



# SOBUS FARMS

TAX MAP: 15 PARCELS: 26 & 154

WYNFIELD ROAD  
PLAN AND PROFILE

OWNER AND DEVELOPER  
HILLTOP DEVELOPMENT CORPORATION  
c/o RICHARD J. DEMMITT  
P.O. BOX 228  
CLARKSVILLE, MD 21029  
410-531-5539

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Danaher* 9-11-95  
CHIEF, BUREAU OF HIGHWAYS #6 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Ann Scammaro* 9/15/95  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JR DATE

*John Deamus* 9/12/95  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

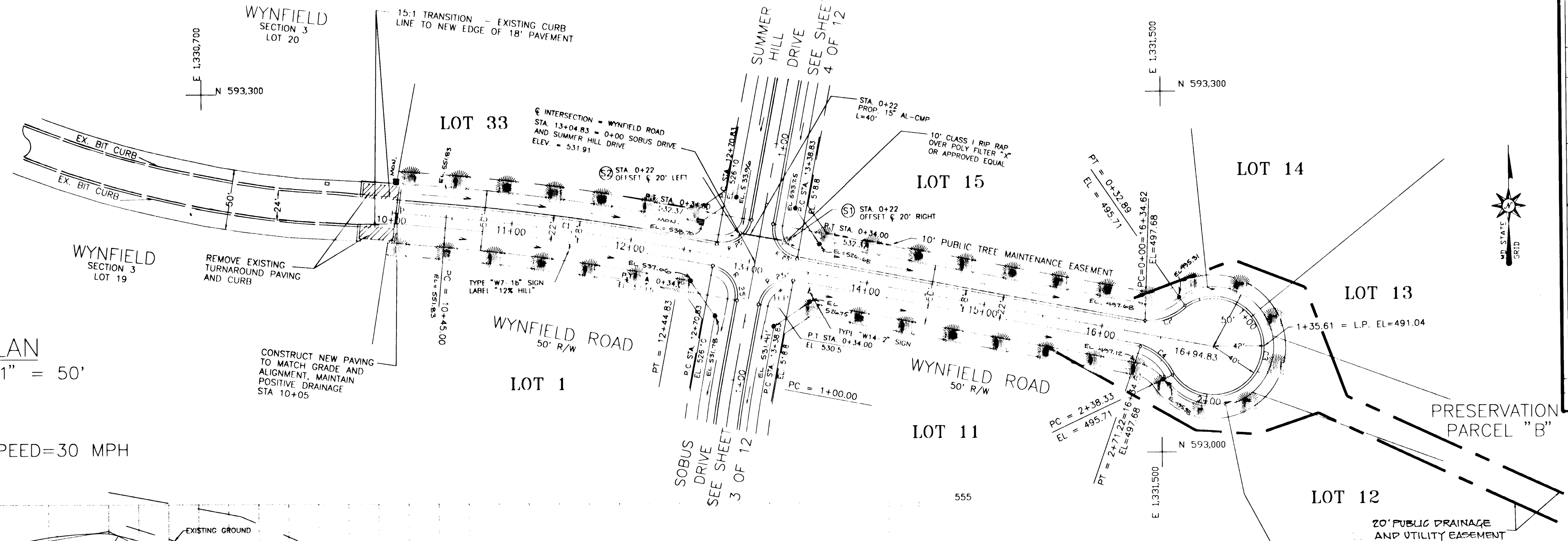
O'CONNELL & LAWRENCE, INC.

SURVEYORS, ENGINEERS & LAND PLANNERS  
17004 Georgia Avenue, Suite 302, Olney, Maryland 20832  
Tel: (301) 924-4570 • Fax: (301) 924-0872

| DESIGNED BY | DRAWN BY | DATE    | SCALE    | PROJECT/JOB NO. | SHEET NO. |
|-------------|----------|---------|----------|-----------------|-----------|
| HLK         | AT       | 5/29/95 | 1" = 50' | 156-15          | 2 OF 15   |

S-94-35 P-95-15 F-95-181

PLAN  
SCALE: 1" = 50'  
DESIGN SPEED=30 MPH



| CURVE# | RADIUS   | LENGTH  | CHORD   | CHORD BEARING | DELTA ANGLE | TANGENT |
|--------|----------|---------|---------|---------------|-------------|---------|
| C1     | 2002.46' | 199.83' | 199.75' | S 82°11'35" E | 05°43'04"   | 100.00' |
| C2     | 46.00'   | 32.89'  | 32.19'  | N 71°01'03" W | 40°57'39"   | 17.18'  |
| C3     | 46.00'   | 205.44' | 53.85'  | S 10°40'02" W | 280°15'36"  | 35.08'  |
| C4     | 46.00'   | 32.89'  | 32.19'  | N 49°41'00" W | 40°57'39"   | 17.18'  |

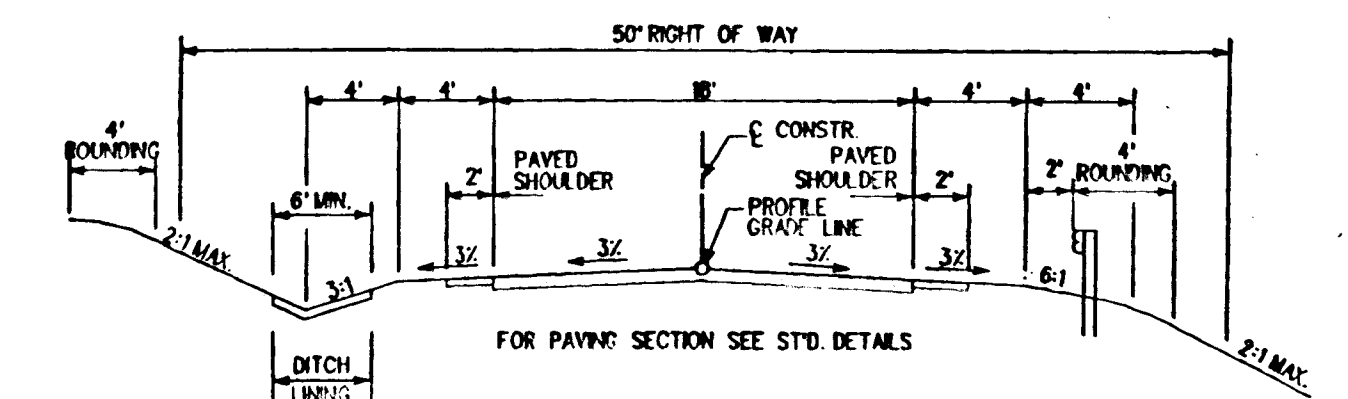
NOTE: SEE SHEET 5 OF 12 FOR CUL-DE-SAC PROFILE

### DITCH LINING SCHEDULE

| ROAD                       | STATION              | TREATMENT   | MAX Q(10) | MAX V(10) |
|----------------------------|----------------------|---|-----------|-----------|
| WYNFIELD ROAD              | 10+00 TO 13+04.83    | SOIL STABILIZATION MATTING OVER SEED & MULCH          | 3.9 CFS   | 4.4 FPS   |
| WYNFIELD ROAD (LEFT SIDE)  | 13+04.83 TO 16+94.83 | ENKAMAT 7010 (INCLUDING CUL-DE-SAC) OR APPROVED EQUAL | 5.4 CFS   | 5.6 FPS   |
| WYNFIELD ROAD (RIGHT SIDE) | 13+04.83 TO 16+94.83 | SOIL STABILIZATION MATTING OVER SEED & MULCH          | 2.0 CFS   | 4.8 FPS   |

### STREET TREE SCHEDULE

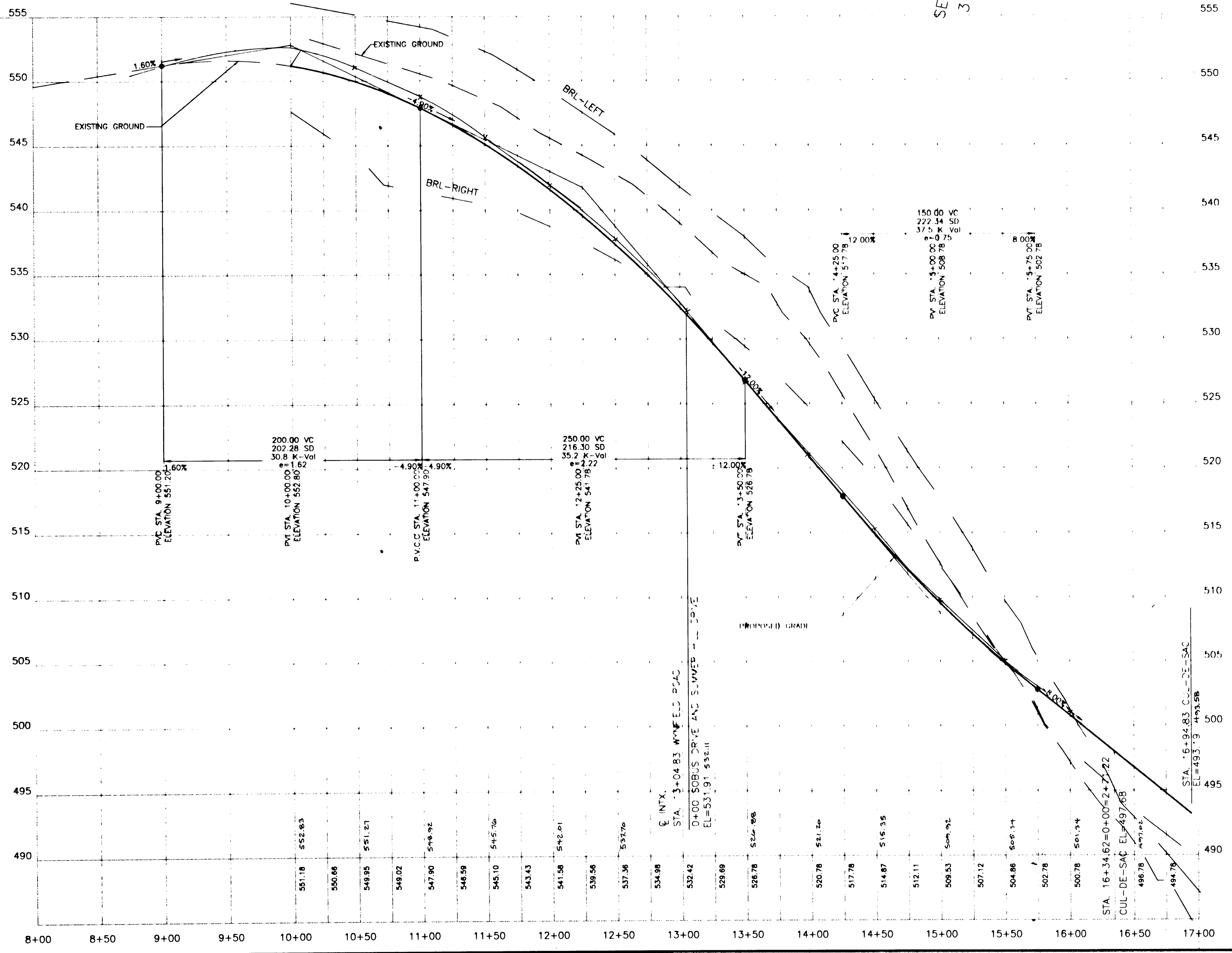
| SYMBOL | QUANTITY | COMMON NAME       | BOTANICAL NAME | SIZE & ROOT CALIPER | COMMENTS |
|--------|----------|-------------------|----------------|---------------------|----------|
|        | 37       | QUERCUS COCCINEAS | SCARLET OAK    | MIN. 2.5" CALIPER   | 40' C/C  |



NOTES:  
1. USE QUADRANT WHERE INDICATED BY FIGURE 2.17.  
DESIGN SPEED 30 MPH  
OPEN SECTION R.R. ZONING

|     |   |  |
|-----|---|--|
| P-2 | RESIDENTIAL ZONES<br>LOCAL CUL-DE-SAC STS. ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL LOTS<br>TRUCKWAYS<br>APARTMENTS AND COMMERCIAL INDUSTRIAL ZONES WITH NO MORE THAN 6 HEAVY TRUCKS PER DAY |  |
| P-7 | STABILIZED SHOULDER FOR ALL ZONES AND ROAD CLASSIFICATIONS  |  |

WYNFIELD ROAD  
10+05 TO 16+94.83



PROFILE  
SCALE: HOR 1" = 50'  
VER 1" = 5'

### PROFILE LEGEND

|                      |  |
|----------------------|--|
| EXISTING CENTER LINE |  |
| PROP. CENTER LINE    |  |
| BRL RIGHT            |  |
| BRL LEFT             |  |

1747



## SOBUS FARMS

TAX MAP: 15 PARCELS: 28 & 154

SOBUS DRIVE  
PLAN AND PROFILE

OWNER AND DEVELOPER  
HILLTOP DEVELOPMENT CORPORATION  
c/o RICHARD J. DEMMITT  
P.O. BOX 228  
CLARKSVILLE, MD 21029  
410-531-5539

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 9-11-95  
CHIEF, BUREAU OF HIGHWAYS *HS* DATE

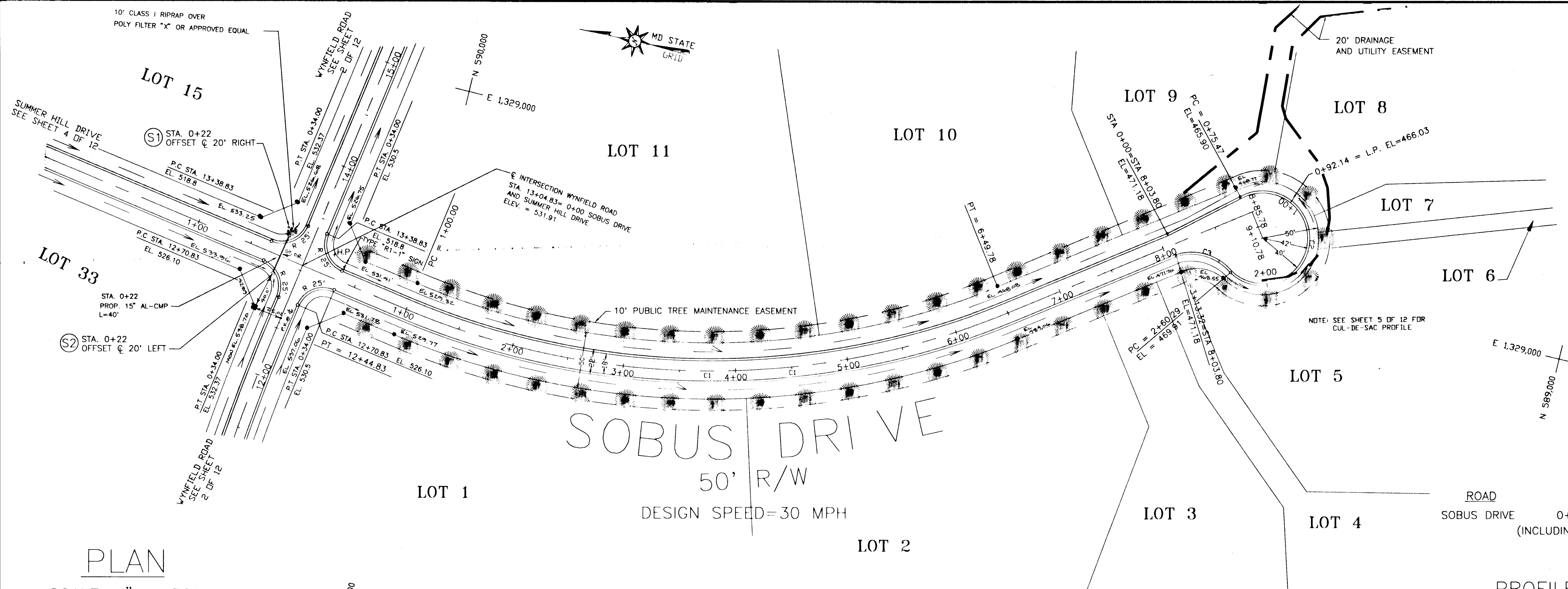
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Gina Anagnostis* 9/15/95  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH *SP* DATE

*W. DeLuca* 9/16/95  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**O'CONNELL & LAWRENCE, INC.**  
SURVEYORS, ENGINEERS & LAND PLANNERS  
17904 Georgia Avenue, Suite 302, Olney, Maryland 20832  
Tel: (301) 924-4570 • Fax: (301) 924-5872

|             |          |         |          |                 |           |
|-------------|----------|---------|----------|-----------------|-----------|
| DESIGNED BY | DRAWN BY | DATE    | SCALE    | PROJECT/JOB NO. | SHEET NO. |
| MLK         | AT       | 5/29/95 | 1" = 50' | 156-15          | 3 OF 15   |

S-94-33 P-95-15 I-95-181



**PLAN**  
SCALE: 1" = 50'

**DITCH LINING SCHEDULE**

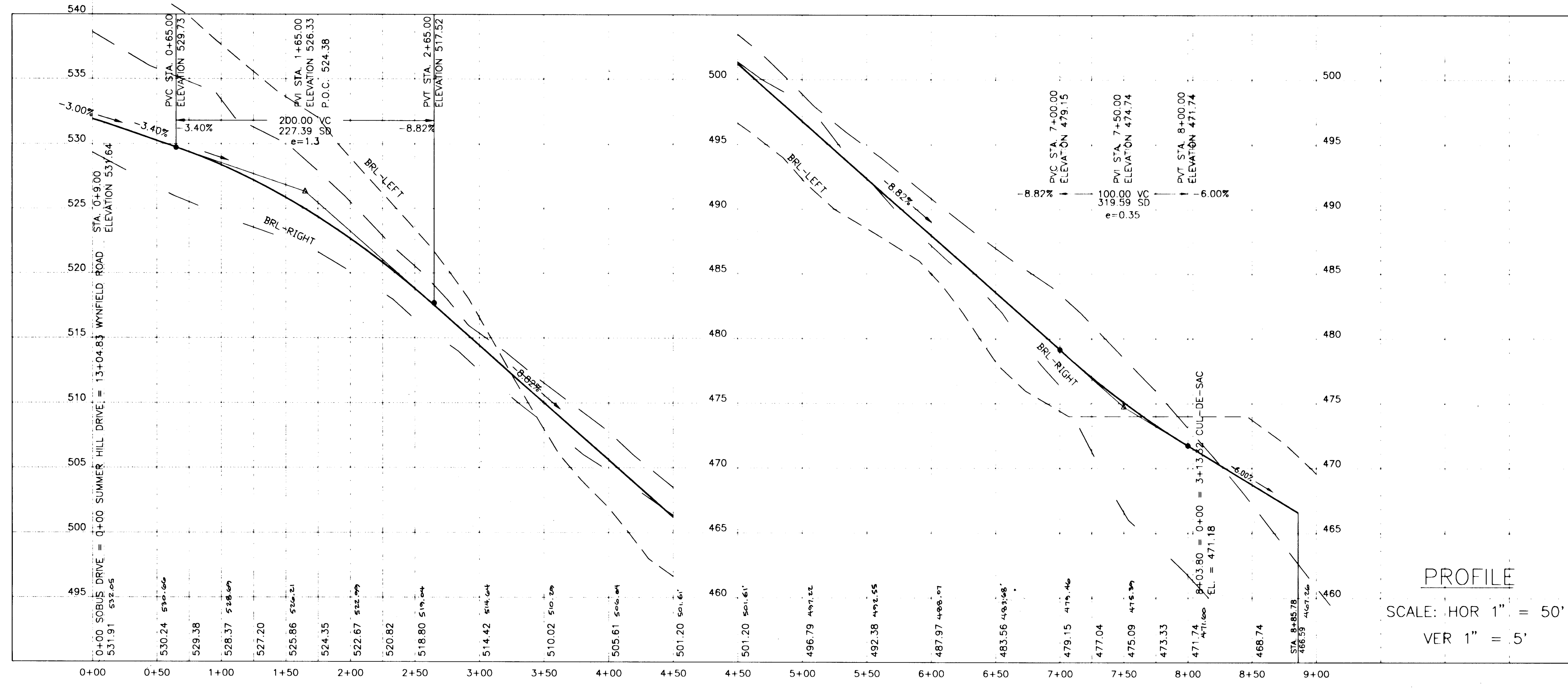
| ROAD        | STATION      | TREATMENT  | MAX Q(10) | MAX V(10) |
|-------------|--------------|--|-----------|-----------|
| SOBUS DRIVE | 0+00 TO 8+50 | SOIL STABILIZATION<br>(INCLUDING CUL-DE-SAC) MATTING OVER SEED & MULCH | 4.2 CFS   | 4.8 FPS   |

