION TAKEN FROM USDA MAP No. 28.
8. ALL PERCOLATION TESTS HAVE BEEN FIELD LOCATED. ALL EXISTING WELLS AND SEPTIC SYSTEMS HAVE BEEN SHOWN WITHIN 100 FT. OF PROPERTY BOUNDARY WHICH MAY IMPACT THIS SUBDIVISION.
9. THE EXISTING SEPTIC SYSTEM SHALL BE PROPERLY ABANDONED PRIOR TO RECORD PLAT APPROVAL.
10. ALL PROPOSED WELLS SHALL BE DRILLED PRIOR TO FINAL PLAT SIGNATURE APPROVAL. LOT 4 WILL UTILIZE THE EXISTING WELL SITE.
11. LOTS 1 THRU 4 WILL REQUIRE A PUMP SYSTEM WITH VISUAL AND AUDIBLE ALARMS FOR INSTALLATION OF THE SEPTIC SYSTEM.
12. TREE PROTECTION FENCE OR BLAZE ORANGE FENCE SHALL BE PLACED AROUND THE PERIMETER OF THE SEWAGE DISPOSAL EASEMENT PRIOR TO ANY CONSTRUCTION OF DRIVEWAY OR LOT IMPROVEMENTS TO INSURE THAT PLACEMENT OF FILL MATERIAL UPON THE EASEMENT AREA WILL NOT OCCUR.
13. THE 100 YEAR FLOODPLAIN SHOWN HEREON IS TAKEN FROM THE HAMMOND BRANCH FLOODPLAIN STUDY.
14. ALL WOODED AREAS SHALL BE PROTECTED BY TREE PROTECTION FENCE.
15. VEHICULAR INGRESS AND EGRESS IS RESTRICTED TO PINDELL SCHOOL ROAD, IN ACCORDANCE WITH DESIGN MANUAL WAIVERS APPROVED ON 2/8/01 AND / /01. ALL VEHICULAR INGRESS AND EGRESS IS RESTRICTED FOR LOTS 1-4 AND PARCEL 60 TO THE APPROVED ACCESS POINT SHOWN ON THE FINAL PLAT AND THIS PLAN. PARCEL 60'S VEHICULAR ACCESS TO PINDELL SCHOOL ROAD VIA THE PRIVATE USE-IN-COMMON DRIVEWAY IS MANDATORY. NO OTHER MEANS OF VEHICULAR ACCESS IS PERMITTED. THE DIRECTOR OF PLANNING AND ZONING HAS DETERMINED THAT DUE TO LIMITED INTERSECTION SITE DISTANCE AND THE DESIRABILITY TO HAVE ONLY ONE DRIVEWAY CONNECTION ONTO PINDELL SCHOOL ROAD, A MAJOR COLLECTOR ROAD, THE MAXIMUM NUMBER FOUR (4) USERS NORMALLY PERMITTED TO USE A USE-IN-COMMON DRIVEWAY CAN BE EXCEEDED BY ONE (1) FOR A TOTAL OF FIVE (5) USERS. THE DIRECTOR'S DETERMINATION IS IN COMPLIANCE WITH THE DEVELOPMENT ENGINEERING DIVISION'S POLICY INTERPRETATION.

SOILS LEGEND

SYMBOL	NAME	SLOPE/CHARACTERISTICS
Ba	Baile Silt Loam	
ChB2	Chester Silt Loam	3 to 8% Moderately Eroded
DeA	Delanco Silt Loam	0 to 3%
DeB2	Delanco Silt Loam	3 to 8% Moderately Eroded
GlA	Glenelg Loam	0 to 3%
GlB2	Glenelg Loam	3 to 8% Moderately Eroded
GnB2	Glenville Silt Loam	3 to 8% Moderately Eroded
Ha	Hatboro Silt Loam	
MlB2	Manor Loam	3 to 8% Moderately Eroded

PERCOLATION TEST LEGEND

- ⊕ FAILED PERCOLATION TEST
- ◎ PASSED PERCOLATION TEST
- ⓟ PERCOLATION TEST HELD FOR WET SEASON
- ◔ PASSED PERCOLATION TEST 3/24/00
- ⊖ VISUAL FOR WATER TABLE DETERMINATION 3/24/00 (Fail)

ENGINEER'S CERTIFICATE

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

SIGNATURE OF ENGINEER — DATE

DEVELOPER'S CERTIFICATE

"I/WE 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 EMISION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER — DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING

Chief, Development Engineering Division — Date 8/8/01

Chief, Division of Land Development — Date 8/9/01

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING, ENVIRONMENTAL DIVISION

SIGNATURE — DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT.

