

| LOT NO | GROSS AREA | PIPESTEM AREA | MINIMUM LOT SIZE |
|--------|-------------|---------------|------------------|
| LOT 4 | 9549.79 SF | 1083.96 SF | 8465.83 SF |
| LOT 5 | 9877.06 SF | 1283.94 SF | 8593.12 SF |
| LOT 7 | 15181.52 SF | 3779.15 SF | 11402.37 SF |
| LOT 8 | 15986.63 SF | 4457.38 SF | 11529.25 SF |
| LOT 9 | 12213.38 SF | 3302.20 SF | 8911.18 SF |
| LOT 10 | 11033.67 SF | 2615.10 SF | 8418.57 SF |
| LOT 14 | 11306.78 SF | 20070.89 SF | 8764.11 SF |
| LOT 15 | 10595.07 SF | 19400.93 SF | 8805.86 SF |
| LOT 16 | 9479.88 SF | 17964.30 SF | 8484.42 SF |
| LOT 21 | 1110.11 SF | 1844.27 SF | 9255.84 SF |

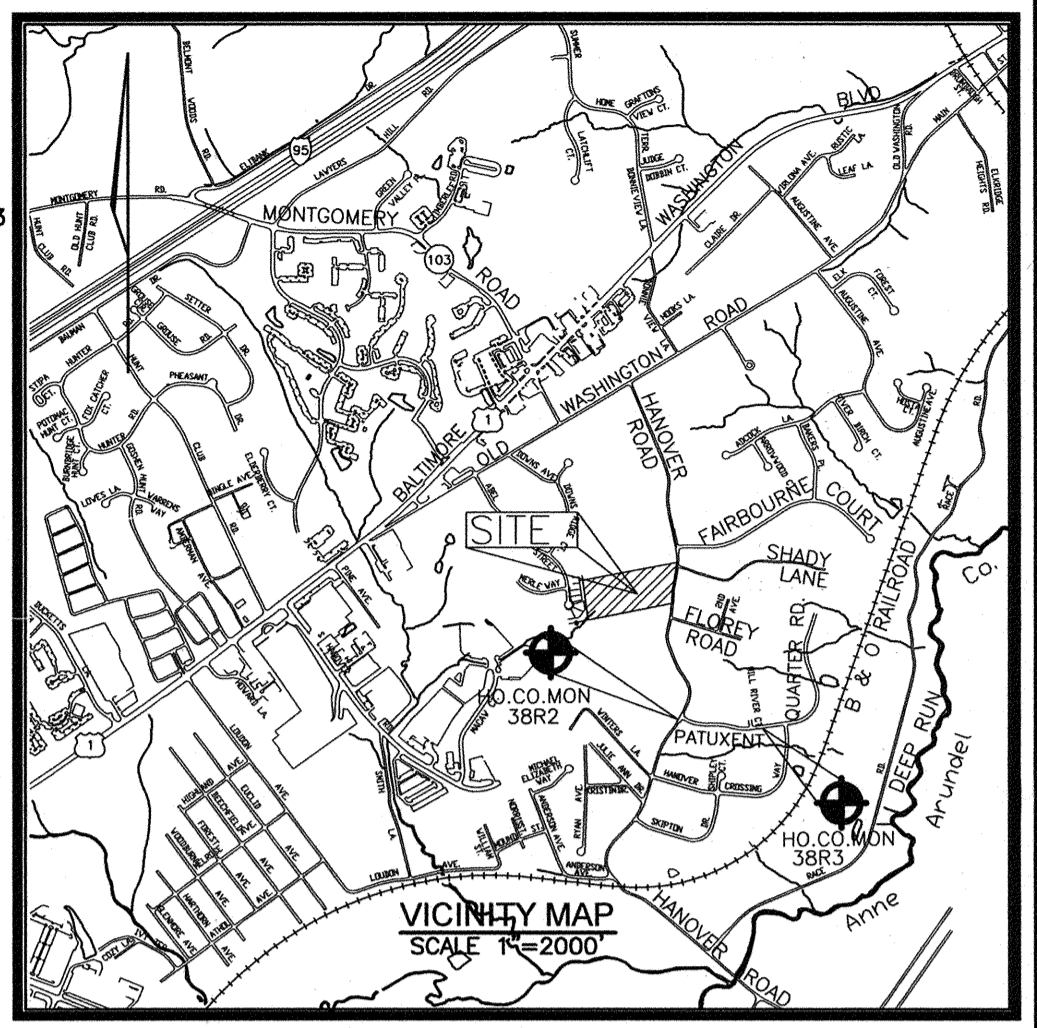
SITE DATA
 LOCATION: TAX MAP 38, PARCEL 235
 FIRST ELECTION DISTRICT
 EXISTING ZONING: R-12
 GROSS AREA OF PARCEL: 387684 SF (8.90 ACRES) BY DEED PER LIBER 3436, FOLIO 410
 AREA OF 1871 ACCESS EASEMENT: 8072.43 SF (0.185 AC.)
 PER LIBER 3436, FOLIO 410
 AREA OF RIGHT OF WAY: 29153.32 SF (0.67 AC.)
 AREA OF FLOODPLAIN: 0.16 AC.
 AREA OF STEEP SLOPES: 0.059 AC.
 NET AREA OF PROJECT: 8.90 AC. - 0.16 AC. = 8.74 AC.
 NUMBER OF PROPOSED RESIDENTIAL LOTS: 21
 AREA OF PROPOSED RESIDENTIAL LOTS: 218669.44 SF 5.0 AC.
 AREA OF SMALLEST BUILDABLE LOT PROPOSED: 8418.57 SQ. FT (LOT 10)
 NUMBER OF PROPOSED OPEN SPACE LOTS: 3 (LOT 13, 19, 24)
 AREA OF OPEN SPACE LOTS: 132083.83 SF (3.0 AC.)
 AREA OF OPEN SPACE REQUIRED: 30% OF GROSS AREA OF PARCEL (2.67 AC.)
 TOTAL AREA OF CREDITED OPEN SPACE PROVIDED: 12,1745.66 (2.77 ACRES) - LOT 13 AND 19
 TOTAL AREA OF NON-CREDITED OPEN SPACE PROVIDED: 10,338.175F (0.23 ACRES) - LOT 24, LOT 13.
 AREA OF RECREATION OPEN SPACE REQUIRED: 4200 SF
 AREA OF RECREATION OPEN SPACE PROVIDED: 4366.89 SF ON LOT 19