**PROFILE LEGEND**

|                      |     |
|----------------------|-----|
| EXISTING CENTER LINE | --- |
| PROP. CENTER LINE    | --- |
| BRL RIGHT            | --- |
| BRL LEFT             | --- |

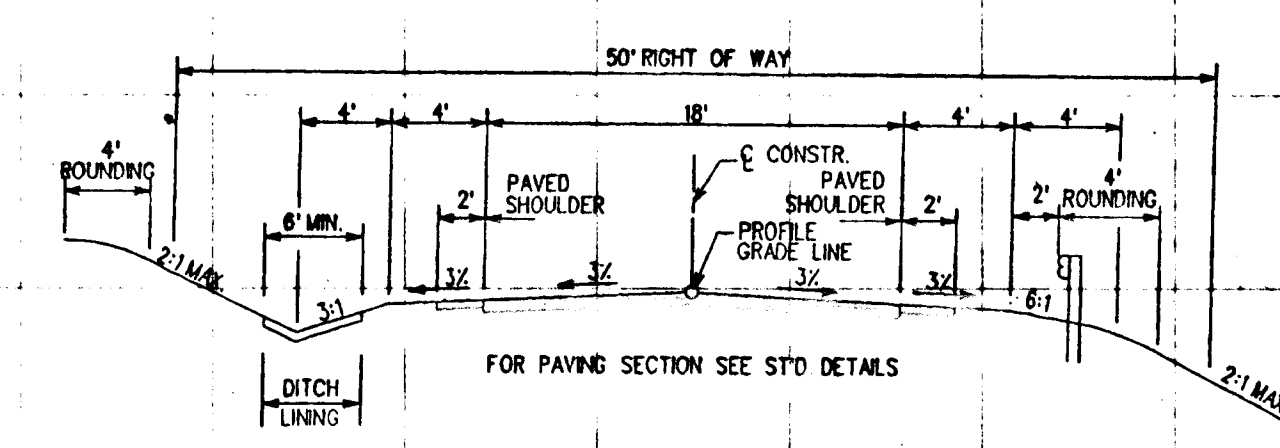
| CURVE# | RADIUS  | LENGTH  | CHORD   | CHORD BEARING | DELTA      | ANGLETANGENT                |
|--------|---------|---------|---------|---------------|------------|-----------------------------|
| C1     | 700.00' | 549.78' | 535.76' | S 89°46'48" E | 45°00'00"  | 289.95' STA 1+00 TO 6+49.78 |
| C2     | 42.00'  | 182.82' | 69.06'  | S 07°30'19" W | 249°23'58" | 60.66' CUL DE SAC           |
| C3     | 46.00'  | 51.04'  | 48.46'  | S 73°30'13" E | 63°34'12"  | 28.50'                      |

1747



**STREET TREE SCHEDULE**

| SYMBOL | QUANTITY | COMMON NAME                      | BOTANICAL NAME | SIZE & ROOT CALIPER | COMMENTS |
|--------|----------|----------------------------------|----------------|---------------------|----------|
|        | 47       | QUERCUS COCCINEAS<br>SCARLET OAK |                | MIN. 2.5" CALIPER   | 40' C/C  |



| RESIDENTIAL ZONES | LOCAL, CUL-DE-SAC, ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL LOTS | TRAVELWAYS  | APARTMENTS AND COMMERCIAL INDUSTRIAL ZONES WITH NO MORE THAN ONE HEAVY TRUCK PER DAY |
|-------------------|---|---|--|
| P-2               | 1 1/2" BIT CONC. SURFACE<br>1" BIT CONC. BASE                       | 1 1/2" BIT CONC. SURFACE<br>1" BIT CONC. BASE               | 1 1/2" BIT CONC. SURFACE<br>1" BIT CONC. BASE  |
| P-7               | 2" GRANULAR SHOULDER PER ALL ZONES AND ROAD CLASSIFICATIONS         | 2" GRANULAR SHOULDER PER ALL ZONES AND ROAD CLASSIFICATIONS | 2" GRANULAR SHOULDER PER ALL ZONES AND ROAD CLASSIFICATIONS                          |

STREET TREE SCHEDULE

| SYMBOL | QUANTITY | COMMON NAME       | BOTANICAL NAME | SIZE & ROOT       | COMMENTS |
|--------|----------|-------------------|----------------|-------------------|----------|
|        | 74       | QUERCUS COCCINEAS | SCARLET OAK    | MIN. 2.5" CALIPER | 40' C/C  |

**SOBUS FARMS**  
TAX MAP: 15 PARCELS: 26 & 154

SUMMER HILL DRIVE  
PLAN AND PROFILE

OWNER AND DEVELOPER  
HILTOP DEVELOPMENT CORPORATION  
c/o RICHARD J. DEMMITT  
P.O. BOX 228  
CLARKSVILLE, MD 21029  
410-531-5539

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 9-11-95  
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Alma Ramsey* 7/15/95  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

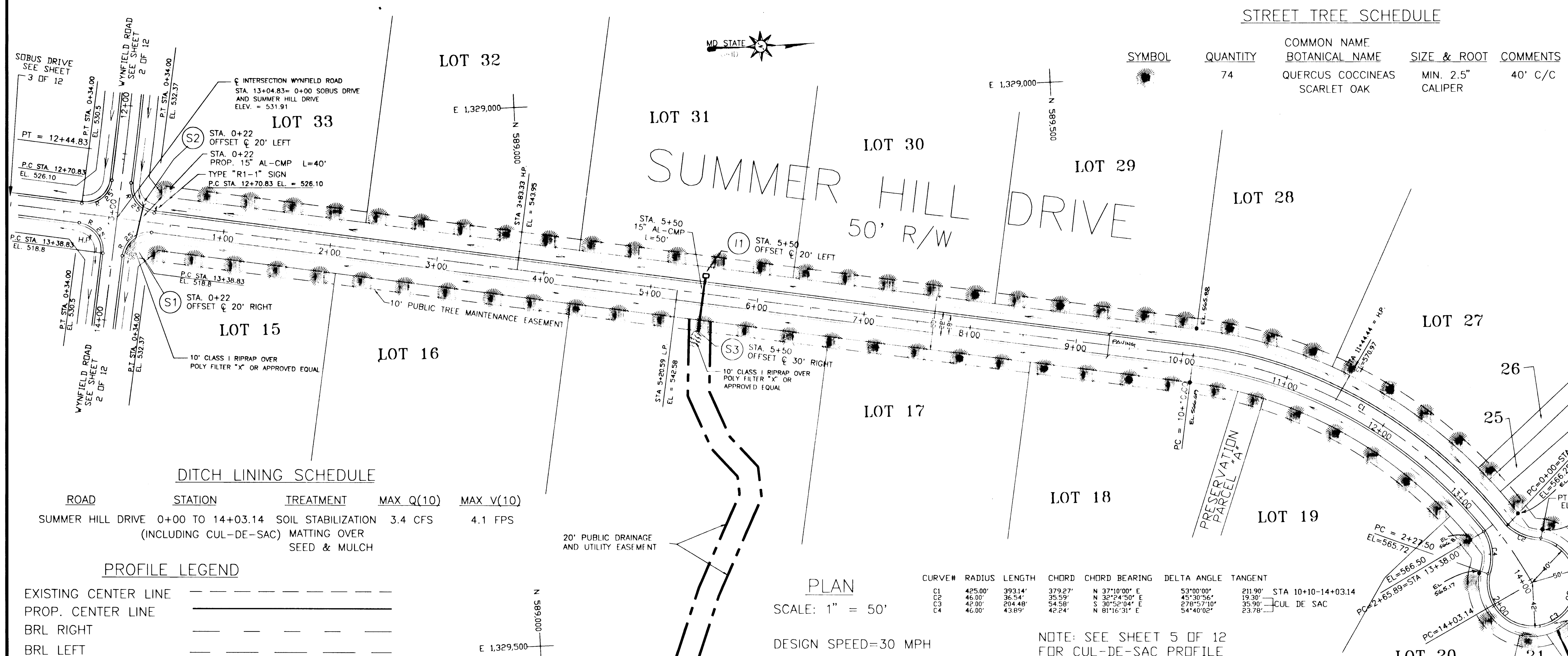
*Chris Damm* 9/12/95  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**O'CONNELL & LAWRENCE, INC.**

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Tel: (301) 924-4570 \* Fax: (301) 924-5872

| DESIGNED BY | DRAWN BY | DATE    | SCALE    | PROJECT/JOB NO. | SHEET NO. |
|-------------|----------|---------|----------|-----------------|-----------|
| MJK         | AT       | 5/29/95 | 1" = 50' | 136-15          | 4 OF 15   |

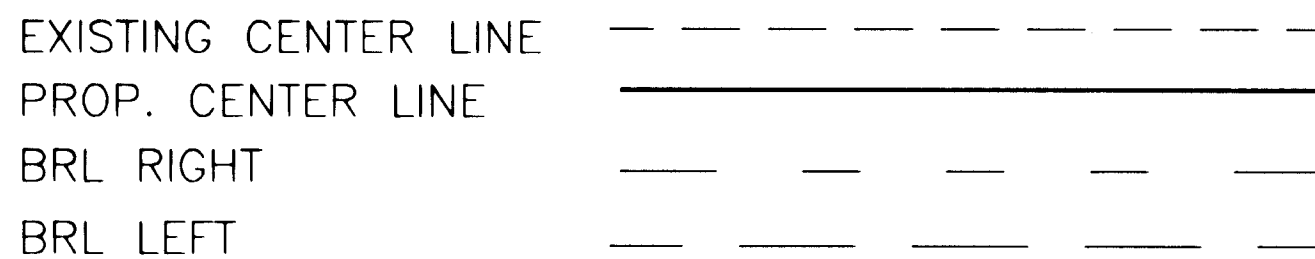
S-94-33 P-95-15 F-95-181



DITCH LINING SCHEDULE

| ROAD              | STATION          | TREATMENT                                    | MAX Q(10) | MAX V(10) |
|-------------------|------------------|--|-----------|-----------|
| SUMMER HILL DRIVE | 0+00 TO 14+03.14 | SOIL STABILIZATION MATTING OVER SEED & MULCH | 3.4 CFS   | 4.1 FPS   |

PROFILE LEGEND



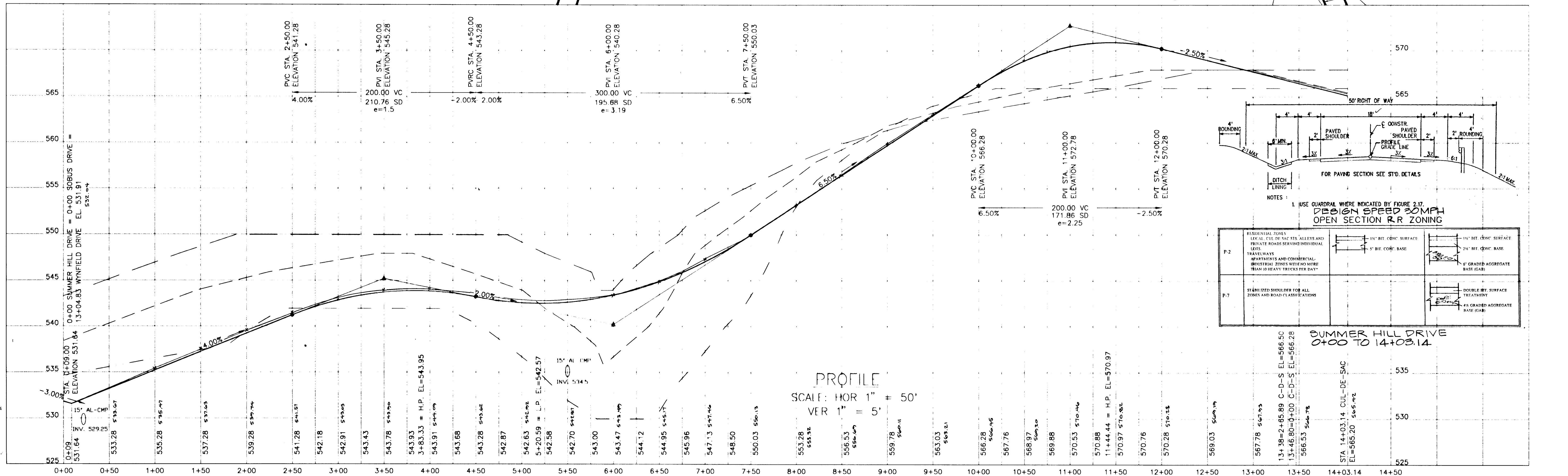
PLAN

SCALE: 1" = 50'

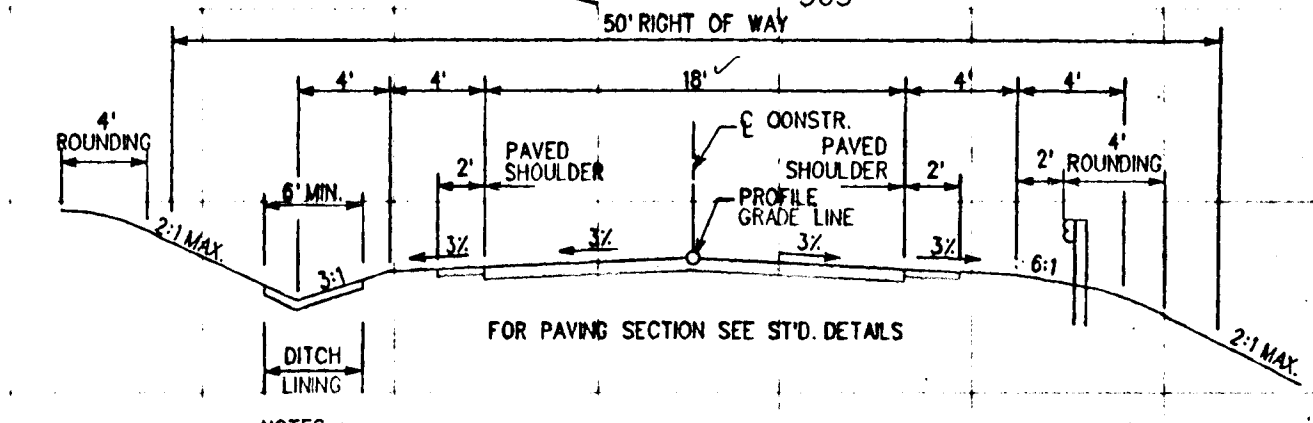
DESIGN SPEED=30 MPH

| CURVE# | RADIUS  | LENGTH  | CHORD   | CHORD BEARING | DELTA ANGLE | TANGENT |
|--------|---------|---------|---------|---------------|-------------|---------|
| C1     | 425.00' | 393.14' | 379.27' | N 37°10'00" E | 53°00'00"   | 211.90' |
| C2     | 46.00'  | 36.54'  | 35.59'  | N 32°24'50" E | 45°30'56"   | 19.30'  |
| C3     | 46.00'  | 36.54'  | 35.59'  | S 30°32'04" E | 67°17'10"   | 39.90'  |
| C4     | 46.00'  | 43.89'  | 42.24'  | N 81°16'31" E | 54°40'02"   | 23.78'  |

NOTE: SEE SHEET 5 OF 12 FOR CUL-DE-SAC PROFILE



PROFILE  
SCALE: HOR 1" = 50'  
VER 1" = 5'



NOTES:

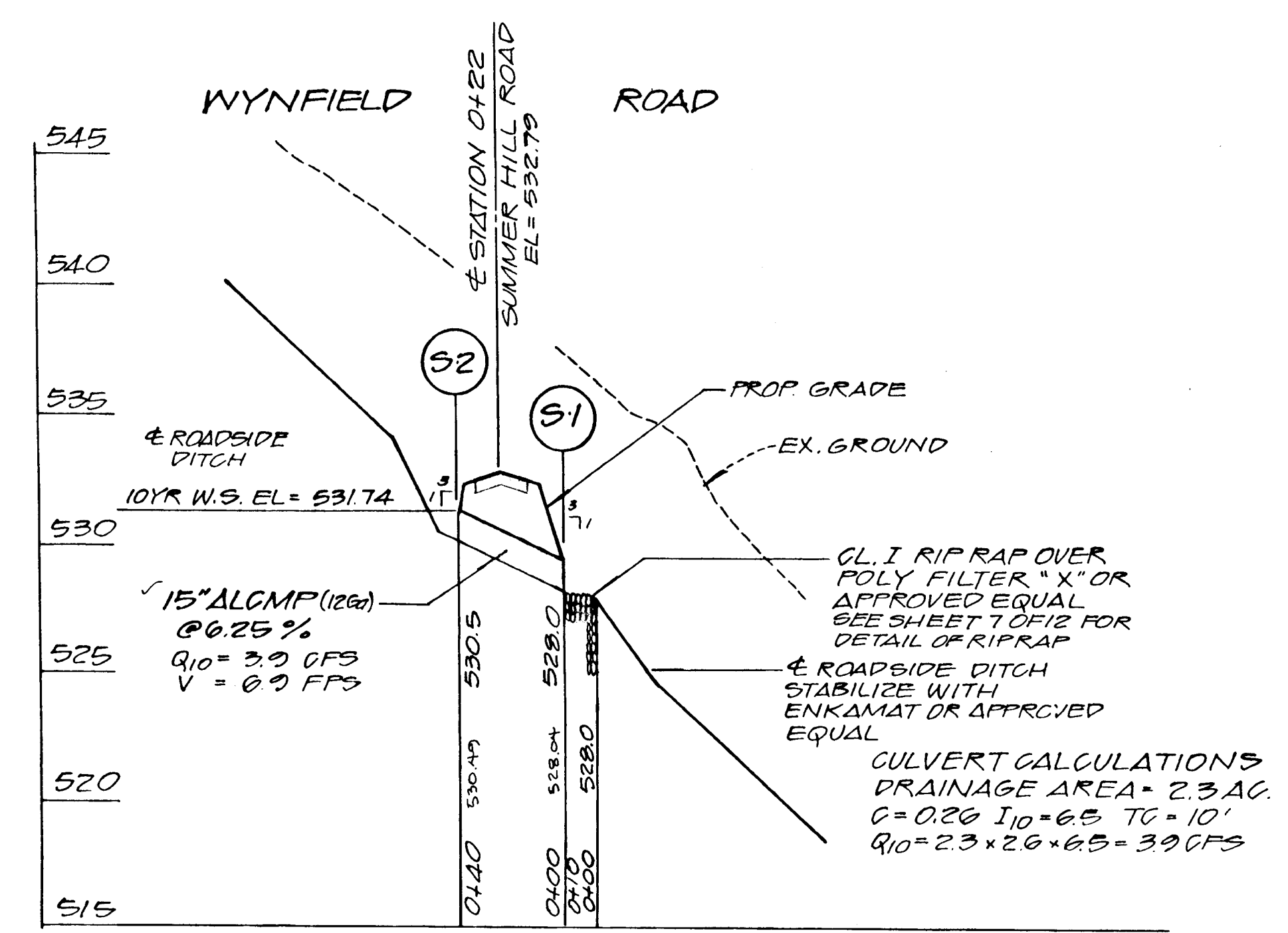
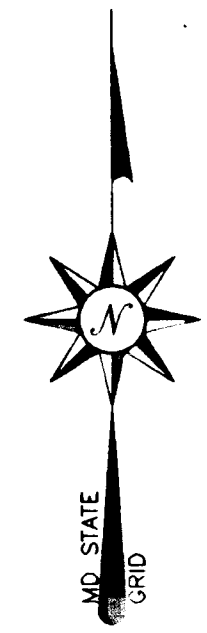
- USE QUADRANT WHERE INDICATED BY FIGURE 2.17.