HOWARD COUNTY HEALTH OFFICER — DATE 8/21/01

No.	Date	Description
⚠ 1	2/02	Revise Driveway Culverts

REVISIONS

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

NATURAL RESOURCE CONSERVATION SERVICE — DATE

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

HOWARD SOIL CONSERVATION DISTRICT — DATE

STATE OF MARYLAND — BRUCE DAVID WARFIELD — No. 19194 — REGISTERED PROFESSIONAL ENGINEER

7/23/01

DEVELOPER'S/BUILDER'S CERTIFICATE

We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and the Howard County Landscape Manual. We further certify that upon completion a Certificate of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Owner — 7/16/01 Date

Owner — Date

DENNIS J. LaBARE, M.S., & ASSOCIATES
Environmental Consulting Services
9903 Flagstone Circle
Rapidallstown, MD 21133
Wetland Delineations & Mitigation
Streams Assessment & Restoration
Water Quality Monitoring
Microinvertebrate Taxonomy
Forest Stand Delineations
Forest Conservation Plans
Qualified Professional, MDFCA
Ph/Fax (410) 922-7476

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

LANDSCAPING / FOREST CONSERVATION PLAN

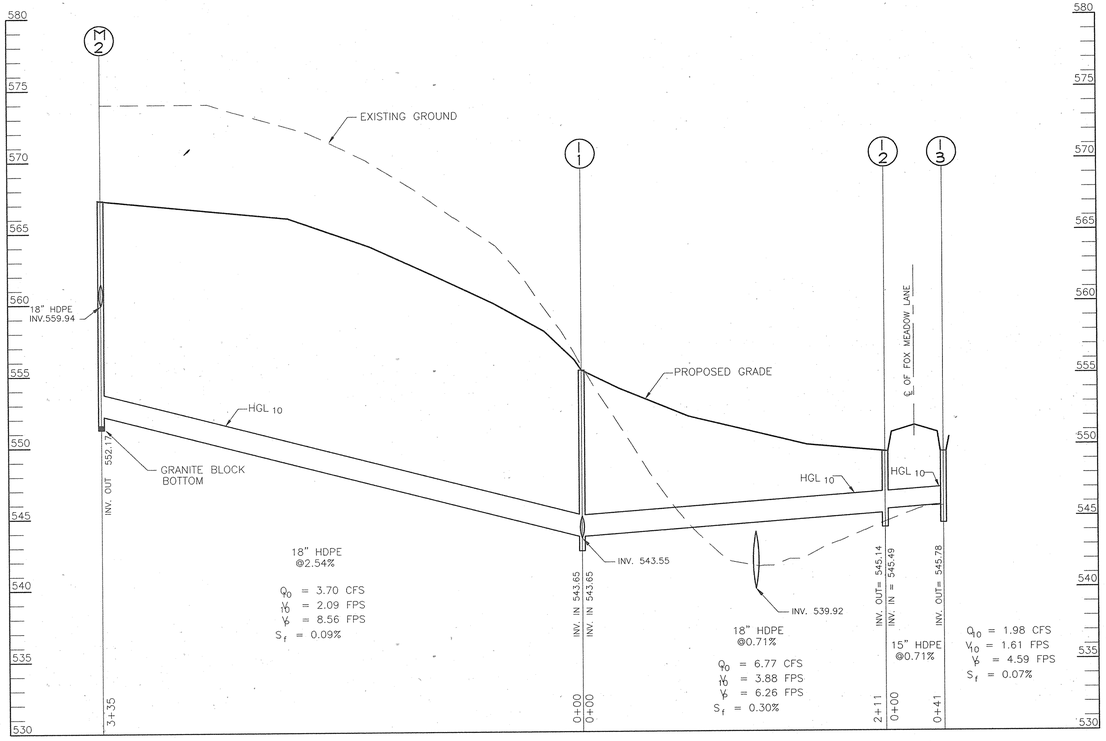
PINDELL CROSSING
LOTS 1-5

TAX MAP 41 PARCEL 201
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DESIGNED: BDB | DRAWN: KBW | CHECKED: BDB | DATE: 7/2001 | SCALE: 1" = 100' | DRAWING: 1 of 2 | JOB NO. 99-060 | FILE NO. F01-63