PRELIMINARY PLAN SHADY LANE CROSSING LOTS 1 THRU 24 HOWARD COUNTY, MARYLAND

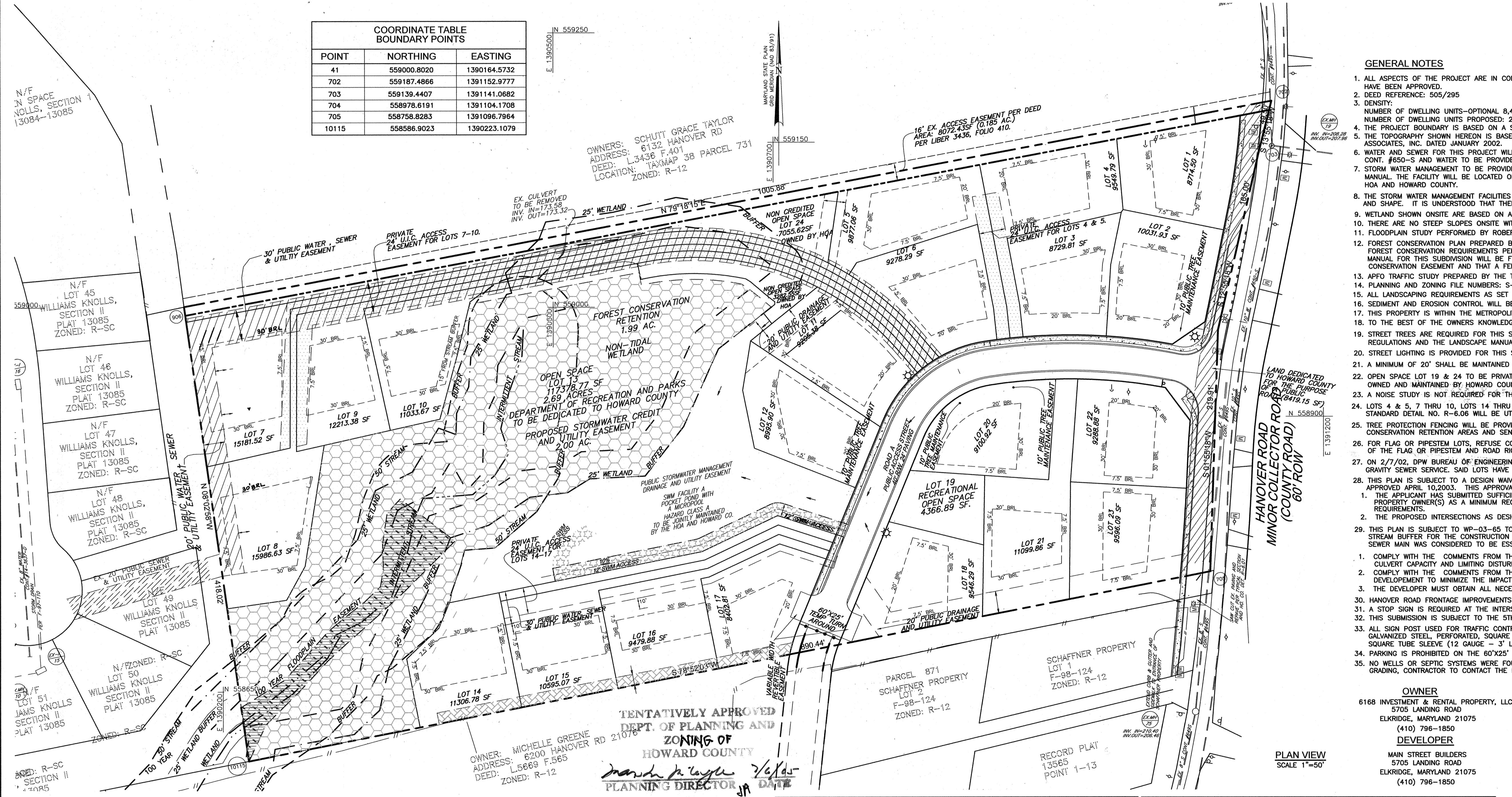
BENCHMARK
 HOWARD COUNTY CONTROL STATION 38R2
 NORTH 557,500.663'
 EAST 1,391,227.052'
 ELEVATION 168.788' (NAVD 1988)

HOWARD COUNTY CONTROL STATION 38R3
 NORTH 557,417.823'
 EAST 1,391,983.177'
 ELEVATION 124.653' (NAVD 1988)

| SHEET NO. | TITLE |
|-----------|---|
| 1 | COVER SHEET |
| 2 | SITE AND UTILITY PLAN |
| 3 | GRADING & SEDIMENT CONTROL PLAN |
| 4 | LANDSCAPE & FOREST CONSERVATION PLAN |
| 5 | LANDSCAPE & FOREST CONSERVATION DETAILS |



| POINT | NORTHING | EASTING |
|-------|-------------|--------------|
| 41 | 559000.8020 | 1390164.5732 |
| 702 | 559187.4866 | 1391152.9777 |
| 703 | 559139.4407 | 1391141.0682 |
| 704 | 558978.6191 | 1391104.1708 |
| 705 | 558758.8283 | 1391096.7964 |
| 10115 | 558586.9023 | 1390223.1079 |