DESIGN SPEED 30 MPH  
OPEN SECTION R.R. ZONING

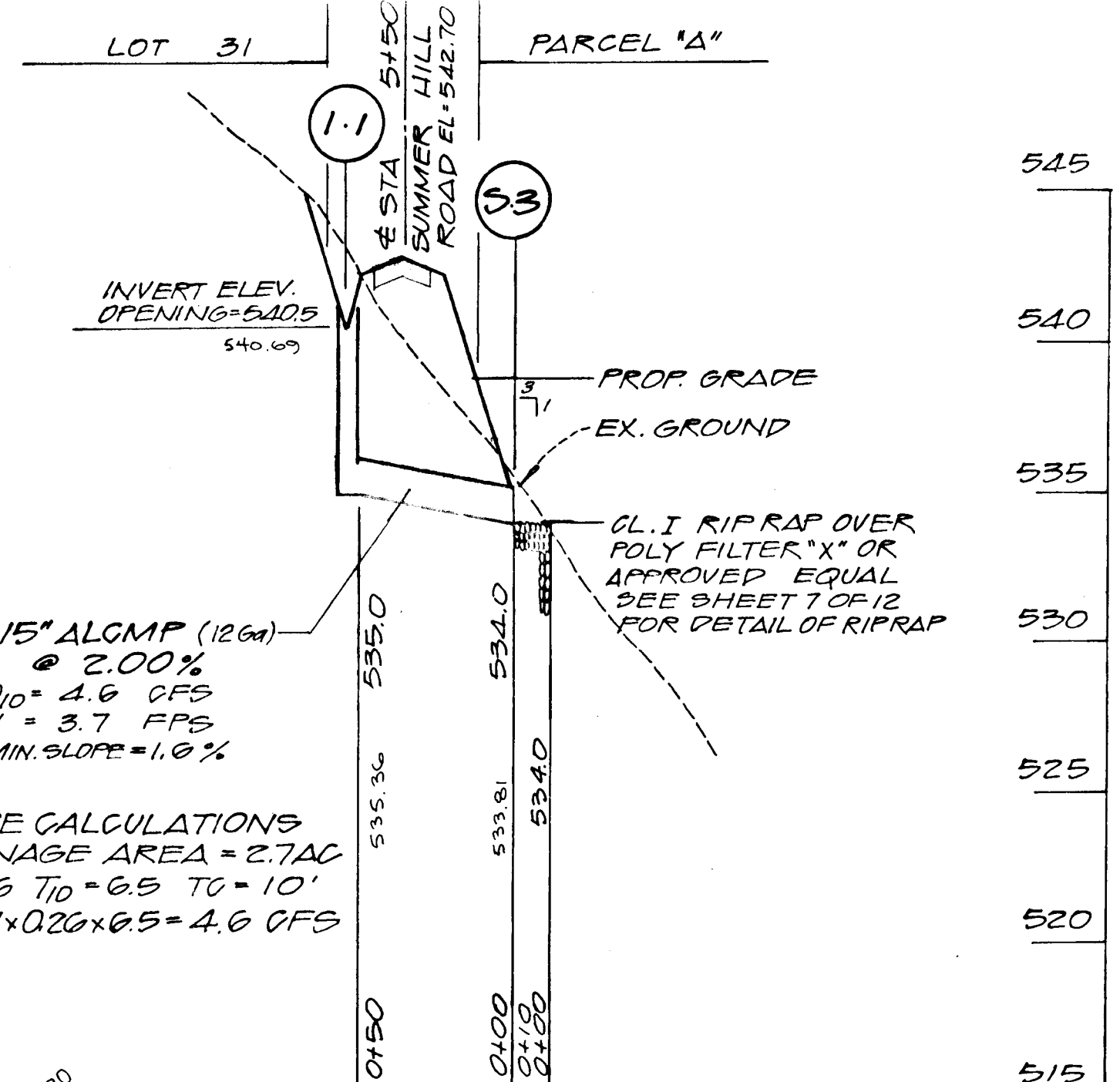
| RESIDENTIAL ZONES | LEVEL CURB IN SAC S/S ALLEYS AND PRIVATE ROADS SERVED INDIVIDUAL LOTS | TRAVELWAYS                                      | APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY |
|-------------------|---|---|--|
| P-2               | 1 1/2" BIT CONC SURFACE<br>5" BIT CONC BASE                           | 1 1/2" BIT CONC SURFACE<br>2 1/2" BIT CONC BASE | 6" GRADED AGGREGATE BASE (GAB)   |
| P-7               | STANDARD SHOULDER FOR ALL ZONES AND ROAD CLASSIFICATION               | DOUBLE BIT SURFACE TREATMENT                    | 4 1/2" GRADED AGGREGATE BASE (GAB)   |

SUMMER HILL DRIVE  
0+00 TO 14+03.14

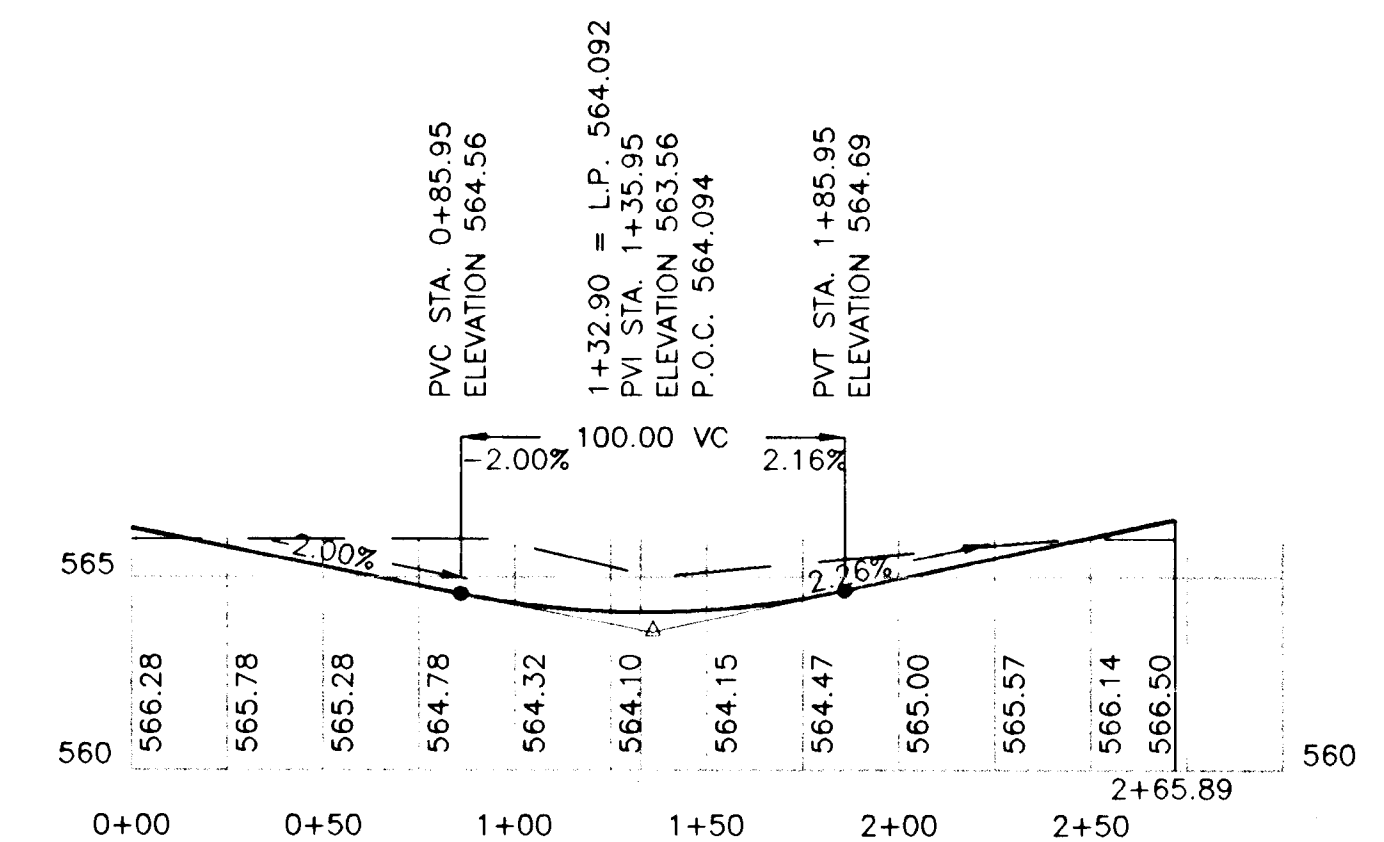
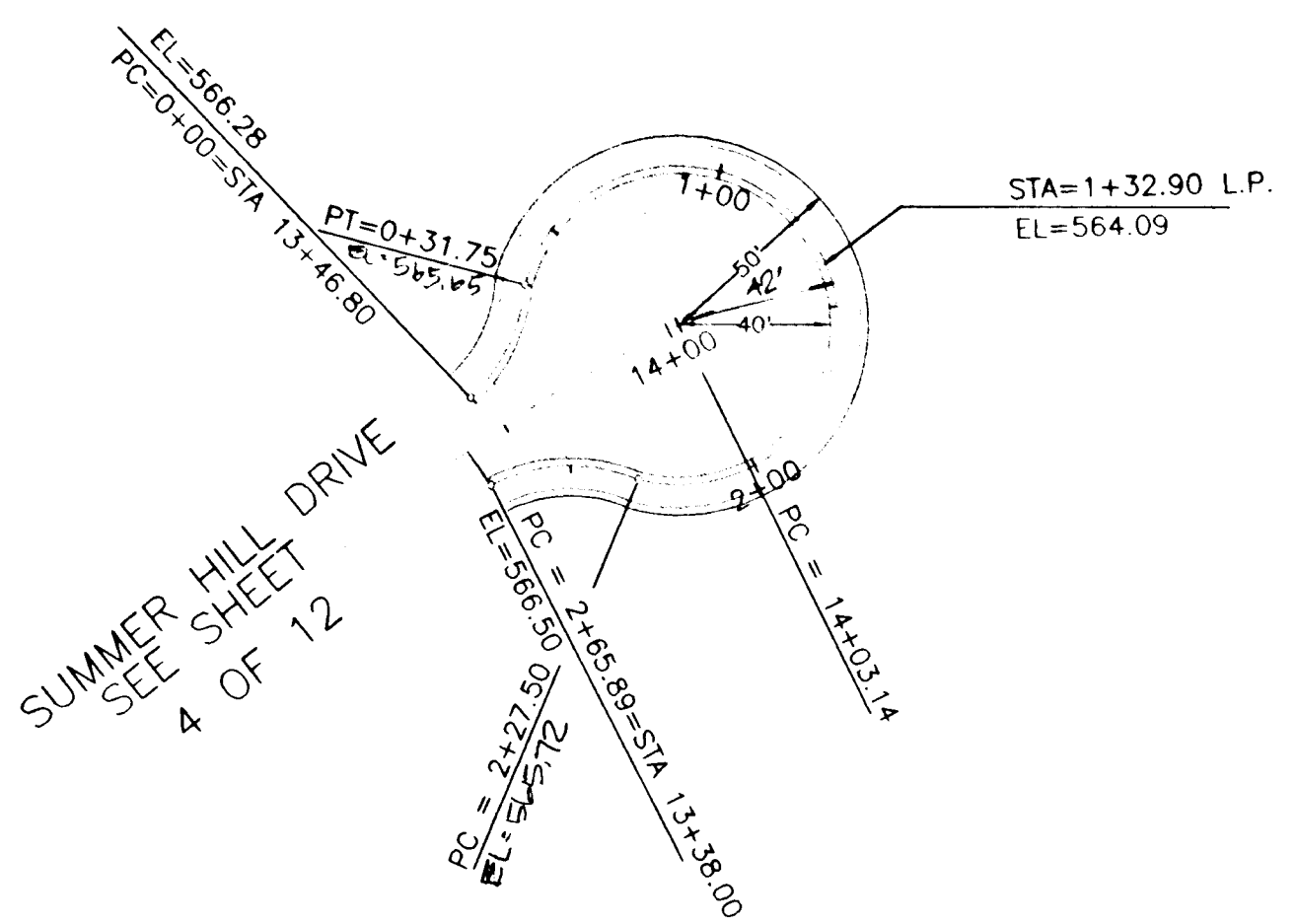
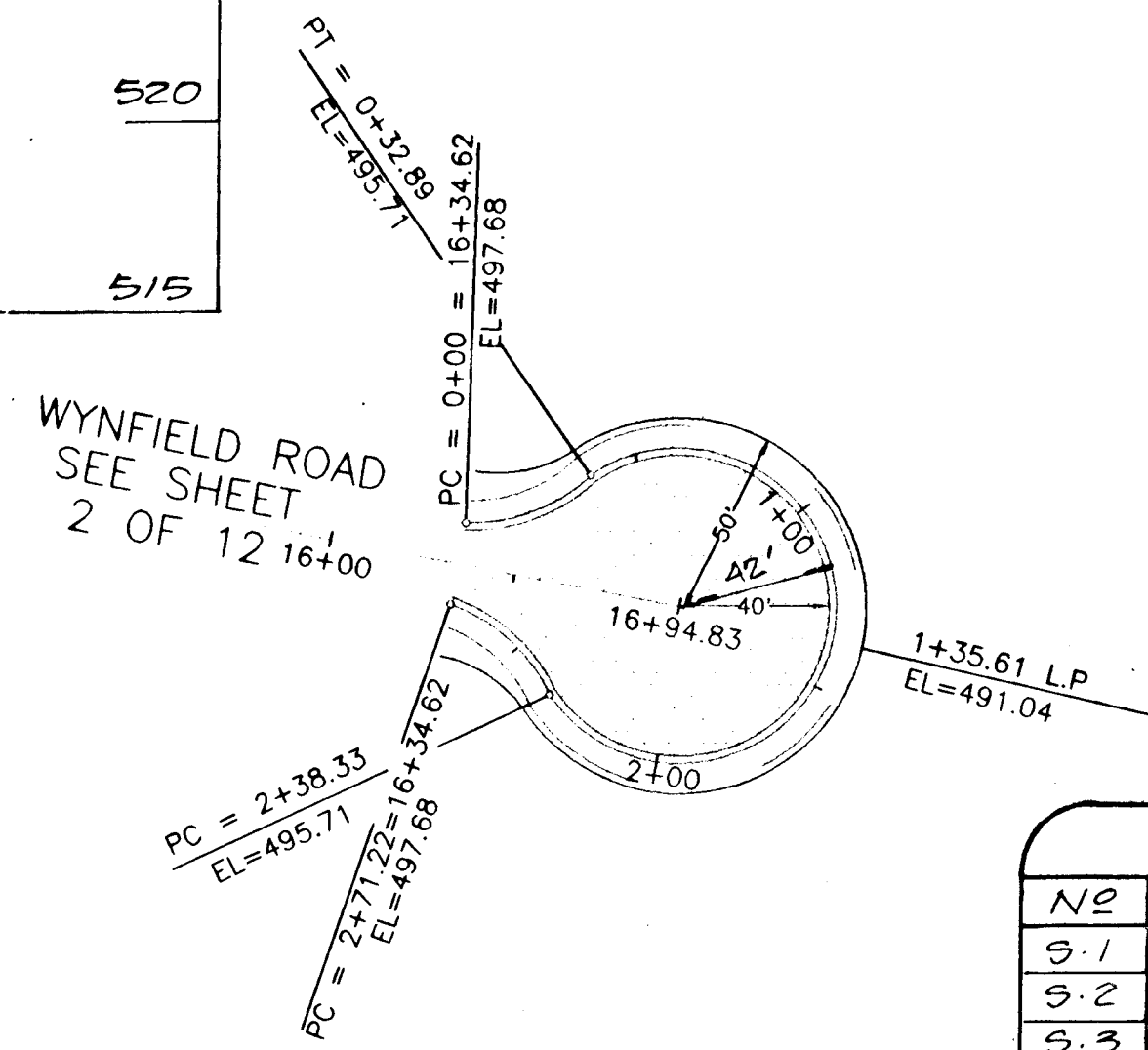
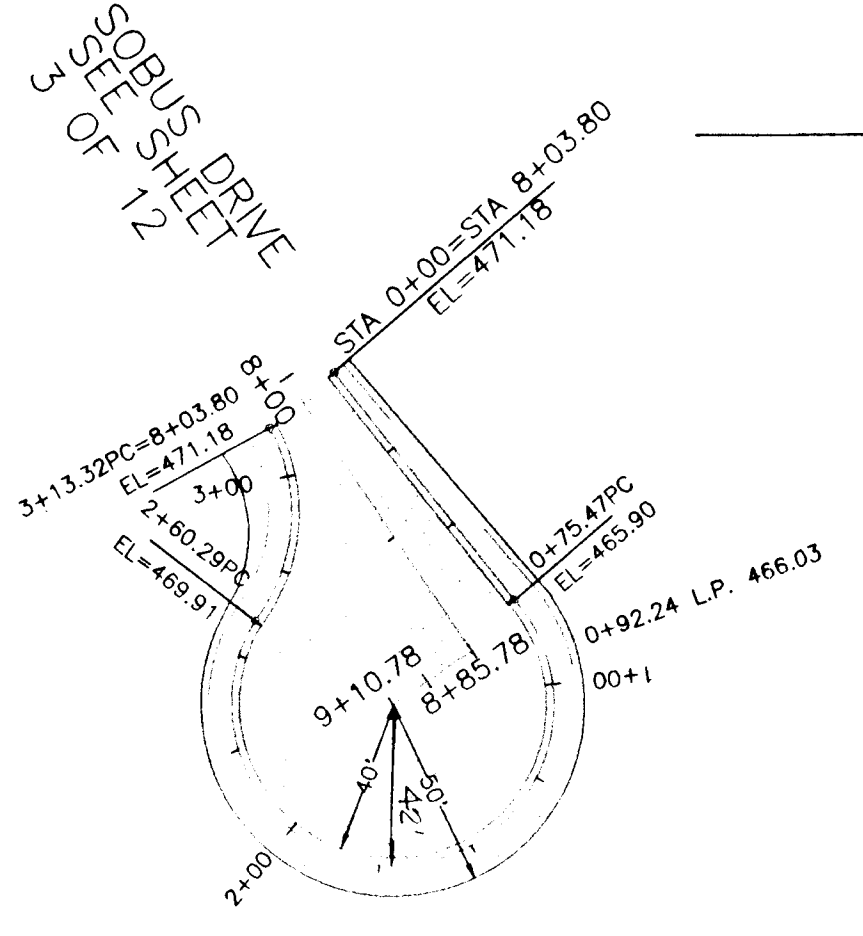




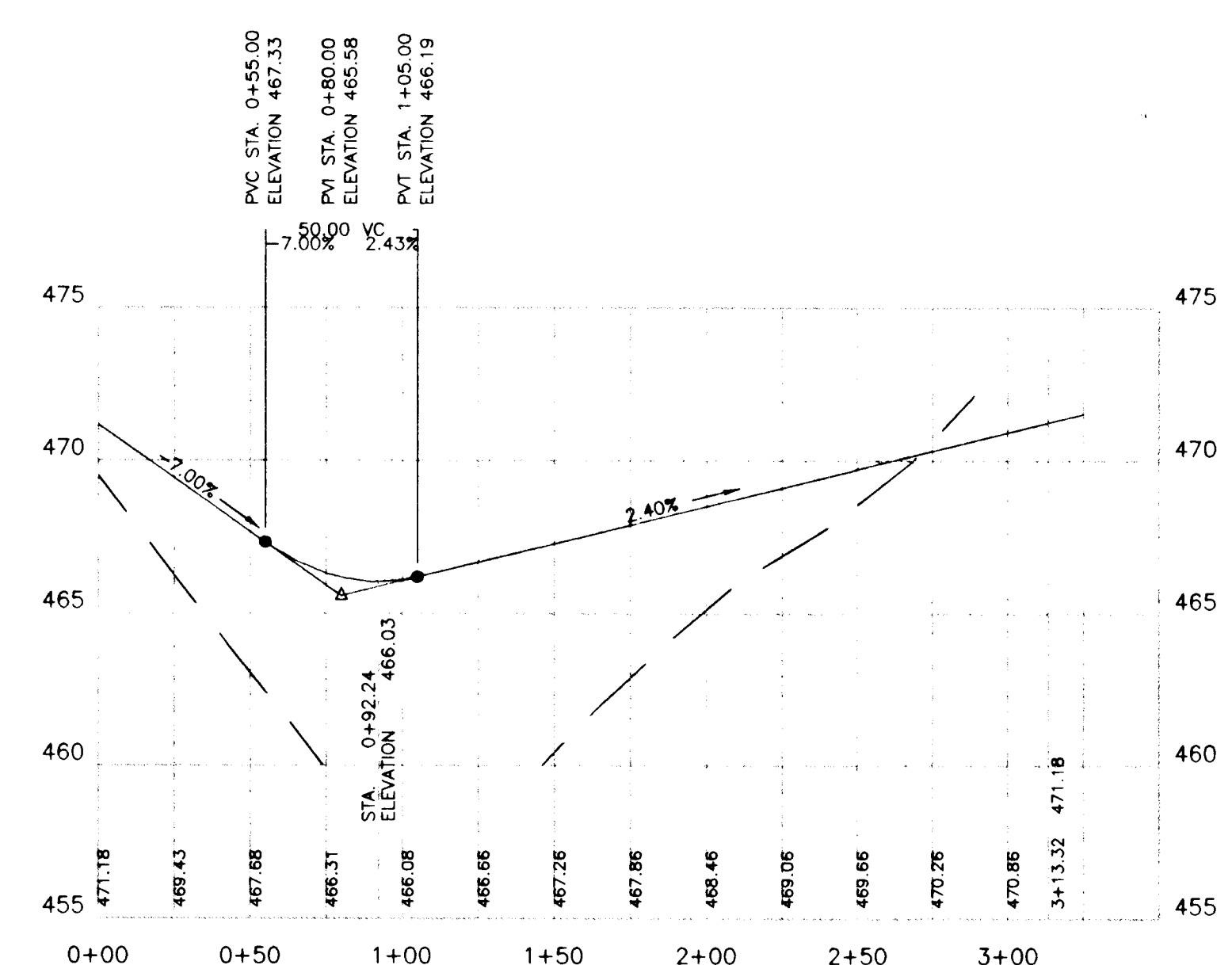
PROFILE SCALE  
 HORIZONTAL: 1" = 50'  
 VERTICAL: 1" = 5'