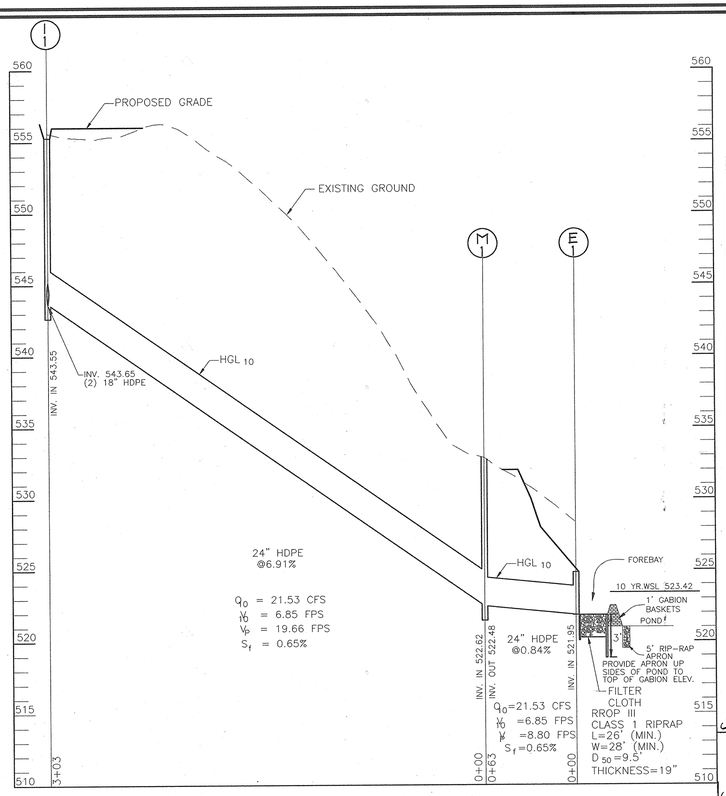
DEVELOPER
PINDELL WOODS, LLC
8835-P Columbia 100 Parkway
Columbia, MD 21045 (410) 730-0810

F01-63



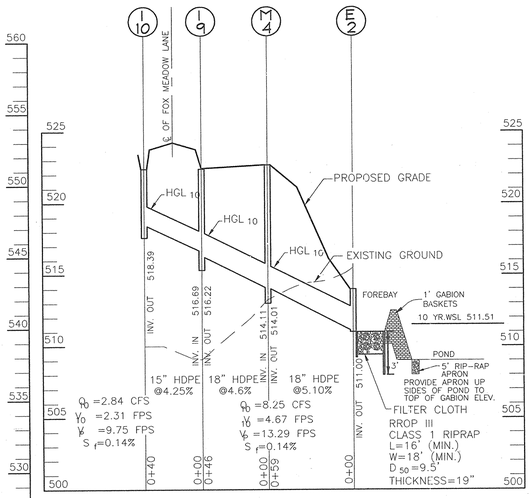
STORM DRAIN PROFILE

SCALE: 1"= 50' HORZ.
1"= 5' VERT.



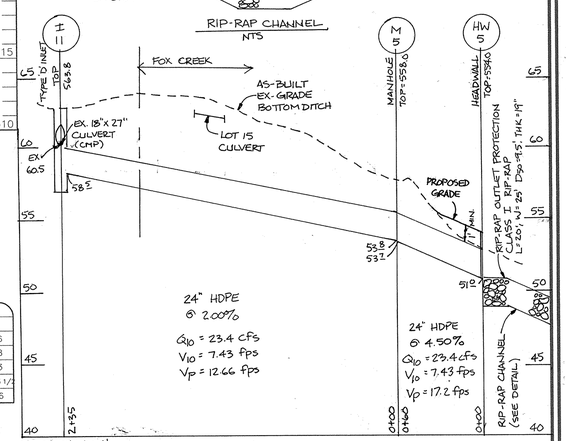
STORM DRAIN PROFILE

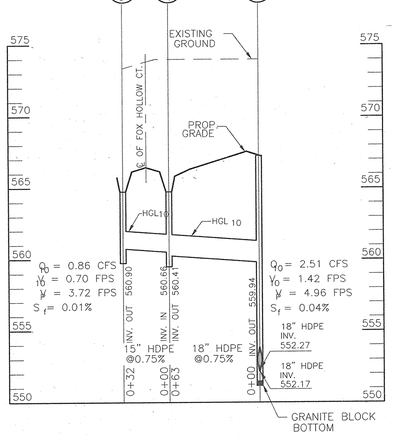
SCALE: 1"= 50' HORZ.
1"= 5' VERT.



STORM DRAIN PROFILE

SCALE: 1"= 50' HORZ.
1"= 5' VERT.





STORM DRAIN PROFILE

SCALE: 1"= 50' HORZ.
1"= 5' VERT.

1"= 5' VERT.