GENERAL NOTES

- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
- DEED REFERENCE: 505/295
- DENSITY: 1.0
- NUMBER OF DWELLING UNITS—OPTIONAL 8,400SF LOTS WITH 30% OPENSACE
NUMBER OF DWELLING UNITS PROPOSED: 21
- THE PROJECT BOUNDARY IS BASED ON A SURVEY PERFORMED BY FREDERICK WARD AND ASSOCIATES, DATED JANUARY 2002
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON A TOPOGRAPHIC SURVEY PERFORMED BY FREDERICK WARD ASSOCIATES, INC. DATED JANUARY 2002.
- WATER AND SEWER FOR THIS PROJECT WILL BE PUBLIC. SEWER TO BE PROVIDED THROUGH CONTR. NO. 649-S, CONT. #650-S AND WATER TO BE PROVIDED THROUGH CONTR. NO. 650-S
- STORM WATER MANAGEMENT TO BE PROVIDED FOR THIS DEVELOPMENT ACCORDANCE WITH 2000 MJD STORMWATER DESIGN MANUAL. THE FACILITY WILL BE LOCATED ON OPEN SPACE LOT 24. THE SWM FACILITY SHALL BE JOINTLY MAINTAINED BY THE HOA AND HOWARD COUNTY.
- THE STORM WATER MANAGEMENT FACILITIES SHOWN ON THIS PLAN ARE AN APPROXIMATION OF THEIR ULTIMATE SIZE AND SHAPE. IT IS UNDERSTOOD THAT THEIR SIZE AND SHAPE MAY CHANGE PRIOR TO FINAL PLAN STAGE.
- WETLAND SHOWN ON SITE ARE BASED ON A WETLAND DELINEATION PERFORMED BY ECO-SCIENCES, DATED FEBRUARY 2000.
- THERE ARE NO STEEP SLOPES ON SITE WITH A MIN. CONTIGUOUS AREA OF 20,000 SF.
- FLOODPLAIN STUDY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC. DATED NOVEMBER 2004.
- FOREST CONSERVATION PLAN PREPARED BY FREDERICK WARD AND ASSOCIATES, DATED JANUARY 2002.
FOREST CONSERVATION REQUIREMENTS PER SECTION 16.202 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY 1.99 ACRES OF RETENTION WILL BE RETAINED IN A FOREST CONSERVATION EASEMENT AND THAT A FEE-IN-LIEU WILL BE PAID FOR 0.91 ACRES, BOTH AS PART OF THE FINAL PLANS
- APFO TRAFFIC STUDY PREPARED BY THE TRAFFIC GROUP, DATED FEBRUARY, 2000.
- PLANNING AND ZONING FILE NUMBERS: S-02-19, WP-03-65.
- ALL LANDSCAPING REQUIREMENTS AS SET FORTH IN THE LANDSCAPE MANUAL SHALL BE COMPLIED WITH.
- SEDIMENT AND EROSION CONTROL WILL BE PROVIDED FOR THIS SITE.
- THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL/CEMETARY LOCATIONS ON SITE.
- STREET TREES ARE REQUIRED FOR THIS SUBDIVISION IN ACCORDANCE WITH SECTION 16.124(a)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. LANDSCAPE SURETY WILL BE PART OF THE DEVELOPER'S AGREEMENT.
- STREET LIGHTING IS PROVIDED FOR THIS SITE.
- A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- OPEN SPACE LOT 19 & 24 TO BE PRIVATELY OWNED AND MAINTAINED BY THE HOA. OPEN SPACE LOT 13 TO BE OWNED AND MAINTAINED BY HOWARD COUNTY DEPT. OF RECREATION AND PARKS.
- A NOISE STUDY IS NOT REQUIRED FOR THIS SITE.
- LOTS 4 & 5, 7 THRU 10, LOTS 14 THRU 17, LOTS 19 & 20 WILL UTILIZE A USE-IN-COMMON DRIVEWAY. HOWARD COUNTY STANDARD DETAIL NO. R-6.06 WILL BE UTILIZED FOR THE ENTRANCE AT THE INTERSECTION OF THE PUBLIC ROAD.
- TREE PROTECTION FENCING WILL BE PROVIDED AT THE LIMITS OF DISTURBANCE WHERE GRADING IS ADJACENT TO FOREST CONSERVATION RETENTION AREAS AND SENSITIVE ENVIRONMENTAL AREAS, SUCH AS STREAM BUFFERS AND STEEP SLOPES.
- FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM ROAD AND ROAD RIGHT-OF-WAY LINE AND NOT TO THE PIPESTEM LOT DRIVEWAY.
- ON 2/7/02, DPM BUREAU OF ENGINEERING APPROVED 8 LOTS TO HAVE NO BASEMENT GRAVITY SEWER SERVICE. SAID LOTS HAVE BEEN IDENTIFIED AT PRELIMINARY PLAN STAGE.
- THIS PLAN IS SUBJECT TO A DESIGN WAIVER TO DESIGN MANUAL, VOLUME III SECTION 2.5.2.H APPROVED APRIL 10, 2003. THIS APPROVAL IS DUE TO THE FOLLOWING:
1. THE APPLICANT HAS SUBMITTED SUFFICIENT EVIDENCE THAT A SIGHT DISTANCE EASEMENT WAS REQUESTED FROM THE ADJACENT PROPERTY OWNERS AS A MINIMUM REQUIREMENT FOR APPROVING A WAIVER TO THE CURRENT INTERSECTION SIGHT DISTANCE REQUIREMENTS.
2. THE PROPOSED INTERSECTIONS AS DESIGNED WILL MEET THE REQUIREMENTS FOR ADEQUATE STOPPING SIGHT DISTANCE.
- THIS PLAN IS SUBJECT TO WP-03-65 TO WAIVE SECTION 16.116(a) TO ALLOW DISTURBANCE OF WETLANDS, WETLANDS BUFFER AND STREAMS BUFFER FOR THE CONSTRUCTION OF A USE-IN-COMMON DRIVEWAY TO SERVE 4 RESIDENTIAL LOTS. THE CROSSING FOR THE SEWER MAIN WAS CONSIDERED TO BE ESSENTIAL. THE FOLLOWING ARE THE CONDITIONS OF APPROVAL:
1. COMPLY WITH THE COMMENTS FROM THE DEVELOPMENT ENGINEERING DIVISION REGARDING CULVERT CAPACITY AND LIMITING DISTURBANCE TO THAT SHOWN ON THE EXHIBITS DATED 1-14-03
2. COMPLY WITH THE COMMENTS FROM THE SOIL CONSERVATION DISTRICT DURING SUBDIVISION DESIGN DEVELOPMENT TO MINIMIZE THE IMPACT OF THE DESIGN AND CONSTRUCTION OF THE DRIVEWAY ON THE WETLANDS.
3. THE DEVELOPER MUST OBTAIN ALL NECESSARY STATE AND/OR FEDERAL PERMITS FOR THE PROPOSED ENVIRONMENTAL IMPACTS.
30. HANOVER ROAD FRONTAGE IMPROVEMENTS TO BE COORDINATED WITH CAPITAL PROJECT J-4173 (CURRENTLY IN CONCEPT PHASE).
31. A STOP SIGN IS REQUIRED AT THE INTERSECTION OF HANOVER ROAD.
32. THIS SUBMISSION IS SUBJECT TO THE 5TH EDITION SUBDIVISION REGULATIONS AND TO THE ZONING REGULATIONS EFFECTIVE 1-08-02.
33. ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE - 3" LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
34. PARKING IS PROHIBITED ON THE 60'X25' TIE TURNAROUND.
35. NO WELLS OR SEPTIC SYSTEMS WERE FOUND ON SITE. IF WELLS AND/OR SEPTIC SYSTEMS ARE ENCOUNTERED DURING GRADING, CONTRACTOR TO CONTACT THE HEALTH DEPARTMENT FOR PROPER ABANDONMENT.

| AREA | REQUIREMENT | VOLUME REQUIREMENT WITHOUT CREDITS | CREDITS | VOLUME REQUIREMENT WITH CREDITS | NOTES |
|------|--|------------------------------------|----------------------|---------------------------------|---------------------------------|
| 1 | WATER QUALITY VOLUME (WQV) | 0.13 AC. FT. | --- | 0.13 AC. FT. | 50% IN GROUND WATER POCKET POND |
| 2 | RECHARGE VOLUME (REV) | 0.031 AC. FT. 0.36 AC. | 0.39 AC. GRASS SWALE | 0.00 AC. FT. | --- |
| 3 | CHANNEL PROTECTION VOLUME (CPV) | 0.19 AC. FT. | --- | 0.19 AC. FT. | POCKET POND |
| 4 | OVERHEAD FLOOD PROTECTION (O _{HP}) | --- | --- | --- | --- |
| 5 | EXTREME FLOOD VOLUME (O _{EFV}) | --- | --- | --- | --- |

| AREA | REQUIREMENT | VOLUME REQUIREMENT WITHOUT CREDITS | CREDITS | VOLUME REQUIREMENT WITH CREDITS | NOTES |
|------|--|------------------------------------|------------|---------------------------------|-----------------------|
| 1 | WATER QUALITY VOLUME (WQV) | 0.03 AC. FT. | RANGARDENS | 0.0 AC. FT. | --- |
| 2 | RECHARGE VOLUME (REV) | 0.005 AC. FT. 0.06 AC. | RANGARDENS | 0.0 AC. FT. | --- |
| 3 | CHANNEL PROTECTION VOLUME (CPV) | N/A | --- | --- | 1 YEAR LESS THAN 20FS |
| 4 | OVERHEAD FLOOD PROTECTION (O _{HP}) | --- | --- | --- | --- |
| 5 | EXTREME FLOOD VOLUME (O _{EFV}) | --- | --- | --- | --- |

| AREA | REQUIREMENT | VOLUME REQUIREMENT WITHOUT CREDITS | CREDITS | VOLUME REQUIREMENT WITH CREDITS | NOTES |
|------|--|------------------------------------|------------|---------------------------------|-----------------------|
| 1 | WATER QUALITY VOLUME (WQV) | 0.03 AC. FT. | RANGARDENS | 0.0 AC. FT. | --- |
| 2 | RECHARGE VOLUME (REV) | 0.004 AC. FT. 0.05 AC. | RANGARDENS | 0.0 AC. FT. | --- |
| 3 | CHANNEL PROTECTION VOLUME (CPV) | N/A | --- | --- | 1 YEAR LESS THAN 20FS |
| 4 | OVERHEAD FLOOD PROTECTION (O _{HP}) | --- | --- | --- | --- |
| 5 | EXTREME FLOOD VOLUME (O _{EFV}) | --- | --- | --- | --- |

| AREA | REQUIREMENT | VOLUME REQUIREMENT WITHOUT CREDITS | CREDITS | VOLUME REQUIREMENT WITH CREDITS | NOTES |
|------|--|------------------------------------|------------------------------------|---------------------------------|-----------------------|
| 1 | WATER QUALITY VOLUME (WQV) | 0.09 AC. FT. | NON-ROOFTOP DISCONNECTS RANGARDENS | 0.0 AC. FT. | --- |
| 2 | RECHARGE VOLUME (REV) | 0.012 AC. FT. 0.13 AC. | NON-ROOFTOP DISCONNECTS RANGARDENS | 0.0 AC. FT. | --- |
| 3 | CHANNEL PROTECTION VOLUME (CPV) | N/A | --- | --- | 1 YEAR LESS THAN 20FS |
| 4 | OVERHEAD FLOOD PROTECTION (O _{HP}) | --- | --- | --- | --- |
| 5 | EXTREME FLOOD VOLUME (O _{EFV}) | --- | --- | --- | --- |