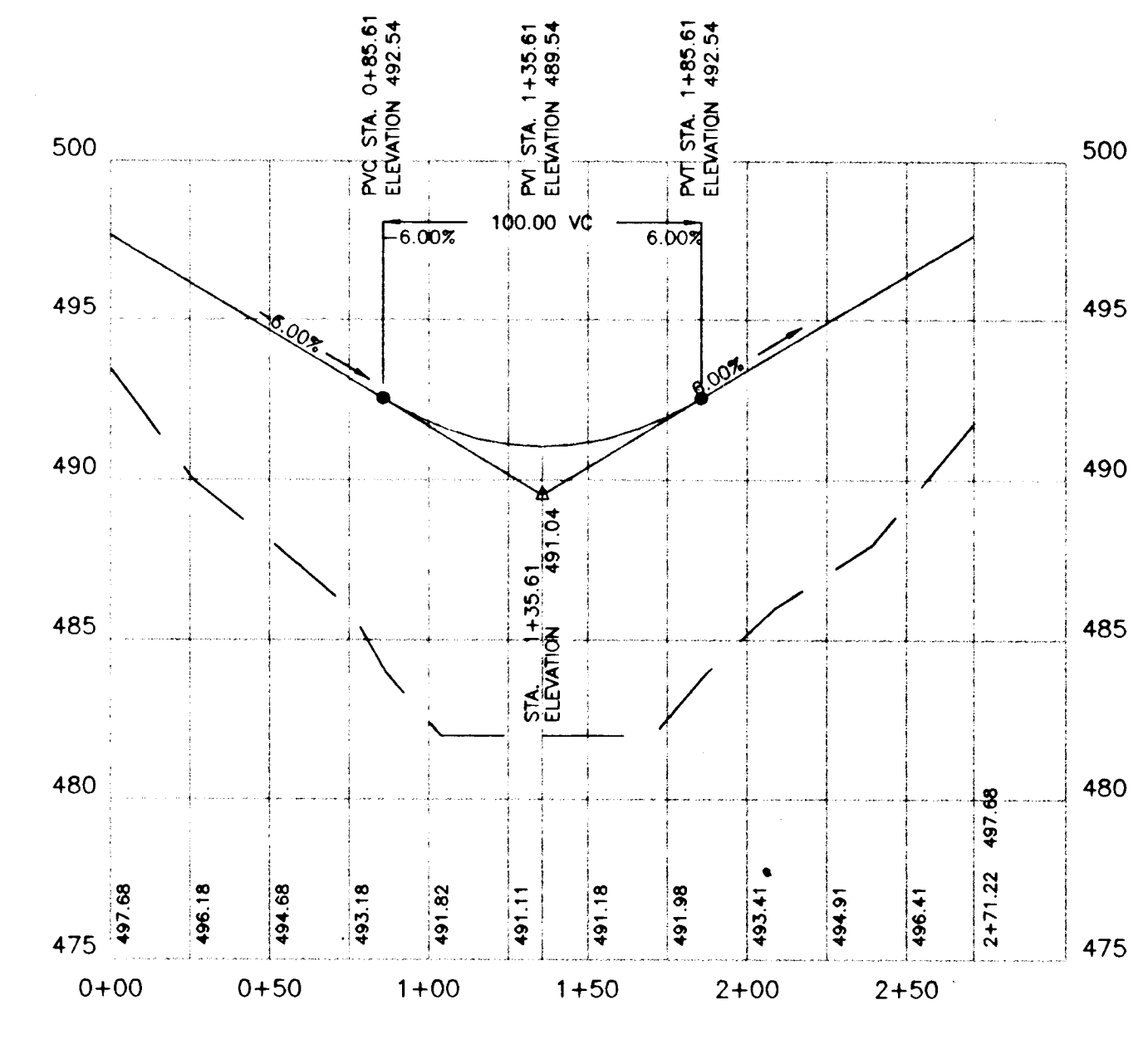
PROFILE SCALE  
 HORIZONTAL: 1" = 50'  
 VERTICAL: 1" = 5'



SUMMER HILL DRIVE



SOBUS DRIVE



WYNFIELD ROAD

**SOBUS FARMS**  
 TAX MAP: 15 PARCELS: 26 & 154  
 CUL DE SACS PLAN AND PROFILE  
 STORM DRAIN PROFILE

OWNER AND DEVELOPER  
 HILLTOP DEVELOPMENT CORPORATION  
 c/o RICHARD J. DEMMITT  
 P.O. BOX 228  
 CLARKSVILLE, MD 21029  
 410-531-5539

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 9-11-95  
 CHIEF, BUREAU OF HIGHWAYS HS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Jim Minnery* 9/15/95  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA DATE

*John D. Dawson* 9/26/95  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION W DATE

**O'CONNELL & LAWRENCE, INC.**  
 SURVEYORS, ENGINEERS & LAND PLANNERS  
 17904 Georgia Avenue, Suite 302, Olney, Maryland 20832  
 Tel: (301) 924-4570 • Fax: (301) 924-5872

|             |          |         |          |                 |           |
|-------------|----------|---------|----------|-----------------|-----------|
| DESIGNED BY | DRAWN BY | DATE    | SCALE    | PROJECT/JOB NO. | SHEET NO. |
| H.K.        | AT       | 5/29/95 | 1" = 50' | 156-13          | 5 OF 13   |

S-94-33 P-95-15 F-95-181

| NO  | STRUCTURE         | TOP   | INV. IN | INV. OUT | COMMENTS |
|-----|-------------------|-------|---------|----------|----------|
| S-1 | STD END SECTION   | —     | —       | 539.0    | SD 5.61  |
| S-2 | STD END SECTION   | —     | —       | 534.0    | SD 5.61  |
| S-3 | STD END SECTION   | —     | —       | 534.0    | SD 5.61  |
| 1-1 | 12" PRECAST INLET | 541.0 | —       | 535.0    | SD 4.30  |

| SIZE | TYPE         | LENGTH |
|------|--------------|--------|
| 15"  | ALCMP (126") | 90'    |

1747







# SOBUS FARMS

TAX MAP: 15 PARCELS: 26 & 154  
WYNFIELD ROAD AND SOBUS DRIVE  
GRADING AND SEDIMENT CONTROL PLAN

OWNER AND DEVELOPER  
HILLTOP DEVELOPMENT CORPORATION  
c/o RICHARD J. DEMMITT  
P.O. BOX 228  
CLARKSVILLE, MD 21029  
410-531-5539

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 9-11-95  
CHIEF, BUREAU OF HIGHWAYS H# DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Anna J. Manning* 9/15/95  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

*John Damann* 9/12/95  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**O'CONNELL & LAWRENCE, INC.**  
SURVEYORS, ENGINEERS & LAND PLANNERS  
17904 Georgia Avenue, Suite 202, Olney, Maryland 20822  
Tel: (301) 924-6078 • Fax: (301) 924-6072

DESIGNED BY: HJK  
DRAWN BY: AT  
DATE: 5/29/95  
SCALE: 1" = 50'  
PROJECT/JOB NO.: 136-15  
SHEET NO.: 6 OF 18 1/3



**SEDIMENT CONTROL**

Developer Certification  
I certify that all development and construction will be done according to the plan 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 am authorized to accept on-site inspection by the Howard Soil Conservation District.

*Richard J. Demmitt* 8-23-95  
Signature Date

Engineer Certification  
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 and that it was prepared in accordance with the requirements of the Howard District.

*Richard J. Demmitt* 8/22/95  
Signature Date

Reviewed for HOWARD SCD and needs Technical Requirements  
*Patricia Engle* 8/30/95  
NATURAL RESOURCE CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*John K. Blum* 9/2/95  
District SCD Date

**TRAP #1**  
STONE OUTLET  
SEDIMENT TRAP ST-II

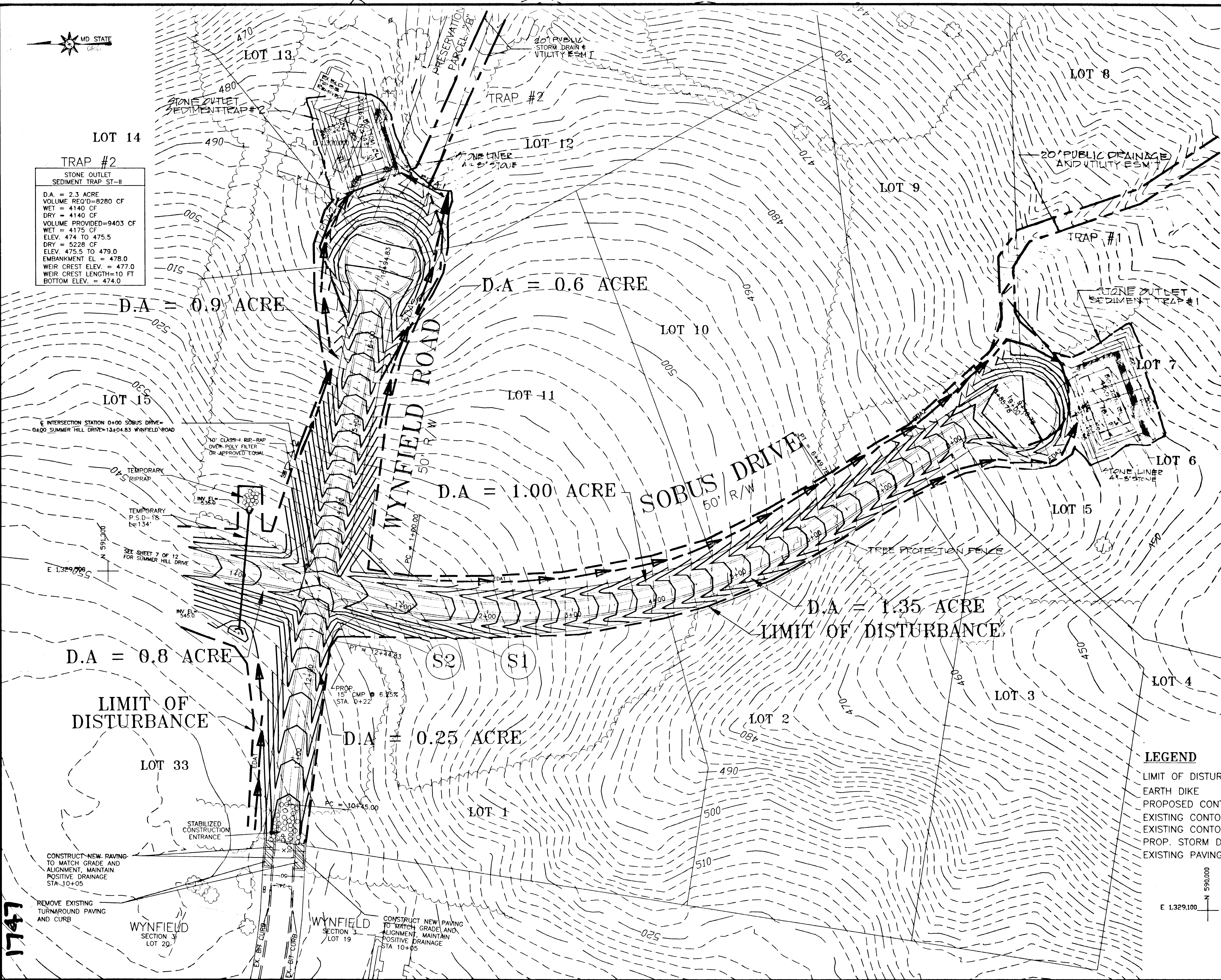
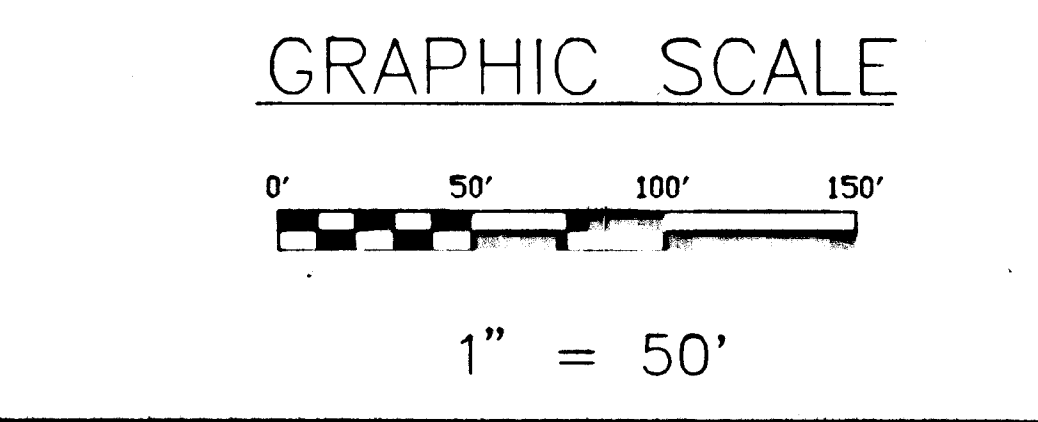
D.A. = 2.6 ACRE  
VOLUME REQ'D=9360 CF  
WET = 4680 CF  
DRY = 4680 CF  
VOLUME PROVIDED=9680 CF  
WET = 4752 CF  
ELEV. 450 TO 451.5  
DRY = 5896 CF  
ELEV. 451.5 TO 453.0  
EMBANKMENT EL. = 454.0  
WEIR CREST ELEV. = 453.0  
WEIR CREST LENGTH=11.0 FT  
BOTTOM ELEV. = 450.0

**TRAP #2**  
STONE OUTLET  
SEDIMENT TRAP ST-II

D.A. = 2.3 ACRE  
VOLUME REQ'D=8280 CF  
WET = 4140 CF  
DRY = 4140 CF  
VOLUME PROVIDED=9403 CF  
WET = 4175 CF  
ELEV. 474 TO 475.5  
DRY = 5228 CF  
ELEV. 475.5 TO 479.0  
EMBANKMENT EL. = 478.0  
WEIR CREST ELEV. = 477.0  
WEIR CREST LENGTH=10 FT  
BOTTOM ELEV. = 474.0

**LEGEND**

- LIMIT OF DISTURBANCE (dashed line)
- EARTH DIKE (solid line)
- PROPOSED CONTOUR (dashed line with arrows)
- EXISTING CONTOUR(2') (dashed line)
- EXISTING CONTOUR(10') (dashed line)
- PROP. STORM DRAIN PIPE (line with arrows)
- EXISTING PAVING TO BE REMOVED (hatched area)



1747



SEDIMENT CONTROL

Developer Certification:  
 "I/we certify that all development and construction will be done according to this plan and that any reasonable personnel involved in the construction project will have a certificate of Attendance at a Department of the Environment Approved Training Program for the control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."  
*Richard M. Demmitt, P.E.* 8-23-95  
 Signature Date

Engineer Certification:  
 "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 and that it was prepared in accordance with the requirements of the Conservation District."  
*Richard M. Demmitt, P.E.* 8/22/95  
 Signature Date

Required for HOWARD S.C.D. and nee's Technical Requirements  
*John P. O'Connell, P.E.* 8/20/95  
 Signature Date  
 NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
*John P. O'Connell, P.E.* 8/23/95  
 Signature Date

**SOBUS FARMS**  
 TAX MAP: 15 PARCELS: 26 & 154

SUMMER HILL DRIVE  
 GRADING AND SEDIMENT CONTROL PLAN

OWNER AND DEVELOPER  
 HILLTOP DEVELOPMENT CORPORATION  
 c/o RICHARD J. DEMMITT  
 P.O. BOX 228  
 CLARKSVILLE, MD 21029  
 410-531-5539

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Pender* 9-11-95  
 CHIEF, BUREAU OF HIGHWAYS MS DATE

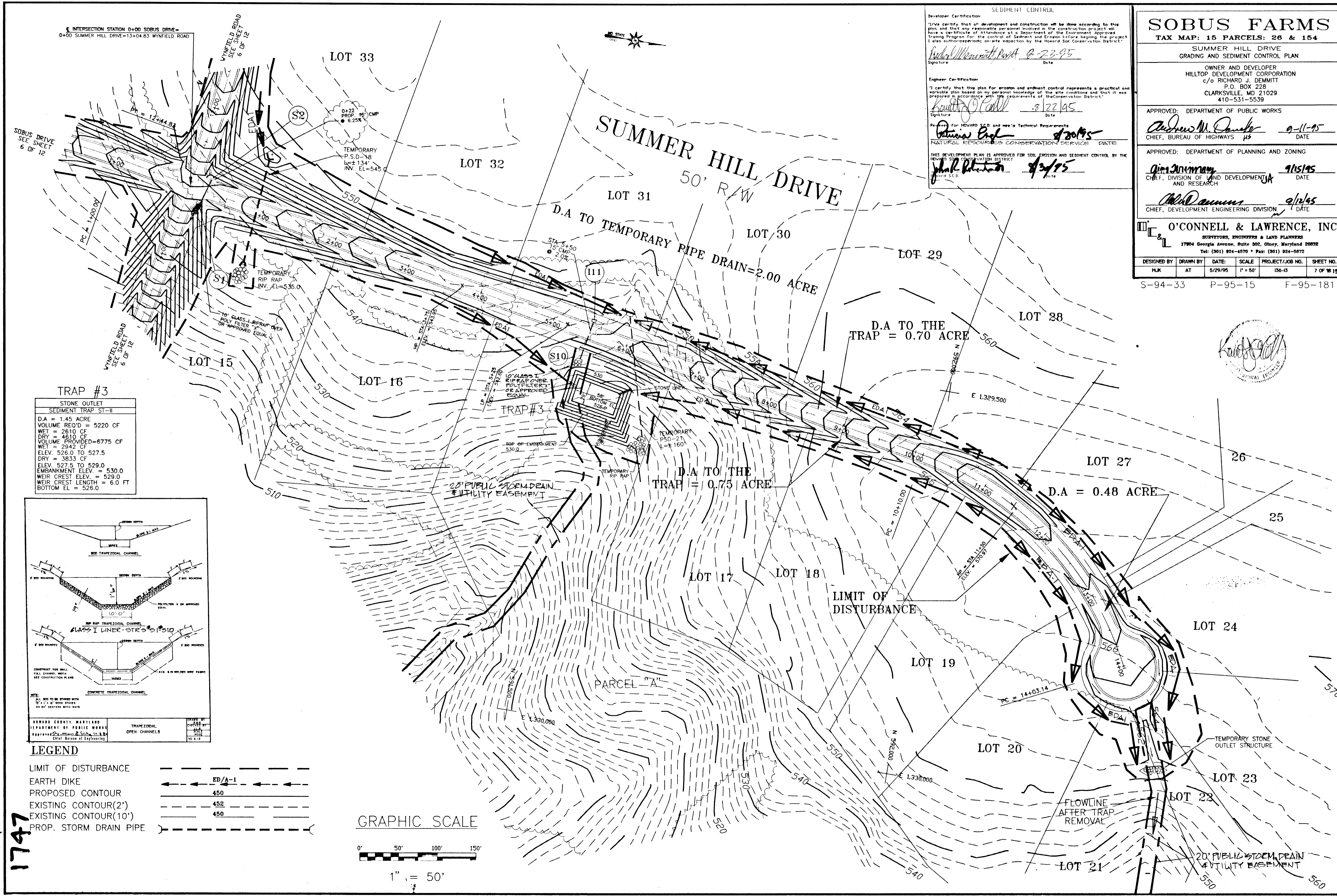
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Jim Antrim* 9/15/95  
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH DATE

