

STREET LIGHT LEGEND

| ROAD | HEIGHT | OFFSET |
|--------------|---------|---------|
| Britten Lane | 19' 90" | 15' LT. |
| | 13' 24" | 17' RT. |
| | 17' 24" | 20' RT. |
| | 17' 24" | 15' LT. |
| | 10' 24" | 26' LT. |

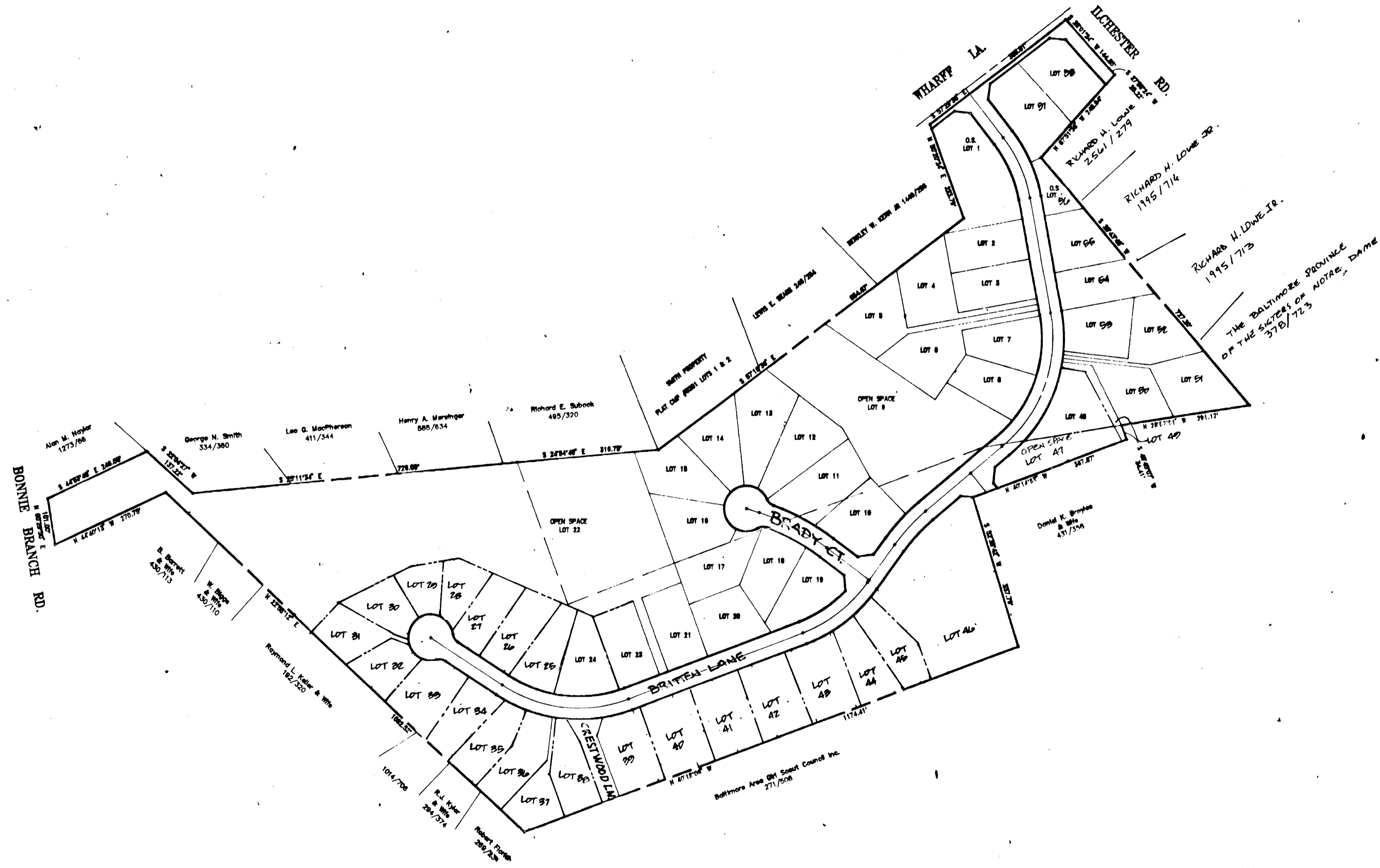
STREET LIGHTS TO BE 100 WATT HPS VAPOR TRADITIONAL POST TOP FIXTURE MOUNTED ON 14 FOOT BLACK FIBERGLASS EMBEDDED POLE