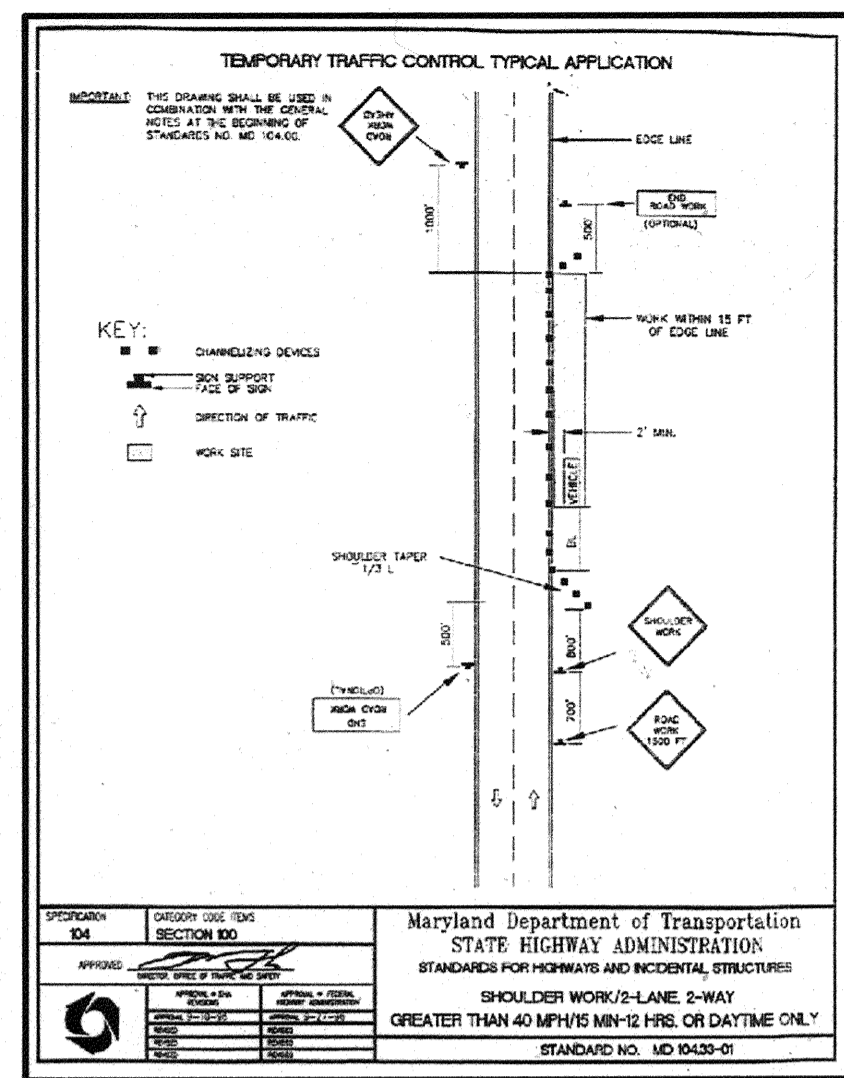
**COVER SHEET
 PRELIMINARY PLAN
 SHADY LANE CROSSING
 LOTS 1 THRU 24**

TAX MAP #38 GRID 9 PARCEL 235
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
 ENGINEERING, INC.**
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RIJICO
 DRAWN BY: RIJICO
 CHECKED BY: RHV
 DATE: FEB. 2005
 SCALE: AS SHOWN
 W.O. NO.: 2019019.00

1 SHEET OF 5



STREET LIGHT LOCATION CHART

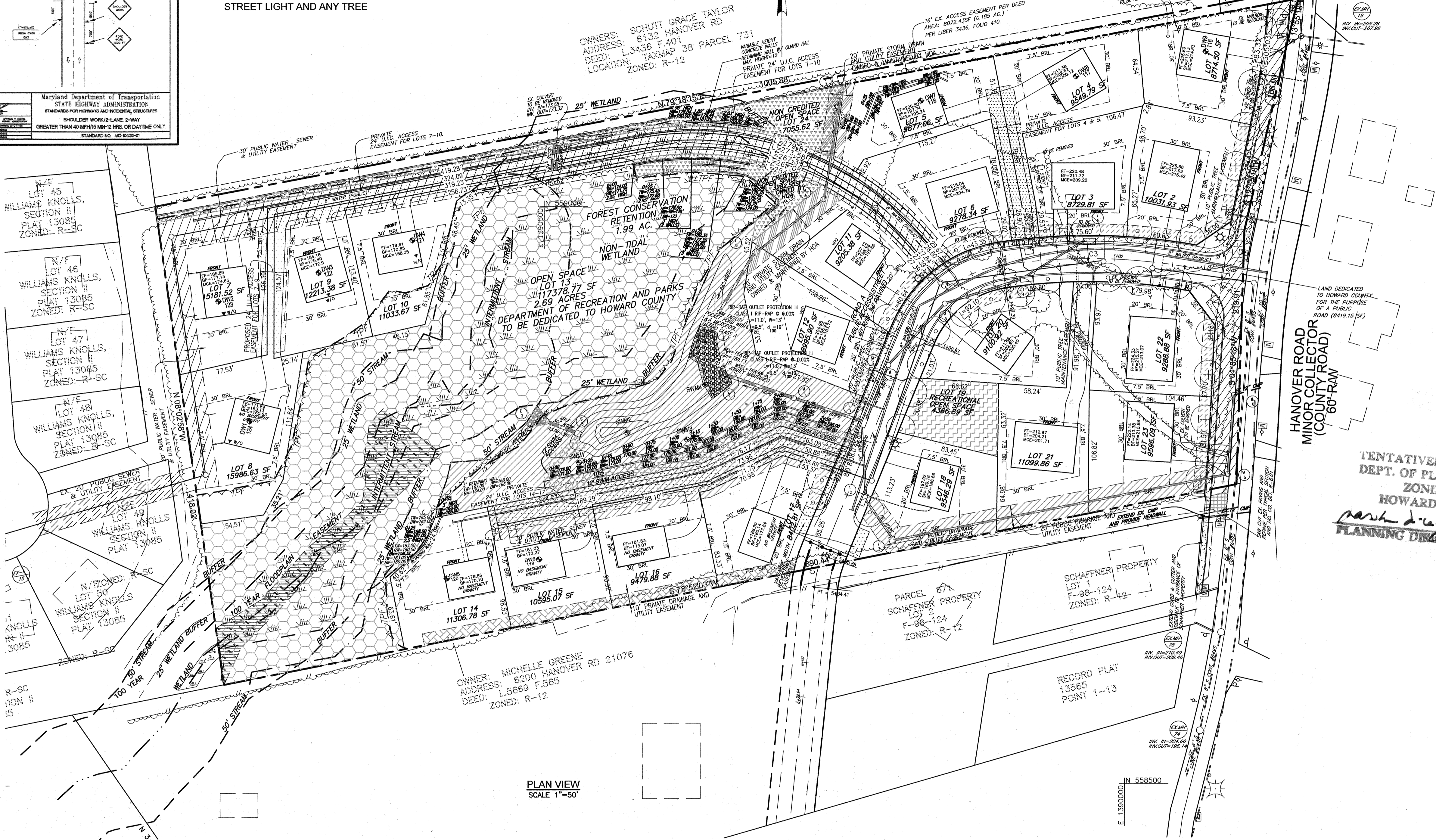
| STREET NAME | STATION | OFFSET | FIXTURE/POLE TYPE |
|----------------------|--------------|-----------------------|---|
| PUBLIC ACCESS STREET | 0+11 | 27' RIGHT | 150 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS MOUNTED ON A 14' POLE NOTE: ALL FOUR LENSES IN THIS FIXTURE SHALL BE "STREET SIDE" |
| PUBLIC ACCESS STREET | 2+58 4+39 | 14' RIGHT 14' LEFT | 100 WATT HPS VAPOR PREMIER POST-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS MOUNTED ON A 14' POLE NOTE: MOUNT D3, ST. NAME SIGN ASSEMBLY, TO LIGHT POLE |