*John P. O'Connell* 9/12/95  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**O'CONNELL & LAWRENCE, INC.**  
 SURVEYORS, ENGINEERS & LAND PLANNERS  
 17804 Georgia Avenue, Suite 302, Olney, Maryland 20852  
 Tel: (301) 924-4570 • Fax: (301) 924-5872

| DESIGNED BY | DRAWN BY | DATE    | SCALE    | PROJECT/JOB NO. | SHEET NO.  |
|-------------|----------|---------|----------|-----------------|------------|
| HJK         | AT       | 5/29/95 | 1" = 50' | 156-15          | 7 OF 16 15 |

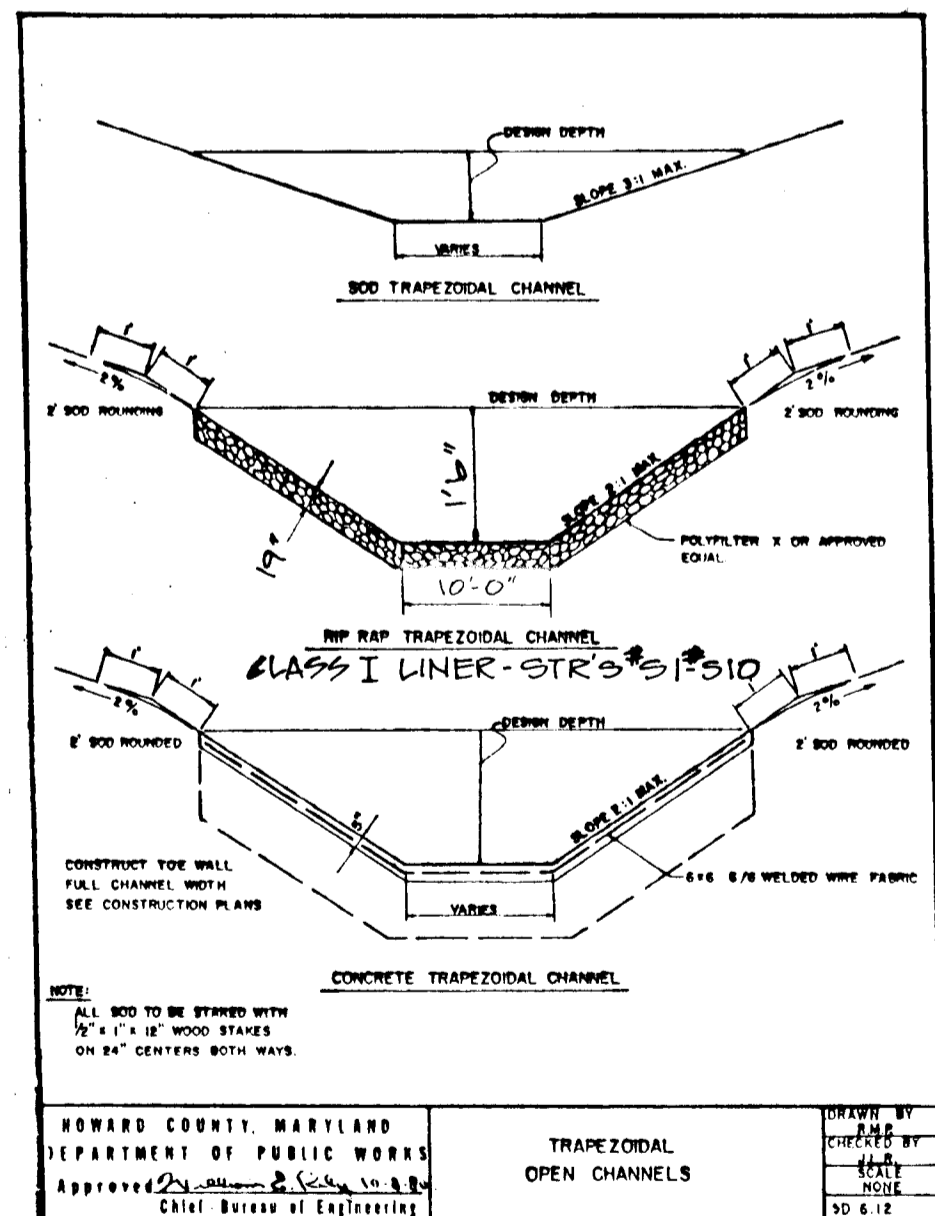
S-94-33 P-95-15 F-95-181



**TRAP #3**

STONE OUTLET  
 SEDIMENT TRAP ST-II

D.A. = 1.45 ACRE  
 VOLUME REQ'D = 5220 CF  
 WET = 2610 CF  
 DRY = 4610 CF  
 VOLUME PROVIDED = 6775 CF  
 WET = 2942 CF  
 ELEV. 526.0 TO 527.5  
 DRY = 3833 CF  
 ELEV. 527.5 TO 529.0  
 EMBANKMENT ELEV. = 530.0  
 WEIR CREST ELEV. = 529.0  
 WEIR CREST LENGTH = 6.0 FT  
 BOTTOM EL. = 526.0



**LEGEND**

LIMIT OF DISTURBANCE ————

EARTH DIKE ————

PROPOSED CONTOUR ————

EXISTING CONTOUR(2') ————

EXISTING CONTOUR(10') ————

PROP. STORM DRAIN PIPE ————

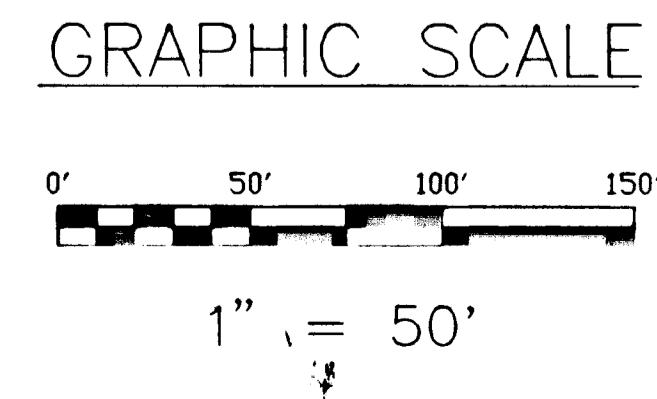
TRAPEZOIDAL OPEN CHANNELS

DESIGNED BY: *John P. O'Connell, P.E.*

CHECKED BY: *John P. O'Connell, P.E.*

DATE: 8/23/95

SCALE: 1" = 50'



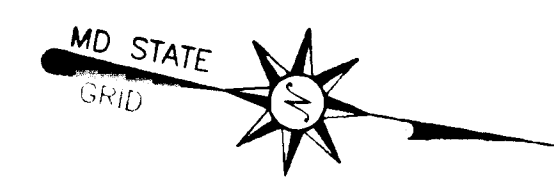
1747



LANDSCAPE TREE SCHEDULE

| SYMBOL | QUANTITY | COMMON NAME | BOTANICAL NAME    | SIZE & ROOT       | COMMENTS |
|--------|----------|-------------|-------------------|-------------------|----------|
|        | 25       | SCARLET OAK | QUERCUS COCCINEAS | MIN. 2.5" CALIPER |          |

This planting plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and Landscape Manual.  
 Financial surety for the required 25 landscape trees in the amount of \$2500.00 is part of the Developer's Agreement.



**SOBUS FARMS**

TAX MAP: 15 PARCELS: 26 & 154  
 DRAINAGE AREA MAP  
 PERIMETER TREE PLANTING PLAN  
 OWNER AND DEVELOPER  
 HILLTOP DEVELOPMENT CORPORATION  
 c/o RICHARD J. DEMMITT  
 P.O. BOX 228  
 CLARKSVILLE, MD 21029  
 410-531-5539

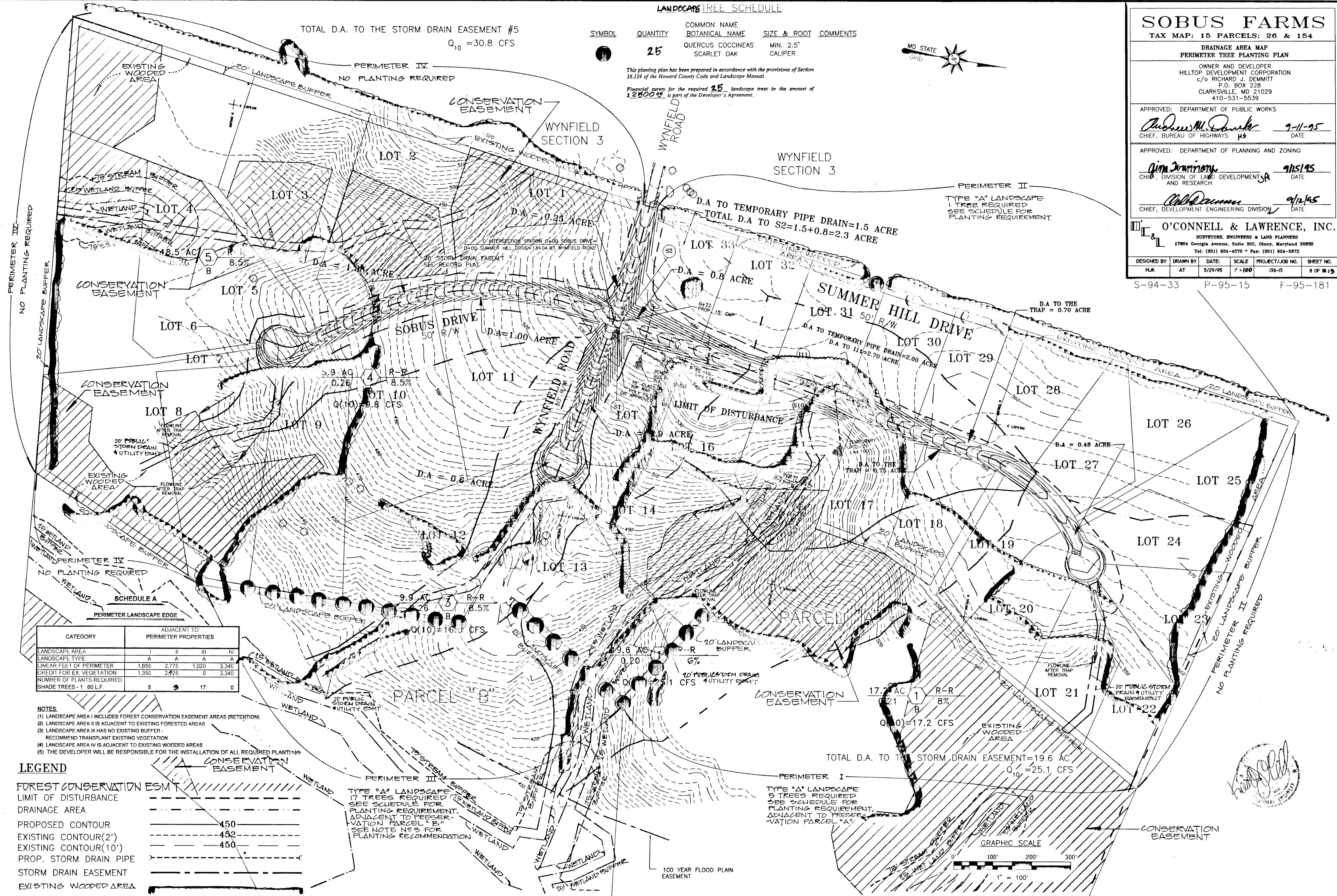
APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 9-11-95  
 CHIEF, BUREAU OF HIGHWAYS MS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Aime J. Jannone* 9/15/95  
 CHIEF, DIVISION OF LAND DEVELOPMENT, SA AND RESEARCH DATE

*William J. ...* 9/2/95  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**O'CONNELL & LAWRENCE, INC.**  
 SURVEYORS, ENGINEERS & LAND PLANNERS  
 17904 Georgia Avenue, Suite 302, Olney, Maryland 20832  
 Tel: (301) 924-4570 • Fax: (301) 924-5872

| DESIGNED BY | DRAWN BY | DATE    | SCALE   | PROJECT/JOB NO. | SHEET NO. |
|-------------|----------|---------|---------|-----------------|-----------|
| MJK         | AT       | 5/29/95 | 1"=100' | 156-15          | 8 OF 15   |

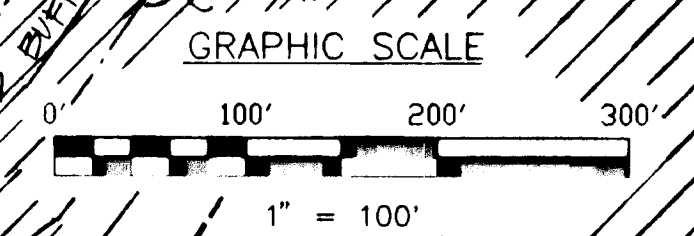


| CATEGORY                  | ADJACENT TO PERIMETER PROPERTIES |       |       |       |
|---------------------------|----------------------------------|-------|-------|-------|
|                           | I                                | II    | III   | IV    |
| LANDSCAPE AREA            | A                                | A     | A     | A     |
| LANDSCAPE TYPE            | A                                | A     | A     | A     |
| LINEAR FEET OF PERIMETER  | 1,655                            | 2,775 | 1,020 | 3,340 |
| CREDIT FOR EX. VEGETATION | 1,350                            | 2,425 | 0     | 3,340 |
| NUMBER OF PLANTS REQUIRED | 5                                | 3     | 17    | 0     |
| SHADE TREES - 1.60 LF     |                                  |       |       |       |

- NOTES:
- (1) LANDSCAPE AREA I INCLUDES FOREST CONSERVATION EASEMENT AREAS (RETENTION)
  - (2) LANDSCAPE AREA II IS ADJACENT TO EXISTING FORESTED AREAS
  - (3) LANDSCAPE AREA III HAS NO EXISTING BUFFER - RECOMMEND TRANSPLANT EXISTING VEGETATION
  - (4) LANDSCAPE AREA IV IS ADJACENT TO EXISTING WOODED AREAS
  - (5) THE DEVELOPER WILL BE RESPONSIBLE FOR THE INSTALLATION OF ALL REQUIRED PLANTING

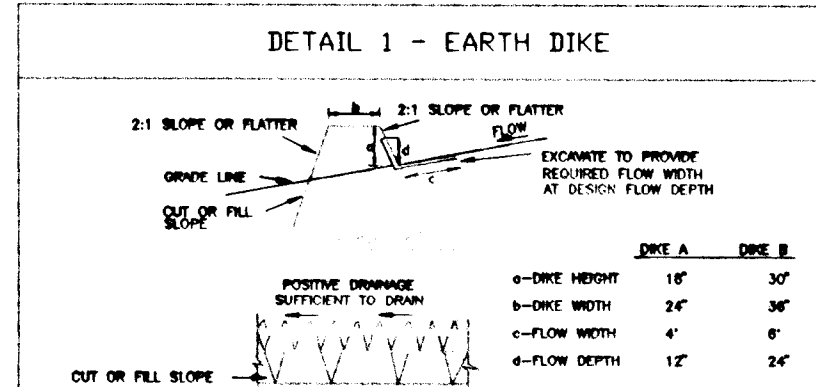
**LEGEND**

|                         |  |
|-------------------------|--|
| FOREST CONSERVATION ESM |  |
| LIMIT OF DISTURBANCE    |  |
| DRAINAGE AREA           |  |
| PROPOSED CONTOUR        |  |
| EXISTING CONTOUR(2')    |  |
| EXISTING CONTOUR(10')   |  |
| PROP. STORM DRAIN PIPE  |  |
| STORM DRAIN EASEMENT    |  |
| EXISTING WOODED AREA    |  |



1747





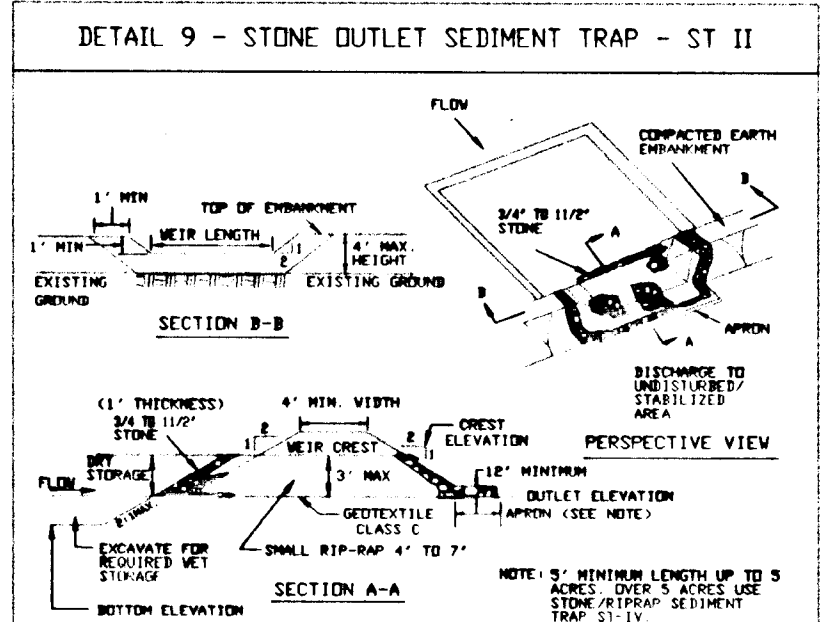
**DETAIL 1 - EARTH DIKE**

2:1 SLOPE ON FLATLAND  
4' CREST  
4' MIN. HEIGHT  
4' MIN. WIDTH  
4' MIN. DEPTH

CONSTRUCTION SPECIFICATIONS

1. Sand and cover with straw mulch.
2. 2" - 7" stone or recycled concrete equivalent placed into the top 7" minimum.

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SOIL CONSERVATION SERVICE

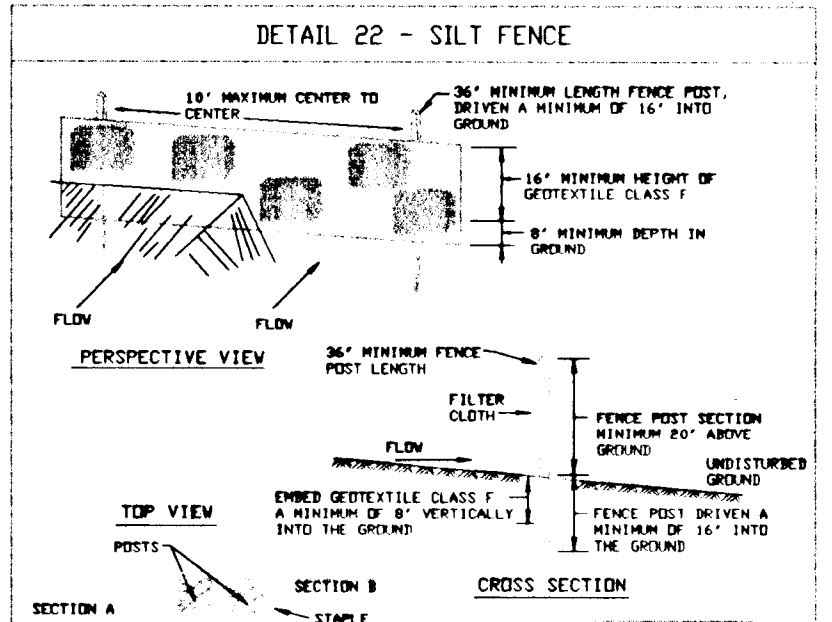


**DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II**

CONSTRUCTION SPECIFICATIONS

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of rocks and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be constructed by layering with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small riprap 4" to 7" in size with a 1" thick layer of 20# to 30# washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
5. Sediment shall be removed and trap returned to its original condition when the sediment has accumulated to one half of the set storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

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SOIL CONSERVATION SERVICE



**DETAIL 22 - SILT FENCE**

CONSTRUCTION SPECIFICATIONS

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 1/2" diameter (minimum) round and shall be of sound quality hardwood. Steel posts shall be standard T or U section weighting not less than 1.00 pound per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and intersection and shall meet the following requirements for Geotextile Class F:
3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt fence shall be inspected after each rainfall event and maintained when failure occur or when sediment accumulation reached 50% of the fabric height.