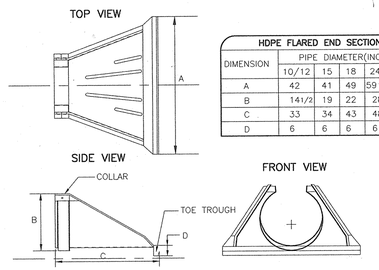
STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	TOP ELEV.	INV IN	INV OUT	REMARKS
E-1	24" HDPE END SECTION	N 596387.26 E 1330199.88	524.85	24" 521.95	521.85	SEE DETAIL
E-2	18" HDPE END SECTION	N 595142.65 E 1329781.42	514.00	18" 511.10	511.00	SEE DETAIL
E-3	36" CONC. END SECTION					SD 5.51
E-4	36" CONC. END SECTION					SD 5.51
I-1	TYPE D INLET	CL STA. 17+68, 20' RT.	555.28 *	(2)18" 543.65	24" 543.55	SD-4.39
I-2	TYPE D INLET	CL STA. 19+80, 20' LT.	549.53 *	15" 545.49	18" 545.14	SD-4.39
I-3	TYPE D INLET	CL STA. 19+80, 20' RT.	549.53 *	–	15" 545.14	SD-4.39
I-4	TYPE D INLET	CL STA. 0+53, 16' RT.	564.75 *	15" 560.51	18" 560.41	SD-4.39
I-5	TYPE D INLET	CL STA. 0+53, 16' LT.	564.75 *	–	15" 560.75	SD-4.39
I-9	TYPE D INLET	CL STA. 5+43, 20 RT.	522.39 *	15" 516.69	18" 516.22	SD-4.39
I-10	TYPE D INLET	CL STA. 5+43, 20 LT.	522.39 *	–	15" 518.39	SD-4.39
I-11	TYPE D INLET	CL STA. 0+38, 18.5' RT	563.84	560.50	24" 558.5	SD-4.39
M-1	STANDARD 4' MANHOLE	N 596360.38 E 1330142.30	532.85	24" 522.62	24" 522.48	G-5.12
M-2	STANDARD 4' MANHOLE	CL STA. 14+31, 18' RT.	567.31	18" 559.94	18" 552.17	G-5.12
M-4	STANDARD 4' MANHOLE	CL STA. 5+89, 20' RT.	522.68	18" 514.11	18" 514.01	G-5.12
M-5	STANDARD 4' MANHOLE	CL STA. 2+57.48, 20' RT	558.0	24" 553.8	24" 553.7	G-5.12
HW-1	TYPE 'A' HEADWALL CIRCULAR	N 595018.62 E 1329730.04	508.50	–	501.50	SD 5.11
HW-2	TYPE 'A' HEADWALL CIRCULAR	N 595066.61 E 1329631.06	512.20	505.20	–	SD 5.11
HW-3	TYPE 'A' HEADWALL CIRCULAR	N 596458.79 E 1330013.83	534.50	–	529.00	SD 5.11
HW-4	TYPE 'A' HEADWALL CIRCULAR	N 596414.55 E 1329767.78	548.50	543.00	–	SD 5.11
HW-5	TYPE 'A' HEADWALL CIRCULAR	N 5911543.35 E 1327645.35	554.0	–	551.0	SD 5.11

NOTE: ALL STORM DRAIN PIPE TO BE HDPE UNLESS OTHERWISE NOTED.
TS = TOP OF SLAB, FACE OF STRUCTURE
TP = TOP OF PIPE
TR = TOP CENTER OF RIM
* ELEV. AT THROAT OPENING

PIPE SCHEDULE

PIPE SIZE	TYPE	TOTAL LENGTH
15"	HDPE	396 LF
18"	HDPE	431 LF
24"	HDPE	661 LF
36"	ASTM RCCP C-361	58 LF
48"	RCCP	250 LF
66"	RCCP	110 LF



HDPE FLARED END SECTION

DIMENSION	PIPE DIAMETER(INCHES)					
	10/12	15	18	24	30	36
A	42	41	49	59 1/2	88	88
B	14 1/2	19	22	28	36	43
C	33	34	43	48	63 1/2	66 1/2
D	6	6	6	6	6	6

HDPE END SECTION DETAIL

NOT TO SCALE

NO.	REVISION	DATE
1	ADD ADDITIONAL PROP. STORMDRAIN PROFILE	5/2/04

STORM DRAIN PROFILES
FOX CREEK SUBDIVISION
LOTS 1 THRU 28 AND PRESERVATION PARCELS 'A' THRU 'D'