NOTE: A MINIMUM OF 20' IS REQUIRED BETWEEN ANY STREET LIGHT AND ANY TREE

STREET SIGN LOCATION CHART

| STREET NAME | STATION | OFFSET | FIXTURE/POLE TYPE |
|----------------------|---|-----------|--|
| PUBLIC ACCESS STREET | 0+05 | 16' LEFT | R1-1 ("STOP" SIGN R1-1) |
| PUBLIC ACCESS STREET | 0+89 | 16' RIGHT | R2-1 ("SPEED LIMIT 25") |
| PUBLIC ACCESS STREET | NUMBER AND LOCATION TO BE DETERMINED IN THE FIELD | | "NO PARKING IN TEE-TURNAROUND" |
| PUBLIC ACCESS STREET | NUMBER AND LOCATION TO BE DETERMINED IN THE FIELD | | 3 - RED DIAMOND OBJECT MARKERS (18"x18") PLACED AT THE END OF ROAD |

- LEGEND**
- SPOT ELEVATION
 - DIRECTION OF FLOW
 - LIGHT POLES
 - WALK OUT BASEMENT
 - PROPOSED STREET TREES
 - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - EXISTING TREES TO REMAIN
 - 15%-24.99% STEEP SLOPE AREA
 - 25% OR GREATER STEEP SLOPE AREA
 - FOREST CONSERVATION EASEMENT (REFORESTATION)
 - FOREST CONSERVATION EASEMENT (RETENTION)
 - NON-CREDITED OPEN SPACE
 - 100 YEAR FLOODPLAIN EASEMENT 0.04 AC.
 - PUBLIC DRAINAGE & UTILITY EASEMENT PUBLIC SWM DRAINAGE AND UTILITY EASEMENT
 - PROPOSED 24' U.I.C. ACCESS EASEMENT
 - NON TIDAL WETLAND
 - 12' WIDE MIN. 10% MAX. SLOPE ACCESS
 - 10' PRIVATE DRAINAGE AND UTILITY EASEMENT
 - CREDITED OPEN SPACE REC OPENSPACE
 - NO WOODY VEGETATION BUFFER
 - TREE MAINTENANCE EASEMENT
 - PRIVATE 20' STORM DRAIN AND UTILITY EASEMENT OWNED & MAINTAINED BY HOA
 - PRIVATE SWM DRAINAGE AND UTILITY EASEMENT



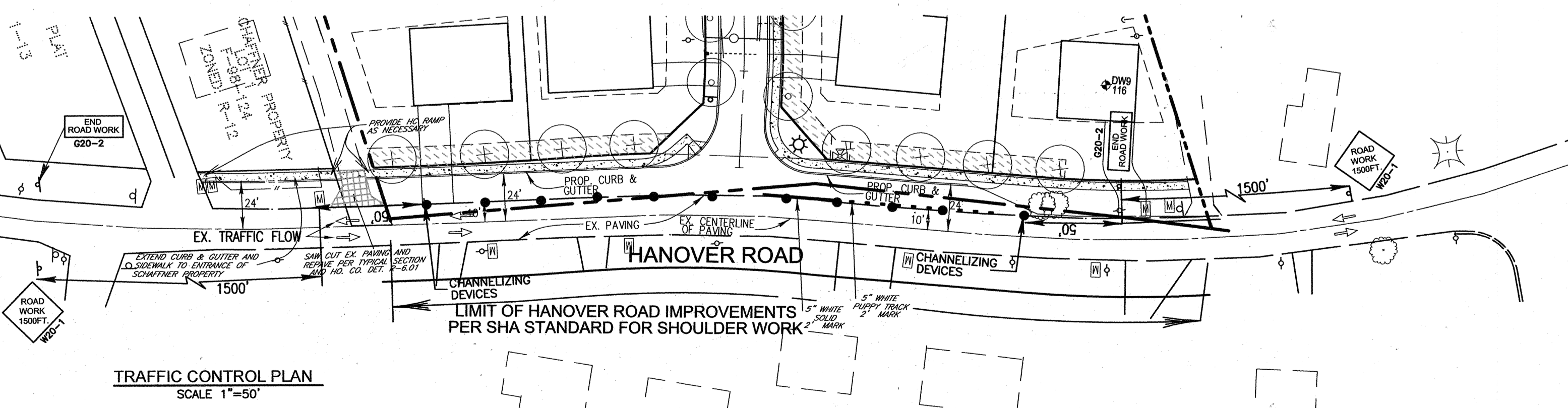
TENTATIVELY APPROVED
DEPT. OF PLANNING AND ZONING OF
HOWARD COUNTY
Nash & Taylor
PLANNING DIRECTOR 2/6/05
DATE
JA

LINE TABLE

| LINE | LENGTH | BEARING |
|------|--------|-------------|
| L1 | 198.49 | N80°02'01"W |
| L2 | 205.26 | N22°20'28"E |
| L3 | 39.58 | S80°24'49"E |

CURVE TABLE

| CURVE | CURVE LENGTH | RADIUS | DELTA | ANGLE/TANGENT | CHORD DIRECTION | CHORD LENGTH |
|-------|--------------|--------|-----------|---------------|-----------------|--------------|
| C1 | 28.46 | 100.00 | 16°18'27" | 14.33 | S14°11'14"W | 28.37 |
| C2 | 103.25 | 100.00 | 59°09'24" | 56.76 | S51°55'10"W | 98.72 |
| C3 | 157.85 | 500.00 | 18°05'19" | 79.59 | N89°27'28"W | 157.20 |



**SITE AND UTILITY PLAN
PRELIMINARY PLAN
SHADY LANE CROSSING
LOTS 1 THRU 24**
6188 HANOVER ROAD
LIBER 505 AND FOLIO 295

TAX MAP #38 GRID 9 PARCEL 235
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666
FAX: 410.461.8961

OWNER
6188 INVESTMENT & RENTAL PROPERTY, LLC
5705 LANDING ROAD ELK RIDGE, MARYLAND 21075 (410) 796-1850

DEVELOPER
MAIN STREET BUILDERS
5705 LANDING ROAD ELK RIDGE, MARYLAND 21075 (410) 796-1850

DESIGN BY: RUJICO
DRAWN BY: RUJICO
CHECKED BY: RHV
DATE: FEB. 2005
SCALE: AS SHOWN
W.O. NO.: 2019019.00

2 SHEET OF 5



- LEGEND**
- SPOT ELEVATION
 - DIRECTION OF FLOW
 - LIGHT POLES
 - WALK OUT BASEMENT
 - PROPOSED STREET TREES
 - EXISTING CONTOUR
 - PROPOSED CONTOUR
 - EXISTING TREES TO REMAIN
 - 15%-24.99% STEEP SLOPE AREA
 - 25% OR GREATER STEEP SLOPE AREA
 - FOREST CONSERVATION EASEMENT (REFORESTATION)
 - FOREST CONSERVATION EASEMENT (RETENTION)
 - NON-CREDITED OPEN SPACE
 - 100 YEAR FLOODPLAIN EASEMENT 0.04 AC.
 - PUBLIC DRAINAGE & UTILITY EASEMENT PUBLIC SWM DRAINAGE AND UTILITY EASEMENT
 - PROPOSED 24' U.I.C. ACCESS EASEMENT
 - NON TIDAL WETLAND
 - 12' WIDE MIN. 10% MAX. SLOPE ACCESS
 - 10' PRIVATE DRAINAGE AND UTILITY EASEMENT
 - CREDITED OPEN SPACE REC OPENSAPCE
 - NO WOODY VEGETATION BUFFER
 - TREE MAINTENANCE EASEMENT
 - PRIVATE 20' STORM DRAIN AND UTILITY EASEMENT OWNED & MAINTAINED BY HOA
 - PRIVATE SWM DRAINAGE AND UTILITY EASEMENT