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SOIL CONSERVATION SERVICE

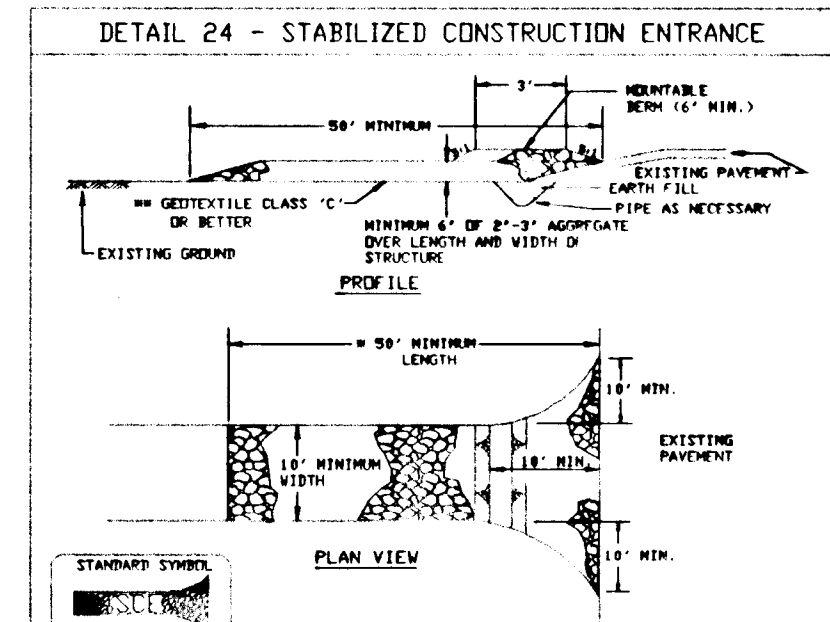
**SILT FENCE**

Silt Fence Design Criteria

| Slope Steepness  | (Maximum) Slope Length | (Maximum) Silt Fence Length |
|------------------|------------------------|-----------------------------|
| Flatter than 3:1 | Unlimited              | Unlimited                   |
| 3:1 to 10:1      | 100 feet               | 1,000 feet                  |
| 10:1 to 3:1      | 60 feet                | 750 feet                    |
| 3:1 to 4:1       | 40 feet                | 500 feet                    |
| 4:1 and steeper  | 20 feet                | 100 feet                    |

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

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SOIL CONSERVATION SERVICE



**DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE**

CONSTRUCTION SPECIFICATION

1. Length - minimum of 50' (40' for single residence lot).
2. Width - 10' minimum, should be placed at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residence to use geotextile.
4. Stone - crushed aggregate 1/2" to 3/4" or retained or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. 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 malleable iron with 3:1 slope and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the pipe is located at a high point and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 4" minimum will be required.
6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Danek* 9-11-95  
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Don Zimmerman* 9/15/95  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

*John P. ...* 9/12/95  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

S-94-33 P-95-15 F-95-181

**HOWARD SOIL CONSERVATION DISTRICT  
PERMANENT SEEDING NOTES**

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

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

1. Preferred--Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)
2. Acceptable--Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding - For the periods March 1 - April 30, and August 1 - October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 - July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs/acre (.05 lbs/1000 sq. ft.) of weeping lovegrass. During the period of October 16 - February 28, protect site by: Option 1 - Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option 2 - Use sod. Option 3 - Seed with 60 lbs/acre Kentucky 30 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching - Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrattled small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 ft. or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Maintenance - Inspect all seeding areas and make needed repairs, replacements and reseeding.

**TEMPORARY SEEDING NOTES**

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

Seedbed preparation - Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments - Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.).

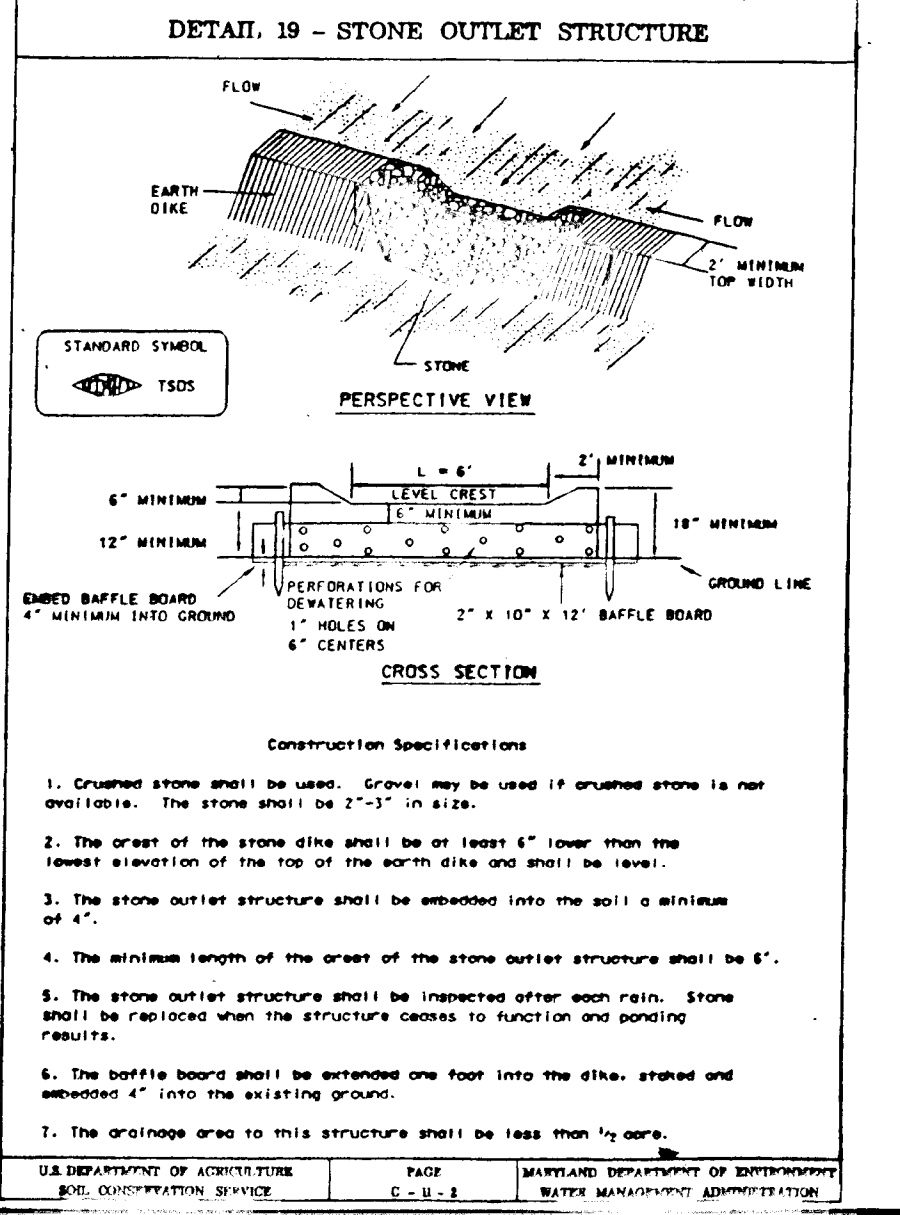
Seeding - For periods March 1 - April 30 and from August 15 - October 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs/1000 sq. ft.). For the period May 1 - August 14, seed with 3 lbs/acre of weeping lovegrass (.07 lbs/1000 sq. ft.). For the period November 16 - February 28, protect site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching - Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrattled weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 ft. or higher, use 348 gal per acre (8 gal/1000 sq. ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

**HOWARD SOIL CONSERVATION DISTRICT  
STANDARD SEDIMENT CONTROL NOTES**

1. 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, (313-1855).
2. All vegetative and structural practices are to be installed according to the provision on this plan and are to be in conformance with the most current "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", and revisions thereto.
3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed with: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4. All sediment traps/basins should be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. 51), sod (Sec. 54), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6. 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.
7. Site Analysis:  
Total Area of Site 124.25 Acres  
Area Disturbed 7.30 Acres  
Area to be roofed or paved 1.80 Acres  
Area to be vegetatively stabilized 6.60 Acres  
Total Cut 13,400.00 Cubic Yards  
Total Fill 8,000.00 Cubic Yards  
Offsite waste/borrow area location
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agent shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approved by the inspection agency is made.
11. Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter.

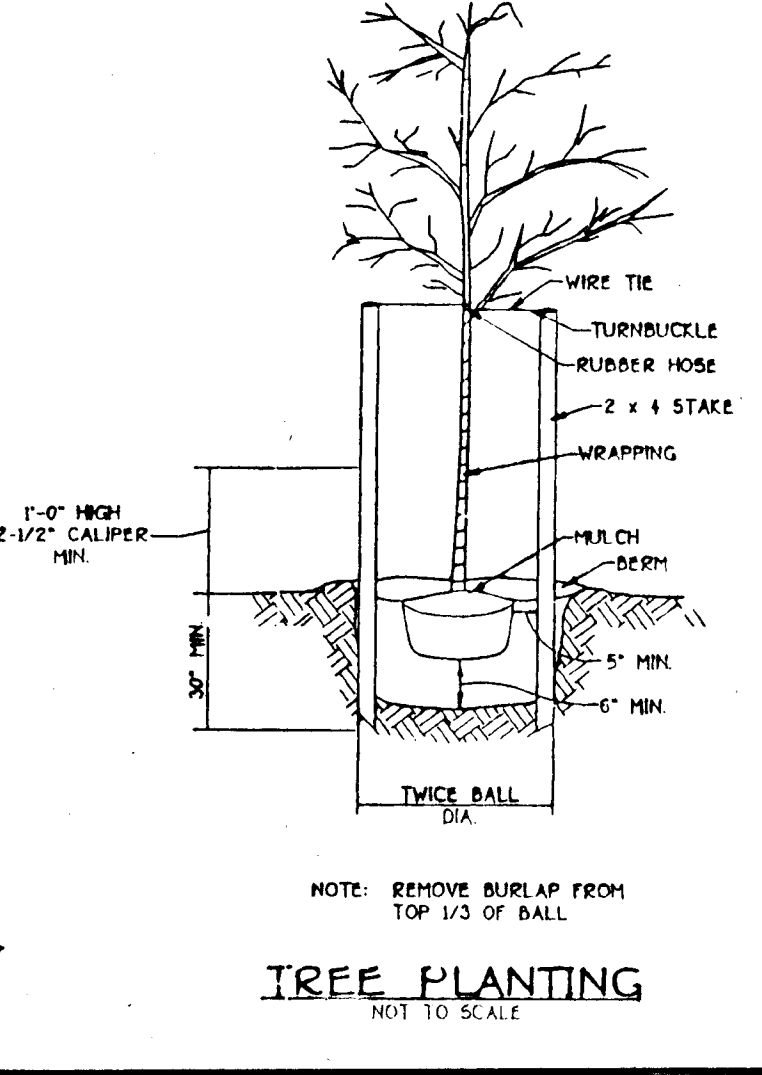


**DETAIL 19 - STONE OUTLET STRUCTURE**

CONSTRUCTION SPECIFICATIONS

1. Crushed stone shall be used. Gravel may be used if crushed stone is not available. The stone shall be 2"-5" in size.
2. The crest of the stone dike shall be at least 6" lower than the lowest elevation of the top of the stone dike and shall be level.
3. The stone outlet structure shall be embedded into the soil a minimum of 4".
4. The minimum length of the crest of the stone outlet structure shall be 6".
5. The stone outlet structure shall be inspected after each rain. Stone shall be replaced when the structure ceases to function and ponding results.
6. The baffle board shall be extended one foot into the dike, spaced and embedded 4" into the existing ground.
7. The drainage area to this structure shall be less than 1/2 acre.

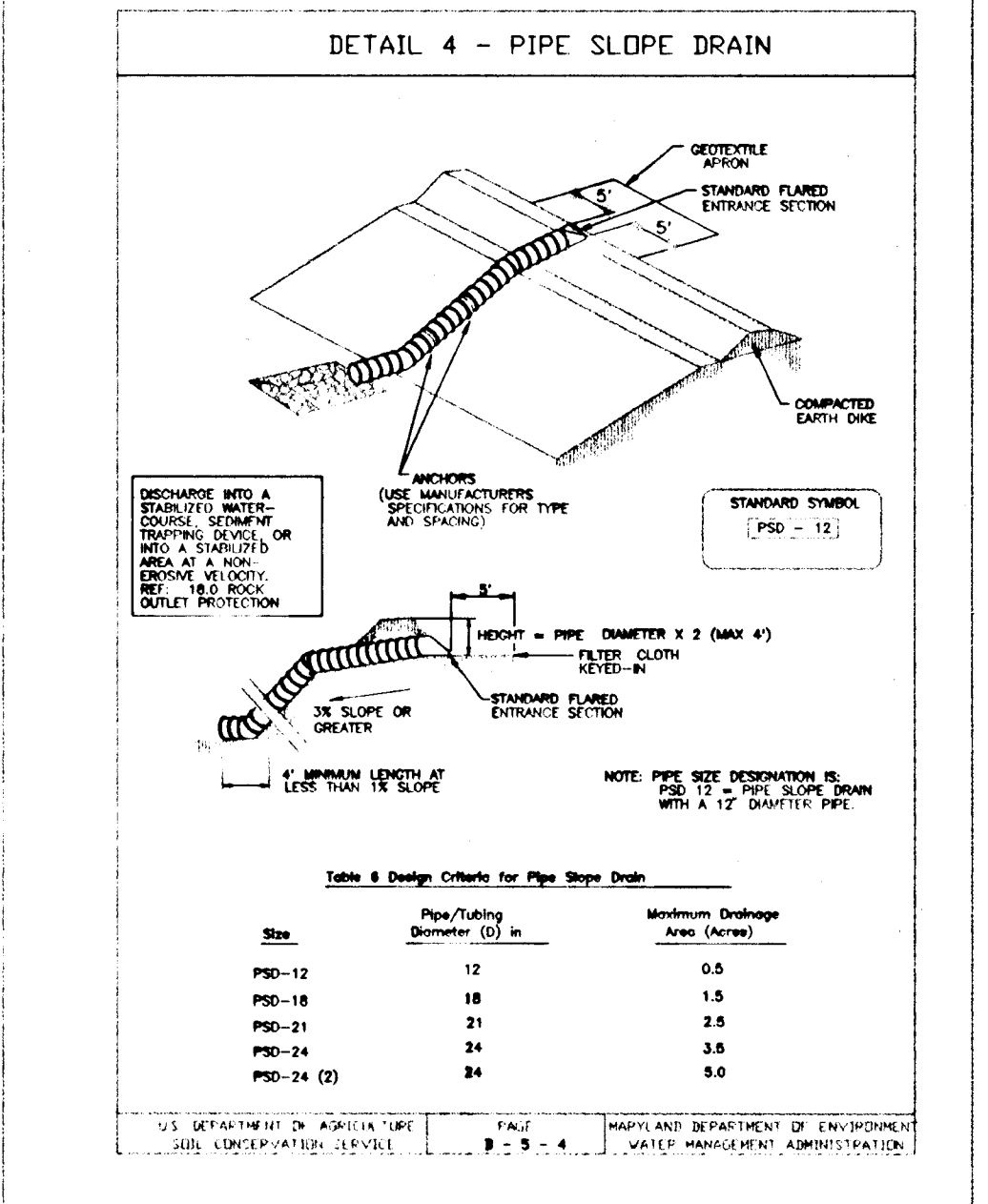
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SOIL CONSERVATION SERVICE



**TREE PLANTING**

NOTE: REMOVE BURLAP FROM TOP 1/3 OF BALL

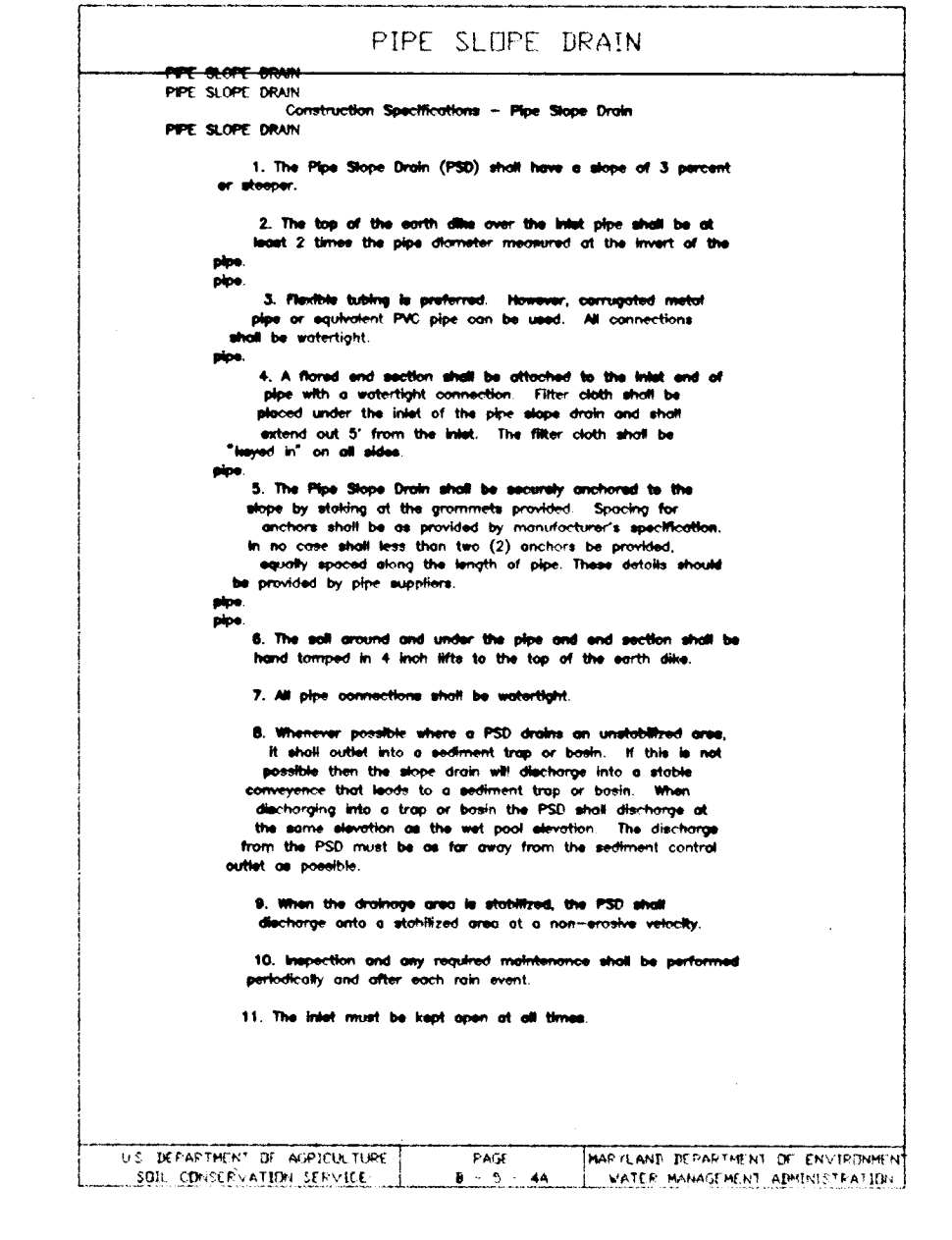
NOT TO SCALE



**Table 4 - Design Criteria for Pipe Slope Drain**

| Size       | Pipe/Filtering Diameter (D) in. | Maximum Drainage Area (Acres) |
|------------|---------------------------------|-------------------------------|
| PSD-12     | 12                              | 0.5                           |
| PSD-16     | 16                              | 1.5                           |
| PSD-20     | 20                              | 2.5                           |
| PSD-24     | 24                              | 3.5                           |
| PSD-24 (2) | 34                              | 5.0                           |

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SOIL CONSERVATION SERVICE



**PIPE SLOPE DRAIN**

CONSTRUCTION SPECIFICATIONS - Pipe Slope Drain

1. The Pipe Slope Drain (PSD) shall have a slope of 3 percent or steeper.
2. The top of the earth fill over the bed pipe shall be at least 2 times the pipe diameter measured at the invert of the pipe.
3. Flexible bedding is preferred. However, corrugated metal pipe or equivalent PVC pipe can be used. All connections shall be watertight.
4. A forced and section shall be attached to the head and tail of pipe with a watertight connection. Filter cloth shall be placed under the head of the pipe slope drain and shall extend out 5' from the head. The filter cloth shall be "sewn in" on all sides.
5. The Pipe Slope Drain shall be securely anchored to the slope by driving the concrete anchors. Spacing for anchors shall be as provided by manufacturer's specification. In no case shall less than two (2) anchors be provided, equally spaced along the length of pipe. These details should be provided by pipe supplier.
6. The tail around and under the pipe and section shall be hand tamped in a both side to the top of the earth fill.
7. All pipe connections shall be watertight.
8. Whenever possible where a PSD discharges into an unobstructed area, it shall outlet into a sediment trap or basin. If this is not possible then the area shall be discharge into a stable convergence that leads to a sediment trap or basin. When discharging into a trap or basin the PSD shall discharge at the same elevation as the bed pipe elevation. The discharge from the PSD must be as far away from the sediment control as possible.
9. When the drainage area is stabilized, the PSD shall discharge onto a stabilized area of a non-erode velocity.
10. Inspection and any required maintenance shall be performed periodically and after each rain event.
11. The head must be kept open at all times.