TAX MAP 15 BLOCKS 12 & 18
TAX MAP 16 BLOCKS 7 & 13
3RD ELECTION DISTRICT
REF: S-00-03, P-01-01

PARCEL '183'
HOWARD COUNTY, MARYLAND

OWNER
RICHARD TENNANT
12256 FREDERICK ROAD
WEST FRIENDSHIP, MD 21794

DEVELOPER
IKO – TENNANT DEVELOPMENT LIMITED PARTNERSHIP
3403 OLANDWOOD COURT, SUITE 101
OLNEY, MD. 20832

FREDERICK WARD ASSOCIATES, INC.
ENGINEERS
ARCHITECTS
SURVEYORS
7125 Riverwood Drive Columbia, Maryland 21046-2354
Phone: 410-290-9550 Fax: 410-720-6226
Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

OWNER
RICHARD TENNANT
12256 FREDERICK ROAD
WEST FRIENDSHIP, MD 21794

DEVELOPER
IKO – TENNANT DEVELOPMENT LIMITED PARTNERSHIP
3403 OLANDWOOD COURT, SUITE 101
OLNEY, MD. 20832

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE 7-17-02

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/19/02

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/23/02

STATE OF MARYLAND — No. 16193 — PROFESSIONAL ENGINEER
ROBERT H. VOGEL, PE No.16193

DESIGN BY:	JCO/RJ
DRAWN BY:	RJ
CHECKED BY:	JCO
DATE:	FEBRUARY 2002
SCALE:	1"=50'
W.O. NO.:	2019036.0

9 SHEET OF 16

F-01-163

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MATCHLINE SEE SHEET 7 OF 16

MATCHLINE SEE SHEET 5 OF 16

LEGEND

- Existing Contour ——382——
- Proposed Contour ——385——
- Existing Trees to Remain
- 15%-24.99% STEEP SLOPE AREA
- 25% OR GREATER STEEP SLOPE AREA
- WETLAND AREA
- FOREST CONSERVATION EASEMENT
- FLOODPLAIN EASEMENT
- NOISEBERM EASEMENT
- EARTH DIKE
- SOIL BORING
- MOUNTABLE BERM
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- SF — SILT FENCE (ALL FENCE MUST EXTEND UPHILL 2' AT ENDS) IN REVISION
- TP — TREE PROTECTION FENCE
- LOD — LIMIT OF DISTURBANCE(PHASE 2)
- LOD — LIMIT OF DISTURBANCE(PHASE 1)
- RIP-RAP INFLOW PROTECTION
- AREAS TO RECEIVE SAME-DAY STABILAZATION

Maryland State Grid Meridian

DEVELOPER
IKO – TENNANT DEVELOPMENT LIMITED PARTNERSHIP
3403 OLANDWOOD COURT, SUITE 101
OLNEY, MD. 20832

OWNER
RICHARD TENNANT
12256 FREDERICK ROAD
WEST FRIENDSHIP, MD 21794

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS — DATE 7-17-02

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

USDA–NATURAL RESOURCES CONSERVATION SERVICE — DATE 7/10/02

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE 7/10/02

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE 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 SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS–BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

TENNANT-IKO DEV. L.L.C.
SIGNATURE OF DEVELOPER — DATE 6/11/02

ENGINEERS CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, 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. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS–BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

SIGNATURE OF ENGINEER
ROBERT H. VOGEL — DATE 6/14/02

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7/9/02

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 7/23/02

NO.	REVISION	DATE
3	ADD STORMDRAIN NEAR LOT 15 & PRES. PARCEL 'D'	5/3/04
2	EXPAND LOD FOR ADDITIONAL GRADING	8.23.03
1	REMOVE TRAFFIC CONTROL DEVICE	3.28.03

GRADING AND SEDIMENT & EROSION CONTROL MAP
FOX CREEK SUBDIVISION
LOTS 1 THRU 28 AND PRESERVATION PARCELS 'A' THRU 'D'

TAX MAP 15 BLOCKS 12 & 18 — PARCEL '183'
TAX MAP 16 BLOCKS 7 & 13
3RD ELECTION DISTRICT — HOWARD COUNTY, MARYLAND
REF: S-00-03, P-01-01

FREDERICK WARD ASSOCIATES, INC.
ENGINEERS
ARCHITECTS
SURVEYORS
7125 Riverwood Drive Columbia, Maryland 21046-2354
Phone: 410-290-9550 Fax: 410-720-6226
Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

STATE OF MARYLAND — ROBERT HARRIS VOGEL — No. 16185 — PROFESSIONAL ENGINEER — 6/14/02
ROBERT H. VOGEL, PE No.16185

DESIGN BY: JCO
DRAWN BY: CMH
CHECKED BY: JCO
DATE: FEBRUARY 2002
SCALE: 1"=50'
W.O. NO.: 2019035.0

SHEET 6 OF 16

F-01-163

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