TENTATIVELY APPROVED
 DEPT. OF PLANNING AND
 ZONING OF
 HOWARD COUNTY
March 24, 2005
 PLANNING DIRECTOR DATE
 JA

OWNER
 6168 INVESTMENT & RENTAL PROPERTY, LLC
 5705 LANDING ROAD
 ELKBRIDGE, MARYLAND 21075
 (410) 796-1850

DEVELOPER
 MAIN STREET BUILDERS
 5705 LANDING ROAD
 ELKBRIDGE, MARYLAND 21075
 (410) 796-1850

**GRADING AND SEDIMENT CONTROL PLAN
 PRELIMINARY PLAN
 SHADY LANE CROSSING
 LOTS 1 THRU 24**
 6168 HANOVER ROAD
 LIBER 505 AND FOLIO 295

TAX MAP #38 GRID 9 PARCEL 235
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
 ENGINEERS, INC.**
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELICOTT CITY, MD 21043 TEL: 410.461.7666
 FAX: 410.461.9961

DESIGN BY: RJJCO
 DRAWN BY: RJJCO
 CHECKED BY: RHV
 DATE: FEB. 2005
 SCALE: AS SHOWN
 W.O. NO.: 2019019.00

3 SHEET OF 5

LEGEND
 EXISTING CONTOUR
 PROPOSED CONTOUR
 SPOT ELEVATION
 DIRECTION OF FLOW
 LIGHT POLES
 WALK OUT BASEMENT
 PROPOSED STREET TREE

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING TREES TO REMAIN
- 15%-24.99% STEEP SLOPE AREA
- 25% OR GREATER STEEP SLOPE AREA
- FOREST CONSERVATION EASEMENT (REFORESTATION)
- FOREST CONSERVATION EASEMENT (RETENTION)
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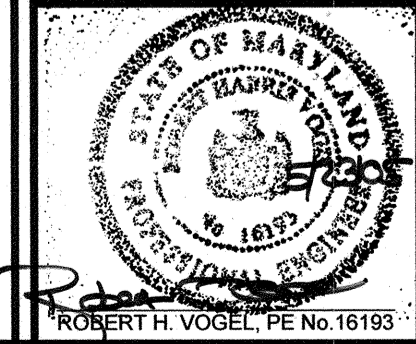
TENTATIVELY APPROVED
 DEPT. OF PLANNING AND ZONING OF
 HOWARD COUNTY
 PLANNING DIRECTOR
 JA

**LANDSCAPE AND FOREST CONSERVATION PLAN
 PRELIMINARY PLAN
 SHADY LANE CROSSING
 LOTS 1 THRU 24**
 6188 HANOVER ROAD
 LIBER 505 AND FOLIO 295

TAX MAP #38 GRID 9
 1ST ELECTION DISTRICT

PARCEL 235
 HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
 ENGINEERING, INC.**
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
 ELLICOTT CITY, MD 21043
 TEL: 410.461.7666
 FAX: 410.461.8961



DESIGN BY: RJUCO
 DRAWN BY: RJUCO
 CHECKED BY: RHV
 DATE: FEB 2005
 SCALE: AS SHOWN
 W.O. NO.: 2019019.00

SHEET OF 5
 4

OWNER
 6168 INVESTMENT / RENTAL
 PROPERTY, LLC
 5705 LANDING ROAD
 ELKRIEGE, MARYLAND 21075
 410-796-1850

DEVELOPER
 MAIN STREET BUILDERS
 5705 LANDING ROAD
 ELKRIEGE, MARYLAND 21075
 (410) 796-1850

James A. Johnson
 LARRY JOHNSON
 DNR QUALIFIED PROFESSIONAL

FOREST RETENTION AREAS AND NOTES

1. FORESTED STREAM BUFFERS ARE RETAINED IN OPEN SPACE LOTS.
2. NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THIS SITE.
3. THE WOODED STEEP SLOPES ARE SUBSTANTIALLY RETAINED IN OPEN SPACE LOTS.
4. FORESTED AREAS ADJACENT TO FLOODPLAINS AND STREAM BUFFERS ARE SUBSTANTIALLY RETAINED IN OPEN SPACE LOTS.
5. THERE ARE NO ISOLATED FOREST STANDS ON THIS SITE.
6. CHANGES IN GRADING AND RUNOFF WITHIN CONSTRUCTION/INSTALLATION AREAS WILL NOT ADVERSELY AFFECT THE SOILS WITHIN THE FOREST RETENTION AREA. SEDIMENT CONTROL MEASURES WILL REDIRECT CONCENTRATED FLOW RUNOFF TO STORMWATER MANAGEMENT FACILITIES, RETAIN SEDIMENT WITHIN THE CONSTRUCTION SITE, AND/OR REDIRECT CLEAN WATER AWAY FROM CONSTRUCTION AREAS.
7. FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE, DPZ, AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY THE RETENTION OF EXISTING FOREST IN THE AMOUNT OF 2.00 AC, REFORESTATION OF 0.058 AC, AND FEE-IN-LIEU FOR THE REMAINING 0.842AC.
8. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

FOREST PROTECTION NOTES

PRE-CONSTRUCTION ACTIVITIES

1. FOR RETENTION AREAS, INSTALL BLAZE ORANGE FENCE AND RETENTION SIGNS BEFORE CONSTRUCTION BEGINS.
2. FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS THE SITUATION WARRANTS.
3. A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNE TREES AS REQUIRED. WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.

CONSTRUCTION PHASE

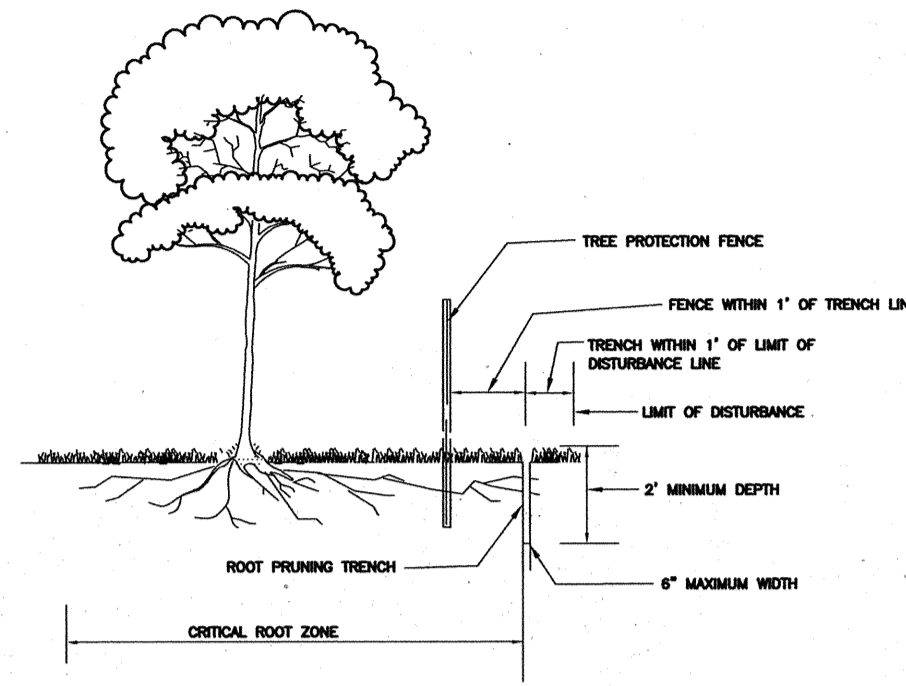
1. NO DISTURBANCE OR DUMPING IS ALLOWED INSIDE THE TREE RETENTION AREA.
2. NO EQUIPMENT SHALL BE OPERATED INSIDE THE TREE RETENTION AREA INCLUDING TREE CANOPIES.
3. IN THE EVENT OF DROUGHT, THE PROTECTED TREES SHALL BE MONITORED FOR SIGNS OF STRESS AND WATERED AS NEEDED.