U.S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

**SEQUENCE OF CONSTRUCTION**

1. Obtain Grading Permit.
2. Notify "Miss Utility" 48 hours before beginning any work at 1-800-257-7777.  
Notify Howard County Office of Construction Inspection Division 24 hours before beginning work at 410-313-1880.
3. Install sediment control devices as necessary. 7 Days
4. Clear and grade roads, install culvert and storm drainage. 21 Days
5. Permanently stabilize all disturbed areas.
6. Pave roads. Flush culvert and storm drainage system. 7 Days
7. With prior permission from the Sediment Control Inspector, all remaining sediment control devices. 7 Days

The contractor shall inspect and provide maintenance for sediment control devices as necessary during construction.

**SEDIMENT CONTROL**

Developer Certification  
I/We certify that all development and construction will be done according to the plan and that any responsible personnel involved in the construction project will have a certificate of attendance as a Department of the Environment Approved Training Program for the control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

*Richard ...* 9-23-95  
Signature Date

Engineer Certification  
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 and that it was prepared in accordance with the requirements of the Conservation District.

*Richard ...* 9/22/95  
Signature Date

Review for HOWARD SC and meet Technical Requirements

*Richard ...* 9/23/95  
Signature Date

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

*John P. ...* 9/24/95  
Signature Date

**SOBUS FARMS  
SEDIMENT CONTROL DETAILS**

TAX MAP: 15 PARCELS: 26 & 154

**O'CONNELL & LAWRENCE, INC.**  
SURVEYORS, ENGINEERS & LAND PLANNERS  
17904 Georgia Avenue, Suite 302, Olney, Maryland 20832  
Tel: (301) 924-4570 • Fax: (301) 924-5872

| DESIGNED BY | DRAWN BY | DATE    | SCALE    | PROJECT/JOB NO. | SHEET NO. |
|-------------|----------|---------|----------|-----------------|-----------|
| MLK         | AT       | 5/29/95 | AS SHOWN | 136-15          | 9 OF 13   |

1749



CURVE DATA: SOMMER HILL DRIVE  
STATION 97.60 PC - 14+00 PT  
R = 425'

15' COMMON DRIVEWAY ACCESS  
EASEMENT LOTS 28 AND 29

STREET TREES  
MEDIUM SIZE 40%

LOT 2  
TREE LINE  
TO REMAIN

P226  
D. UNDY  
L714 F.742

P228  
H. ARTHNER  
L.723 F.692

P.93

CONSERVATION EASEMENT  
12.3 AC.

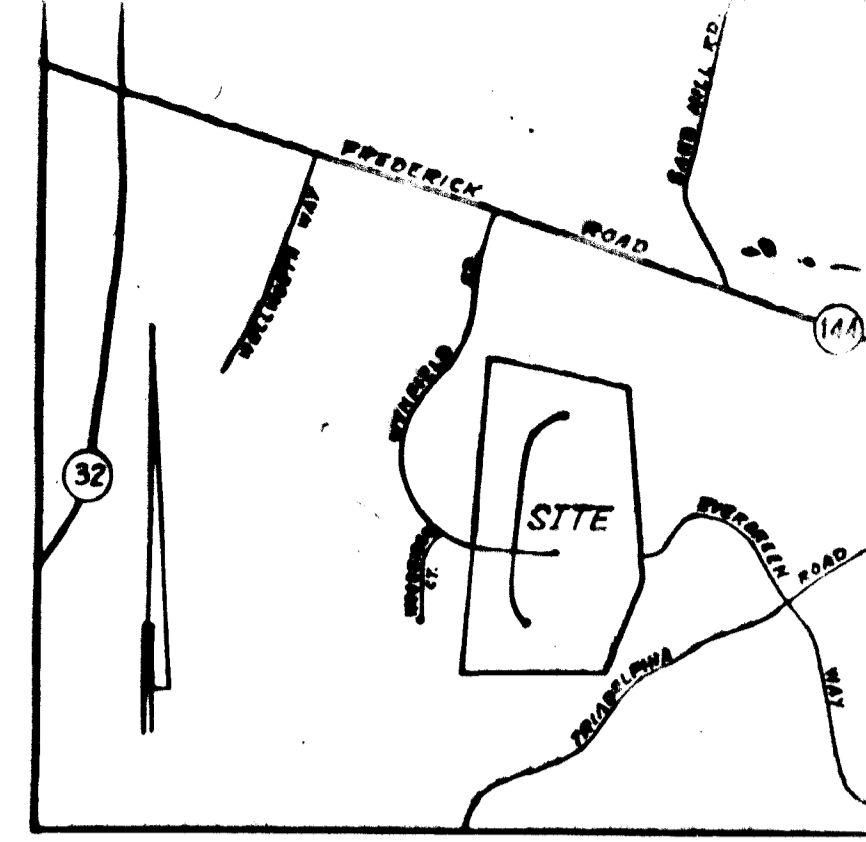
P.317  
ET GROGAN  
L.355 F.006

CONSERVATION ESM'T.  
2.8 AC

TO BE DEVELOPED AS  
A SINGLE FAMILY  
RESIDENCE  
PRESERVATION  
PARCEL 'A'  
29.01 ACRES

**LEGEND**

- 100 YR FLOOD PLAIN
- PROPERTY LINE
- SOIL DESIGNATION
- STREAM BUFFER
- EXISTING COUNTOUR
- PROPOSED HOUSE
- EXISTING STREAM
- 25% SLOPES
- 15% SLOPES
- PROP SEPTIC AREA  
W/TEST HOLES
- PROPOSED WELL  
WITH 100' R
- CONSERVATION ESM'T. LINE LIMIT
- EXISTING STRUCTURE  
(HOUSE BARN SHED)
- LIMIT OF DISTURBANCE
- DIVISION BETWEEN  
CLUSTER / 3.0 AC.
- DEVELOPMENT  
PROP. PAVING
- SECOND TRACT  
38.25 ACRES
- PROP STREET TREES
- EX. TREE LINE TO REMAIN



**AREA COMPS**  
Gross Area 124.25 Ac  
14 lots at 3 Ac 42.45 Ac  
Roads for 3 Ac Lots 1.0 Ac  
Area Remaining for Cluster 80.80 Ac

**CLUSTER SITE ANALYSIS**

1. Location - Tax Map 15, Parcels 26 & 154
2. Zoning RR
3. Cluster Tract Area 80.80 Ac
4. Number of Allowed Cluster Lots at 1 per 4.25 gross acres = 19
5. 2 Proposed Preservation Parcels
6. 0 Proposed Non-buildable Preservation Parcels
7. 2.74 Acres of Proposed Road R/W
8. 25.93 Acres of Proposed Cluster Lots
9. 91.84 Acres total for 2 Proposed Parcels
10. 100 year flood plain 4.77 Ac
11. Steep slopes area - 3.0 Ac
12. Wetlands area - 2.7 Ac

**3 ACRE SITE ANALYSIS**

1. Tax map 15, Parcel 26 & 154
2. Zoning RR
3. Gross Area - 49.45 Ac
4. Net Area - 42.60 Ac
5. Steep Slopes - 0.89 Ac
6. 100 year Flood Plain - 0 Ac
7. Area of lots - 42.45 Ac
8. Road Right of Way Area - 1.0 Ac
9. Dwelling Units allowed - 14
10. Dwelling Units provided - 14
12. Open Space Required - 2.17 Ac
13. Request fee in lieu of open space (\$1000/lot)

CLUSTER LOTS # 15-33  
3.0 AC LOTS # 1-14  
PRESERVATION PARCELS A & B

DENNIS J. LABARE, M.S., & ASSOCIATES  
Environmental Consulting Services  
8903 Flagstone Circle  
Randallstown, MD 21133  
Wetland Delineations & Mitigation  
Stream Assessment & Restoration  
Water Quality Monitoring  
Interdisciplinary Taxonomy  
Forest Stand Delineations  
Forest Conservation Plans  
Qualified Professional, MDPCA  
91, FPA (110) 922-7426



**SOBUS FARMS**  
TAX MAP: 15 PARCELS: 26 & 154  
GRADING AND  
FOREST CONSERVATION PLAN

OWNER AND DEVELOPER  
HILLTOP DEVELOPMENT CORPORATION  
c/o RICHARD J. DEMMITT  
P.O. BOX 228  
CLARKSVILLE, MD 21029  
410-531-5539

APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Canale* 9/1/95  
CHIEF, BUREAU OF HIGHWAYS HS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Jim Johnson* 9/15/95  
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JK DATE

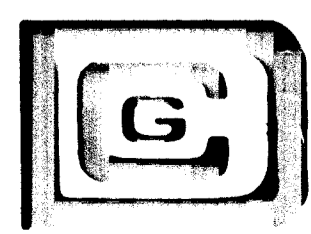
*John Damm* 9/12/95  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FINAL PLAN F-25-181  
PRELIMINARY PLAN F-25-15  
SKETCH PLAN S-24-93  
E-95-181

1747

WYNFIELD SEE SHEET 2 ROAD

| NO. | REVISIONS | DATE |
|-----|-----------|------|
|     |           |      |
|     |           |      |
|     |           |      |



**DEVELOPMENT CONSULTANTS GROUP, INC.**  
17904 GEORGIA AVENUE \* 102  
OLNEY, MARYLAND 20832  
301-924-4570

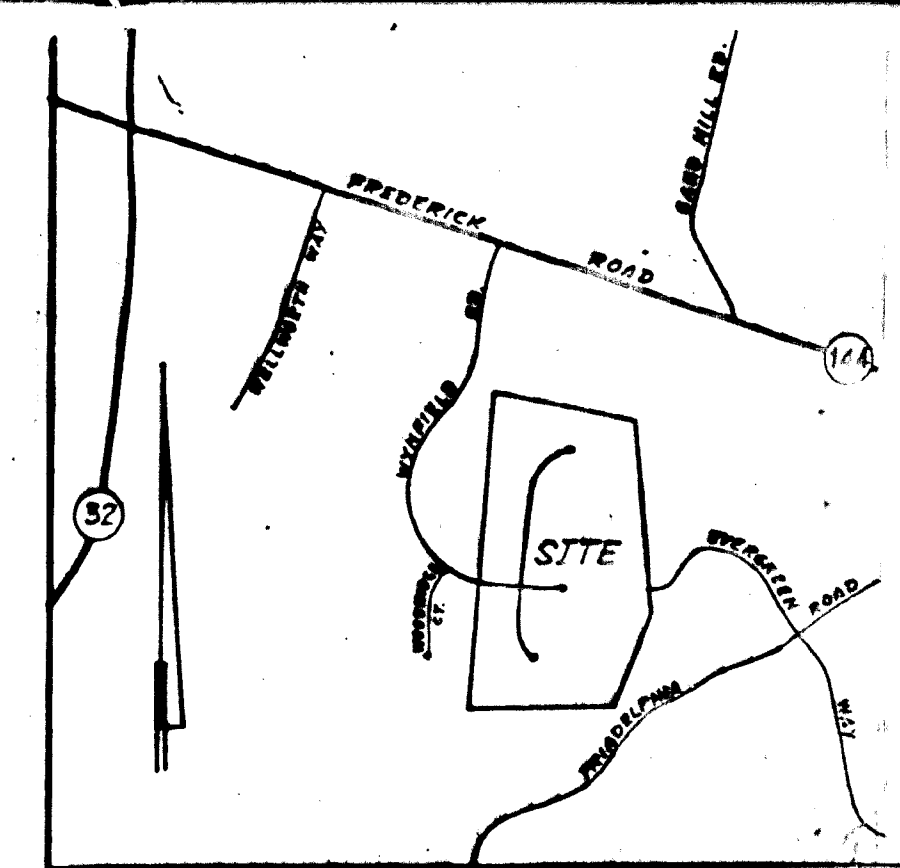
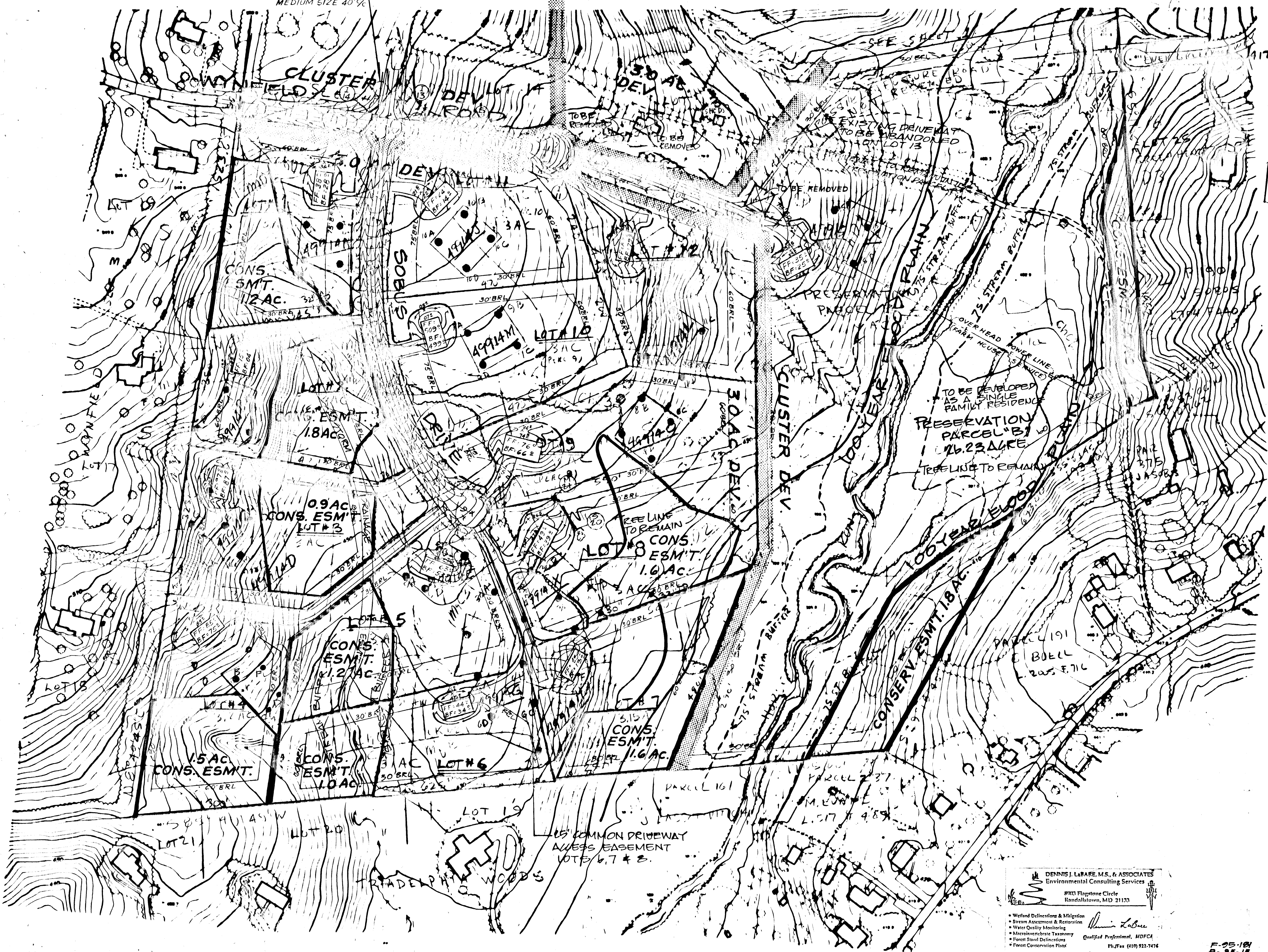
DCG a division of  
**O'CONNELL & LAWRENCE, INC.**  
SURVEYORS ENGINEERS & LAND PLANNERS  
17904 Georgia Avenue Suite 102, Olney Maryland 20832 \* (301) 924-4572  
45-BUILT 11/2002

GRADING AND FOREST CONSERVATION PLAN  
LOTS 1-33 & PRESERVATION PARCELS A & B  
**SOBUS FARMS**  
3RD ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND  
TAX MAP: 15 PARCELS: 26 & 154  
DATE AUG 95  
DRAWN FFM  
CHECKED EJA  
SCALE 1"=100'  
Sheet 10 of 13  
PROJECT NO. 15-6-1



6 CURVE DATA SOBUS DRIVE  
STATION 1110 PC - 8110 PCC  
R = 875'

STREET TREES  
MEDIUM SIZE 40%



VICINITY MAP  
SCALE 1"=2000'



|   |         |
|---|---------|
| <b>SOBUS FARMS</b>  |         |
| TAX MAP: 15 PARCELS: 26 & 154   |         |
| GRADING AND FOREST CONSERVATION PLAN  |         |
| OWNER AND DEVELOPER<br>HILLTOP DEVELOPMENT CORPORATION<br>c/o RICHARD J. DEMMITT<br>P.O. BOX 228<br>CLARKSVILLE, MD 21029<br>410-531-5539 |         |
| APPROVED: DEPARTMENT OF PUBLIC WORKS  |         |
| <i>Richard M. Danville</i>  | 9-11-95 |
| CHIEF, BUREAU OF HIGHWAYS   | DATE    |
| APPROVED: DEPARTMENT OF PLANNING AND ZONING   |         |
| <i>Anna Jurinary</i>  | 9/15/95 |
| CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH  | DATE    |
| <i>Chris Danner</i>   | 9/16/95 |
| CHIEF, DEVELOPMENT ENGINEERING DIVISION   | DATE    |

DENNIS J. LABARE, M.S., & ASSOCIATES  
Environmental Consulting Services  
8783 Flaggline Circle  
Randallstown, MD 21133  
 • Wetland Delineation & Mitigation  
 • Stream Assessment & Restoration  
 • Water Quality Monitoring  
 • Microbiological Taxonomy  
 • Forest Stand Delineations  
 • Forest Conservation Plans  
 Dennis J. Labare  
 Qualified Professional, MDPCA  
 Ph/Fax (410) 932-7426

F-95-104  
P-95-15  
5-24-95

1747

|   |     |           |      |
|---|-----|-----------|------|
| Owner/Developer:  | NO. | REVISIONS | DATE |
| HILLTOP DEVELOPMENT INC.<br>RICHARD J. DEMMITT<br>P.O. BOX 228<br>CLARKSVILLE, MD 21029<br>410-531-5539 |     |           |      |

 **DEVELOPMENT CONSULTANTS GROUP, INC.**  
17904 GEORGIA AVENUE # 102  
OLNEY, MARYLAND 20832  
301-924-4570

DCC a division of  
**O'CONNELL & LAWRENCE, INC.**  
SURVEYORS, ENGINEERS & LAND PLANNERS  
17904 Georgia Avenue Suite 102 Olney Maryland 20832 \* (301) 924-4573 Fax (301) 924-5872

|  |   |
|--|---|
| GRADING AND FOREST CONSERVATION PLAN<br>LOT 15 & 26 CREATION PARCELS A & B<br><b>SOBUS FARMS</b><br>3RD ELECTION DISTRICT<br>HOWARD COUNTY, MARYLAND<br>TAX MAP: 15 PARCELS 26 & 154 | AUG 95<br>DRAWN<br>E.I.M.<br>CHECKED<br>P.A.<br>SCALE<br>1"=100'<br>SHEET NO.<br>11<br>OF 13<br>PROJECT NO.<br>154-154-15 |
|--|---|



**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)

- The edge of the woods to be protected will be marked (staked or flagged) in the field per the limits of disturbance shown in the approved site development 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, whichever is greater.

- Construction activities expressly prohibited within the preservation areas are:

Placing or stockpiling backfill or top soil in protected areas  
 Felling trees into protected areas  
 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  
 Impervious surfaces  
 Stormwater management devices  
 Staging areas

- Protective fencing (see Figure "Protective Fencing") shall be the responsibility of the general contractor. The general contractor shall affix signs to the fencing at 25' minimum intervals indicating that these areas are "Forest Retention Areas" or "Specimen Trees" (see Figure "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.

- 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.

- Foot traffic shall be kept to a minimum in the protective areas.