POST-CONSTRUCTION ACTIVITIES

1. AT THE DIRECTION OF A QUALIFIED TREE CARE EXPERT, DAMAGES TO RETAINED TREES SHALL BE REPAIRED BY THE CONTRACTOR.
2. FENCE REMOVAL AND STABILIZATION SHALL BE AS PER THE SEDIMENT AND EROSION CONTROL PLAN.
3. DO NOT REMOVE SIGNS.

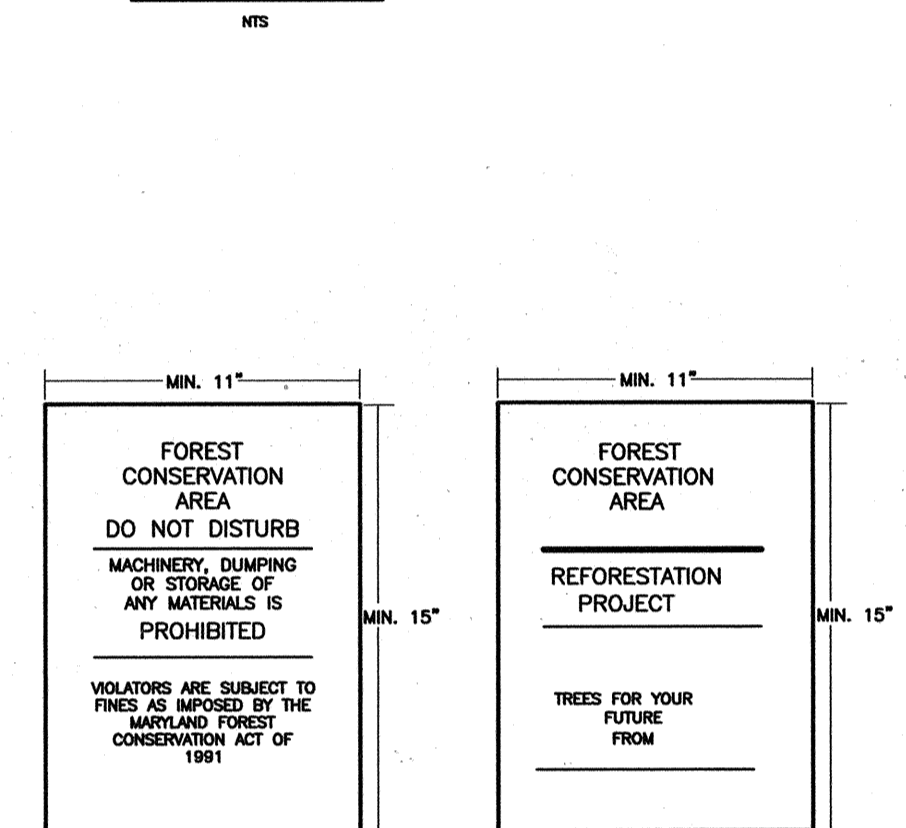
COST ESTIMATE: (For bonding purposes, only)
RETENTION OF 2.00 AC.
1.99

SURETY NOTE
1.99 ACRES OF RETENTION WILL BE RETAINED IN A FOREST CONSERVATION EASEMENT AND FEE-IN-LIEU WILL BE PAID FOR 0.84 ACRES, BOTH AS PART OF THE FINAL PLANS.
.91



- NOTES:**
1. RETENTION AREAS TO BE ESTABLISHED AS PART OF THE FOREST CONSERVATION PLAN REVIEW PROCESS.
 2. BOUNDARIES OF RETENTION AREAS TO BE STAKED, FLAGGED AND/OR FENCED PRIOR TRENCHING.
 3. EXACT LOCATION OF TRENCH SHOULD BE IDENTIFIED.
 4. TRENCH SHOULD BE IMMEDIATELY BACKFILLED WITH SOIL, REMOVED OR ORGANIC SOIL.
 5. ROOTS SHOULD BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER ACCEPTABLE EQUIPMENT.

ROOT PRUNING



- NOTE:**
1. BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
 2. SIGNS TO BE PLACED APPROXIMATELY 100' FEET APART. CONDITIONS ON SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
 3. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.

FOREST CONSERVATION AREA SIGN

NTS

ZONED R-20

NET TRACT AREA:

| | |
|--|---------|
| A. TOTAL TRACT AREA | 8.90 AC |
| B. AREA WITHIN 100' YEAR FLOODPLAIN | 0.16 AC |
| C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION | 0.00 AC |
| D. NET TRACT AREA | 8.74 AC |

LAND USE CATEGORY

INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED R-12.

| | | | | | |
|-----|-----|-----|-----|-----|-----|
| ARA | MDR | IDA | HDR | MPD | CIA |
| 0 | 0 | 0 | 1 | 0 | 0 |

E. AFFOREST THRESHOLD 15% X D = 1.31 AC
F. CONSERVATION THRESHOLD 20% X D = 1.75 AC

EXISTING FOREST COVER:

| | | |
|---|---|---------|
| G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) | = | 6.59 AC |
| H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD | = | 5.28 AC |
| I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD | = | 4.84 AC |

BREAK EVEN POINT:

(2 X I) + F = BREAK EVEN POINT (2.62AC)

| | | |
|--|---|---------|
| J. FOREST RETENTION WITH NO MITIGATION | = | 2.72 AC |
| K. CLEARING PERMITTED WITHOUT MITIGATION | = | 3.87 AC |

PROPOSED FOREST CLEARING:

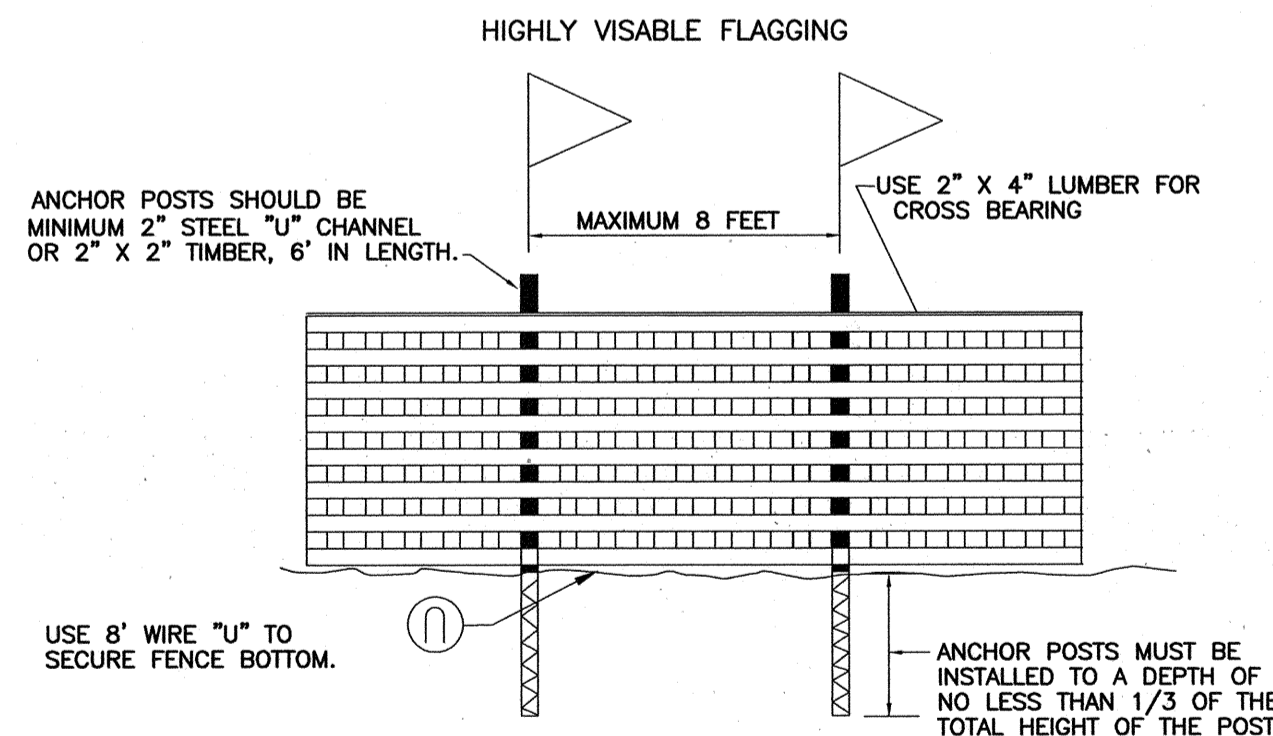
| | | |
|--|---|---------|
| L. TOTAL AREA OF FOREST TO BE CLEARED | = | 4.59 AC |
| M. TOTAL AREA OF FOREST TO BE RETAINED | = | 2.00 AC |

PLANTING REQUIREMENTS:

| | | |
|---|---|---------|
| N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD (L X.25) | = | 1.15 AC |
| P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD | = | 0.00 AC |
| Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD (M-F) | = | 0.25 AC |
| R. TOTAL REFORESTATION REQUIRED (N+P-Q) | = | 0.90 AC |
| S. TOTAL AFFORESTATION REQUIRED | = | 0.00 AC |
| T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED | = | 0.90 AC |

OBLIGATION TO BE FULFILLED BY ON-SITE RETENTION OF 1.99 AC. AND FEE-IN-LIEU FOR 0.91 AC.

- NOTE**
1. THE TOPOGRAPHY SHOWN HEREIN IS BASED ON A TOPOGRAPHIC SURVEY PREPARED BY FREDERICK WARD ASSOCIATES IN JANUARY 2002.



- NOTES:**
1. FOREST PROTECTION DEVICE ONLY.
 2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
 4. ROOT DAMAGE SHOULD BE AVOIDED.
 5. PROTECTION SIGNAGE SHOULD BE USED.
 6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

BLAZE ORANGE PLASTIC MESH
TYPICAL TREE PROTECTION FENCE DETAIL

NTS

SCHEDULE A: PERIMETER LANDSCAPE EDGE

| CATEGORY | ADJACENT TO PERIMETER PROPERTIES | | | | ADJACENT TO ROADWAYS | |
|--|----------------------------------|----------|----------|---------|----------------------|------------|
| | 1 | 2 | 3 | 4 | (LOT-2) 5 | (LOT-22) 6 |
| PERIMETER/FRONTAGE DESIGNATION | A | A | A | A | B | B |
| LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER | 299 | 516 | 418 | 975 | 84 | 79 |
| CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED) | NO | YES* 158 | YES* 140 | NO | NO | NO |
| CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET DESCRIBE BELOW IF NEEDED) | NO | NO | NO | NO | NO | NO |
| NUMBER OF PLANTS REQUIRED (LF REMAINING) | 299 | 358 | 278 | 975 | 84 | 79 |
| SHADE TREES | 1:60 5 | 1:50 6 | 1:50 5 | 1:50 17 | 1:50 2 | 1:60 2 |
| EVERGREEN TREES | - | - | - | - | 1:40 2 | 1:40 2 |
| NUMBER OF PLANTS PROVIDED | - | - | - | - | - | - |
| SHADE TREES | 5 | 6 | 5 | 17 | 2 | 2 |
| EVERGREEN TREES | - | - | - | - | 2 | 2 |
| OTHER TREES (2:1 SUBSTITUTION) | - | - | - | - | - | - |
| SHRUBS (10:1 SUBSTITUTION) | - | - | - | - | - | - |
| DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED | - | - | - | - | - | - |

* EXISTING WOODS TO REMAIN

SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING

| | |
|--|-------------------|
| LINEAR FEET OF PERIMETER | POND #1 616 LF |
| CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET) | YES* 277 |
| CREDIT FOR OTHER LANDSCAPING (NO, YES AND %) | NO |
| NUMBER OF TREES REQUIRED | (339) |
| SHADE TREES | 7 SHADE TREES |
| EVERGREEN TREES | 8 EVERGREEN TREES |
| NUMBER OF TREES PROVIDED | 7 SHADE TREES |
| SHADE TREES | 8 EVERGREEN TREES |
| SHRUBS | - |

*EXISTING WOODS TO REMAIN

STREET TREE CALCULATIONS

| STREET NAME | LINEAR FEET | REQUIRED TREES | PROVIDED TREES |
|-------------------------|-------------|----------------|----------------|
| PUBLIC ACCESS STREET-RW | 93840 | 24 | 24 |
| HANOVER RD-RW | 33540 | 9 | 9 |

STREET TREE PLANT LIST

| SYMBOL | QTY | BOTANICAL NAME | SIZE | REMARKS |
|--------|-----|--|------------------|---------|
| ⊙ | 24 | SHADE TREES ACER RUBRUM/ RED MAPLE | 2 1/2" - 3" Cal. | B & B |
| ⊕ | 9 | PRUNUS SARGENTII SARGENT CHERRY | 2 1/2" - 3" Cal. | B & B |

GENERAL NOTES

A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.

FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED WITH THE DEVELOPER'S AGREEMENT AS PART OF THE FINAL PLAN

TEMPORARILY APPROVED
DEPT. OF PLANNING AND ZONING OF HOWARD COUNTY
JANUARY 12, 2005
PLANNING DIRECTOR
DATE
JA

LANDSCAPE & FOREST CONSERVATION DETAILS PRELIMINARY PLAN
SHADY LANE CROSSING LOTS 1 THRU 24

6188 HANOVER ROAD
LIBER 505 AND FOLIO 295
TAX MAP #38 GRID 9
1ST ELECTION DISTRICT
PARCEL 235
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLSWORTH CITY, MD 21043
TEL: 410.461.7566
FAX: 410.461.8961

DESIGN BY: RJJCO
DRAWN BY: RJJCO
CHECKED BY: RHV
DATE: FEB. 2005
SCALE: AS SHOWN
W.O. NO.: 2019019.00

5 SHEET OF 5

OWNER
6188 INVESTMENT & RENTAL PROPERTY, LLC
5705 LANDING ROAD
ELKDRIDGE, MARYLAND 21075
(410) 796-1850
DEVELOPER
MAIN STREET BUILDERS
5705 LANDING ROAD
ELKDRIDGE, MARYLAND 21075
(410) 796-1850
DATE 5/23/05
LARRY THOMPSON
CNR QUALIFIED PROFESSIONAL