- All trees which are not to be preserved within fifty feet of any tree preservation areas are to be removed in a manner that will not damage those trees that are designated for preservation. It is highly recommended that tree stumps within this fifty foot area be ground out with a stump grinding machine to minimize damage.

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

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

**FOREST PROTECTION PROCEDURES - Construction Phase**

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

The following shall be monitored:

- Soil compaction
- Root injury - prune and monitor; consider crown reduction
- Limb injury - prune and monitor
- Flooded conditions - drain and monitor; correct problem
- Drought conditions - water and monitor;

- correct problem.
- Other stress signs - determine reason, correct, and monitor.

**FOREST PROTECTION PROCEDURES - Post-Construction Phase**

The following measures shall be taken:

- Corrective measures if damages were incurred due to negligence:

- Stress reduction
- Removal of dead or dying trees. This may be done only if trees pose an immediate safety hazard

- Removal of temporary structures:

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

- No open burning within 100 feet of a wooded area.

- All temporary forest protection structures will be removed after construction.

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

- Aerate compacted soil.

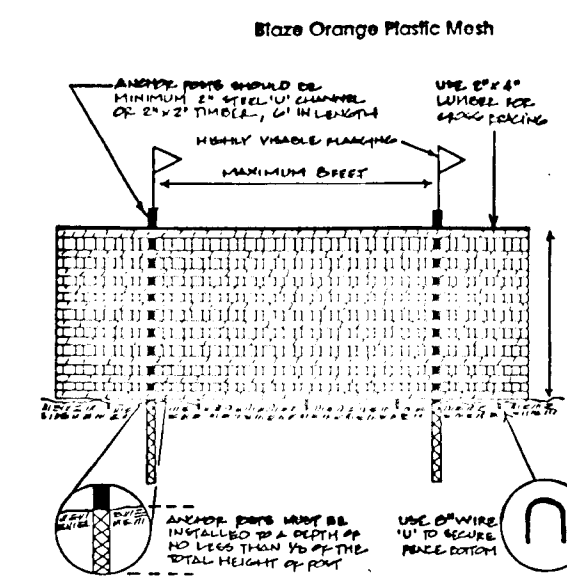
- Replant disturbed sites with trees, shrubs and/or herbaceous plants.

- Retain signs for retention areas or specimen trees.

- A County official shall inspect the entire site.

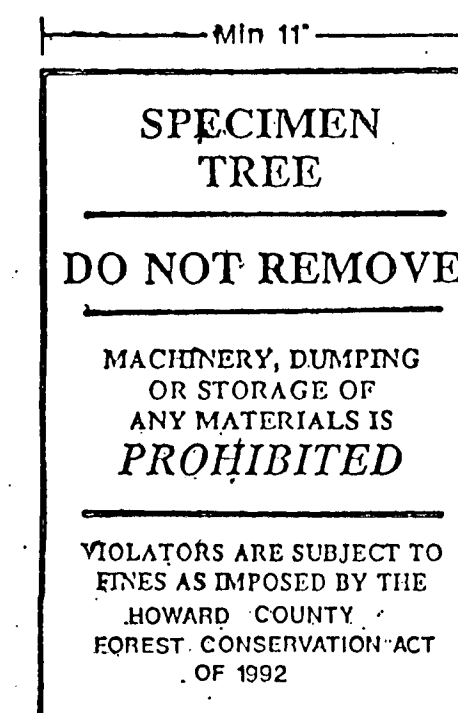
**APPENDIX G  
FOREST CONSERVATION WORKSHEET**

|   |       |
|---|-------|
| ACRES<br>(110 acres)  |       |
| I. BASIC SITE DATA  |       |
| GROSS SITE AREA   | 124.2 |
| AREA WITHIN 100 YEAR FLOODPLAIN                                     | 27.5  |
| AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE) | —     |
| NET TRACT AREA  | 96.7  |
| LAND USE CATEGORY (R-FLD, R-RMD, R-S, CA/O, I) <u>R-RMD</u>         |       |
| II. INFORMATION FOR CALCULATIONS                                    |       |
| A. NET TRACT AREA   | 96.7  |
| B. REFORESTATION THRESHOLD ( $25\% \times A$ )                      | 24.2  |
| C. AFFORESTATION MINIMUM ( $20\% \times A$ )                        | 19.3  |
| D. EXISTING FOREST ON NET TRACT AREA                                | 44.3  |
| E. FOREST AREAS TO BE CLEARED                                       | 13.7  |
| F. FOREST AREAS TO BE RETAINED                                      | 30.6  |

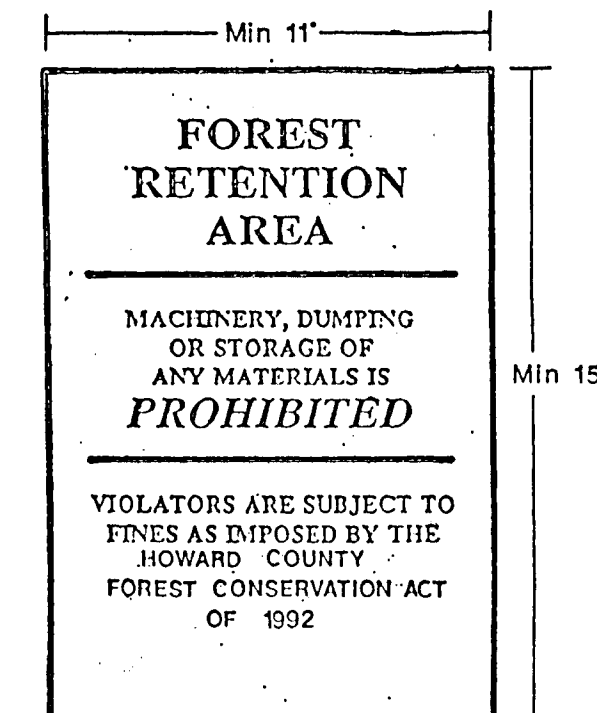


Notes:  
 1. Forest protection signs shall be placed at the edge of the wooded areas. Signs should be placed at 25' intervals along the perimeter of the wooded areas. Signs should be placed at 25' intervals along the perimeter of the wooded areas.  
 2. Signs should be placed at 25' intervals along the perimeter of the wooded areas.  
 3. Signs should be placed at 25' intervals along the perimeter of the wooded areas.

Signage



Signage



**BREAK-EVEN (BEP) CALCULATIONS**

Zone: R-MD  
 Reforestation Threshold: 25%  
 Therefore:  
 $(25 \times 96.7 = 24.2) + (20 \times 20.1 = 4.0) = 28.2$  Acres  
 This minimum retention shall be found in Forest Conservation Easements. Add'l forest coverage is found on Septic Reserve Areas, in addition to that required by law.

**SOBUS FARMS**  
 TAX MAP: 15 PARCELS: 26 & 154  
**FOREST CONSERVATION NOTES & DETAILS**  
 OWNER AND DEVELOPER  
 HILLTOP DEVELOPMENT CORPORATION  
 c/o RICHARD J. DEMMITT  
 P.O. BOX 228  
 CLARKSVILLE, MD 21029  
 410-531-5539  
 APPROVED: DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Danville* 9/11/95  
 CHIEF, BUREAU OF HIGHWAYS 45 DATE  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Gina J. Juntunen* 9/15/95  
 CHIEF, DIVISION OF LAND DEVELOPMENT, PLANNING AND RESEARCH DATE  
*Chad D. Danner* 9/12/95  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Owner/Developer:  
 HILLTOP DEVELOPMENT INC.  
 90 RICHARD J. DEMMITT  
 P.O. BOX 228  
 CLARKSVILLE, MD. 21029  
 410-531-5539



**FOREST CONSERVATION NOTES AND DETAILS**  
**SOBUS FARMS**  
 3RD ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 TAX MAP: 15 PARCELS: 26 & 154  
 9-24-95 F 95-181

|                   |  |                   |  |
|-------------------|--|-------------------|--|
| DESIGNER<br>B.A.  |  | SHEET             |  |
| DRAWN<br>E.F.M.   |  | 12                |  |
| DATE<br>AVG, 95   |  | OF 13             |  |
| SCALE<br>AS SHOWN |  | JOB No.<br>136-13 |  |

O'CONNELL & LAWRENCE INC.  
 17904 GEORGIA AVENUE  
 SUITE  
 OLNEY MARYLAND 20832  
 301-924-4570  
 FAX 301-924-5872

DENNIS J. LABARE, M.S., & ASSOCIATES  
 Environmental Consulting Services  
 8903 Flagstone Circle  
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 • Wetland Delineations & Mitigation  
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 • Macroinvertebrate Taxonomy  
 • Forest Stand Delineations  
 • Forest Conservation Plans  
 Qualified Professional, MDP/CA  
 P.E. No. (410) 922-7476

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# SOBUS FARMS

TAX MAP: 15 PARCELS: 26 & 154

## DRAINAGE AREA MAP

OWNER AND DEVELOPER  
 HILLTOP DEVELOPMENT CORPORATION  
 c/o RICHARD J. DEMMITT  
 P.O. BOX 228  
 CLARKSVILLE, MD 21029  
 410-531-5539

APPROVED:  
 DEPARTMENT OF PUBLIC WORKS

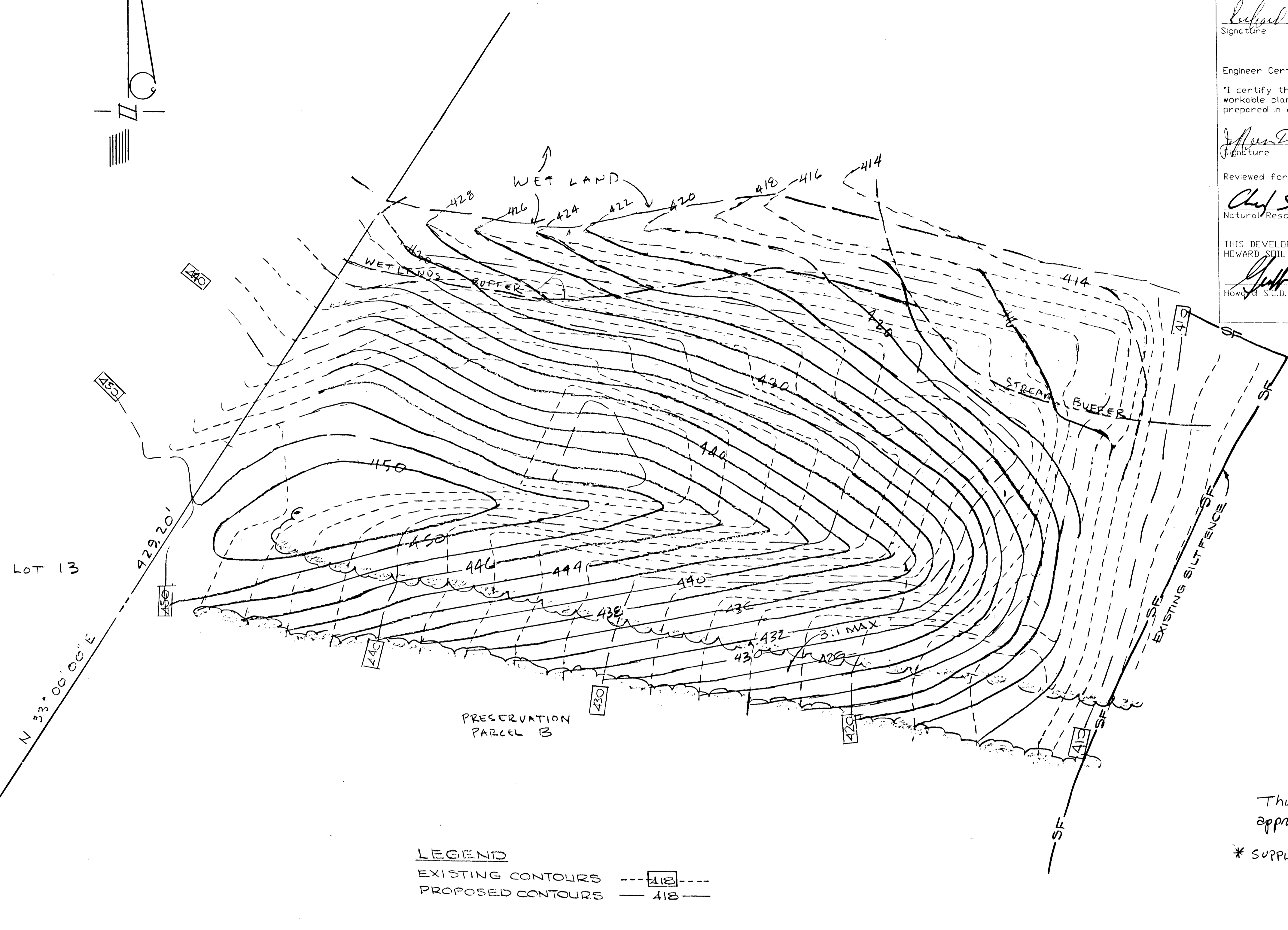
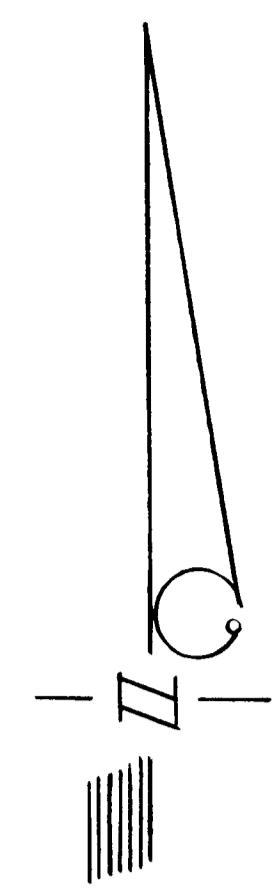
*Richard J. Demmitt* 12-1-99  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED:  
 DEPARTMENT OF Planning & Zoning

*William J. Demmitt* 12/2/99  
 CHIEF, DIVISION OF ENGINEERING & DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED:  
 DEPARTMENT OF PLANNING AND ZONING

*Wanda Hammett* 12/7/99  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



**LEGEND**  
 EXISTING CONTOURS --- 418 ---  
 PROPOSED CONTOURS --- 418 ---

**NOTES**  
 1. GRADING REVISED TO REFLECT MAX 3:1 SLOPE

"I/We certify all fill material has been removed from within the wetland stream buffers as shown on this plan and in accordance with currently accepted testing procedures"

ENGINEER

SEQUENCE OF CONSTRUCTION

- 1) Obtain grading permit
- 2) Install contours, and inspector's permission to proceed
- 3) Perform grading
- 4) Provide engineer certification (above) and seal to HSCD
- 5) - Job site and remove contours with inspector's permission

### SEDIMENT CONTROL

Developer Certification:  
 "I/We certify that all development and construction will be done according to this plan, 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 on-site inspection by the Howard Soil Conservation District."

*Richard J. Demmitt* 1-25-99  
 Signature Date

Engineer Certification:  
 "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 and that it was prepared in accordance with the requirements of the Conservation District."

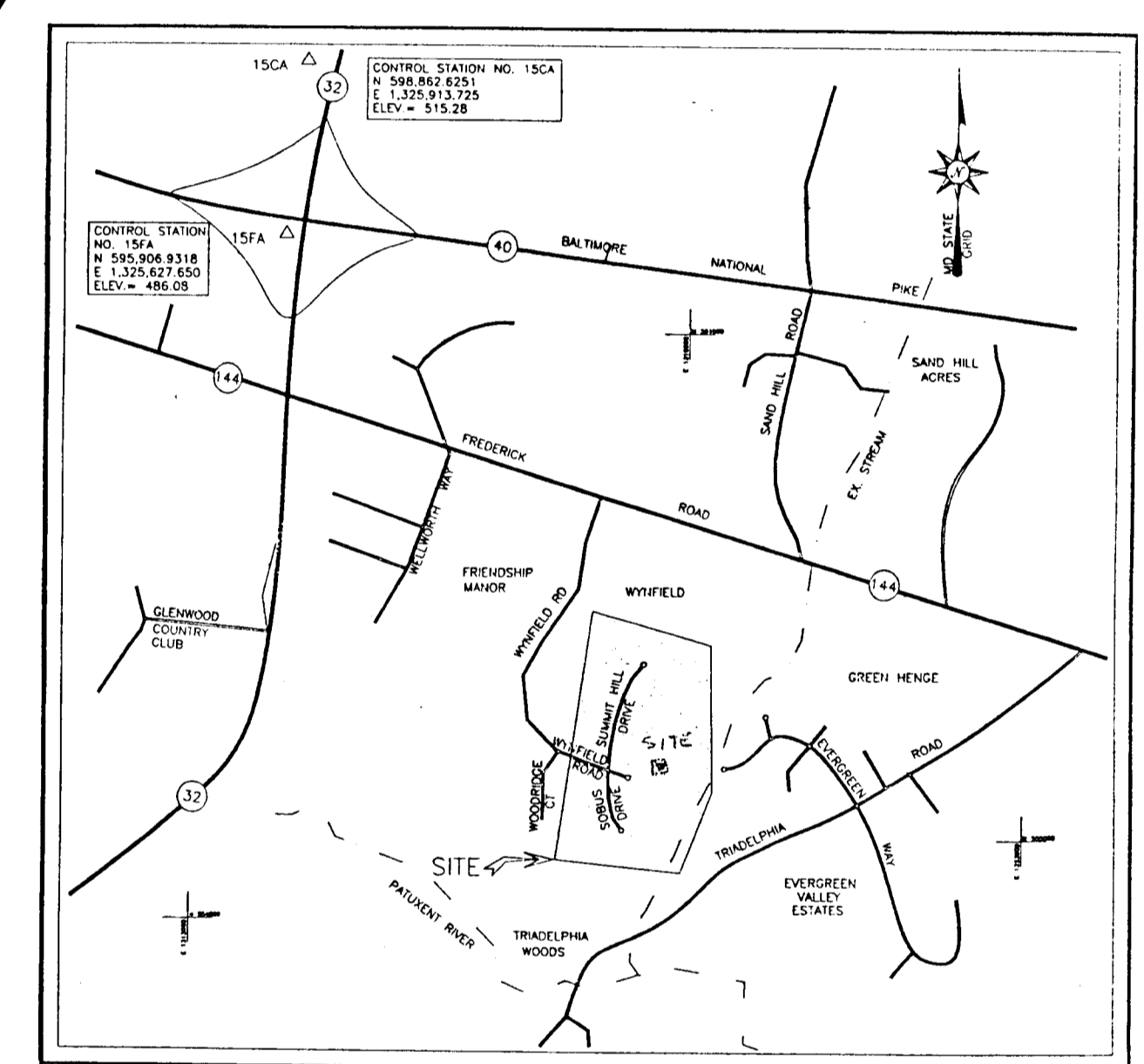
*Allen D. Lawrence* 1-25-99  
 Signature Date

Reviewed for HOWARD S.C.D. and meets Technical Requirements

*Chief Simmons /CS* 11/18/99  
 Natural Resources Conservation Service Date

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

*John S. Selig* 11/10/99  
 HOWARD S.C.D. Date

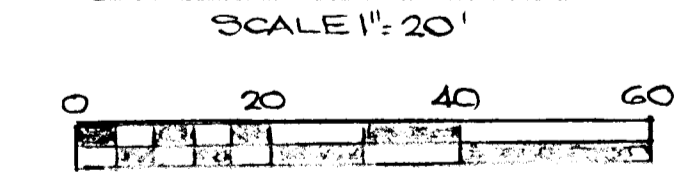


VICINITY MAP  
 SCALE: 1" = 200'

This plan has been submitted in accordance with the approval of UP-99-111 (see letter of 6/24/99).

\* SUPPLEMENTAL SHEET TO F-95-181 PLANS

### GRAPHIC SCALE



PRESERVATION PARCEL B

\* GRADING PLAN  
**SOBUS FARMS**  
 3RD ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 TAX MAP 15 PARCELS 26 & 154

|                                       |  |          |          |             |          |
|---------------------------------------|--|----------|----------|-------------|----------|
| <b>O'Connell &amp; Lawrence, Inc.</b> |  | DESIGNER | JDL      | PROJECT NO. | F-95-181 |
| 17904 Georgia Avenue                  |  | DRAWN    | RMT      | SHEET       | 13*      |
| Suite 302                             |  | DATE     | DEC. 08  | OF          | 13       |
| Olney, Maryland 20832                 |  | SCALE    | 1" = 20' | JOB No.     | 136-013  |
| 301-924-4570                          |  |          |          |             |          |
| Fax 301-924-5872                      |  |          |          |             |          |

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F.95.181