SYMBOL *

Note street lights to be 20 feet from street trees

FINAL CONSTRUCTION PLAN BRITTEN/BRADY PROPERTY LOTS 1-58

Howard County, Maryland



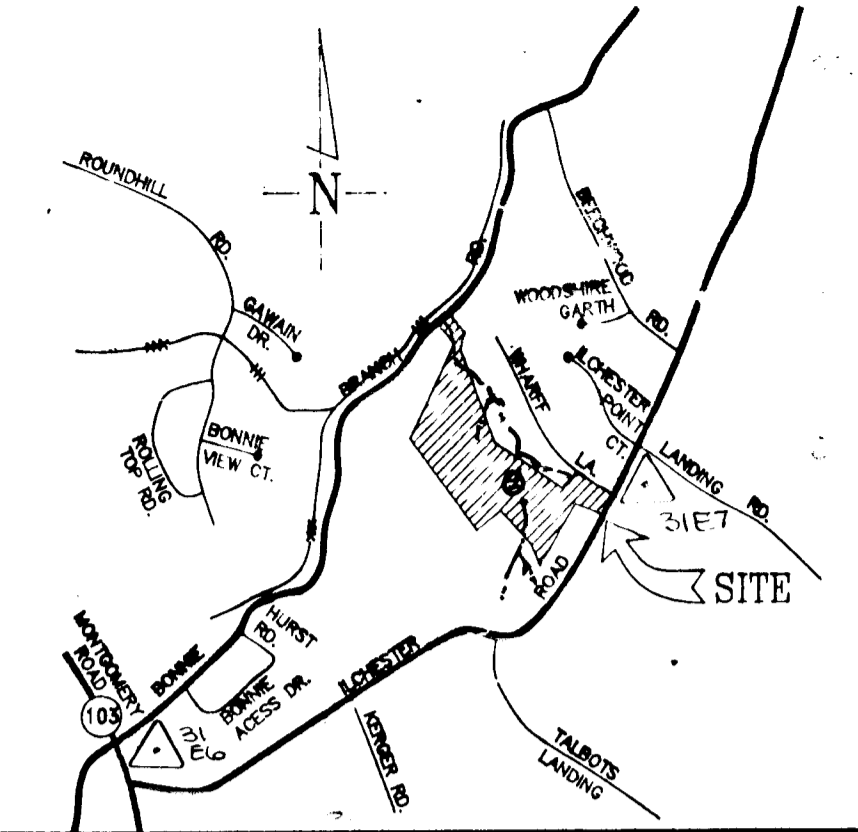
PLAN

GENERAL NOTES

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV.e. STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

| | |
|---|-------------------|
| MISS UTILITY- | 1-800-257-7777 |
| BELL TELEPHONE SYSTEM- | 393-3649 |
| LONG DISTANCE CABLE DIVISION- | 393-3553 or 3553 |
| BALTIMORE GAS AND ELECTRIC CO.- | 539-8000 ext. 691 |
| COLONIAL PIPELINE- | 795-1390 |
| HOWARD COUNTY BUREAU OF UTILITIES- | 992-2366 |
| HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION- | 313-1872 |
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL STREET CURB RETURNS SHALL HAVE A 35.0' RADIUS UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN THE ROAD RIGHT-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME IV.e. STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- INSTALLATION OF TRAFFIC CONTROL DEVICES, MARKING, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE MUTCO.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIAL STANDARDS.

ALL 50' RIGHT-OF-WAYS = 30 M.P.H.
- ALL ELEVATIONS SHOWN ARE BASED ON U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929
- ALL FILL AREAS WITHIN THE ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION, PER AASHTO T-100 METHOD.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- SUBJECT PROPERTY ZONED R-20 PER 10-18-95 COMPREHENSIVE ZONING PLAN.
- FIELD RUN TOPOGRAPHY WAS PREPARED BY W.L.MEEKINS 1995.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- ALL STORM DRAIN PIPE BEDDING SHALL BE AS SHOWN IN FIG. 11.4 VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
- SEE DEPARTMENT OF PLANNING AND ZONING FILE Nos.: S-94-113 P-95-23 F-96-17, FLOOD PLAIN STUDY PREPARED BY AE INC. APPROVED 7-1-95.
- SEE WATER QUALITY CERTIFICATION #88-GWQC-001R AND U.S. ARMY CORP SEE PERMIT CENAB-OP-RW-90-2018-2 ORIGINALLY OBTAINED FOR THE CRESTWOOD PROJECT. THESE PERMITS HAVE BEEN EXTENDED AND REVISED.
- The Forest Conservation Easement has been established to fulfill the requirements of Section 16.1200 of the Howard County Code Forest Conservation Easement; however, forest management practices as defined in the Deed of Forest Conservation are allowed.



VICINITY MAP
SCALE: 1" = 2000'

LEGEND

- CONTOUR INTERVAL 2 FT.
- EXISTING CONTOUR [Symbol]
- PROPOSED CONTOUR [Symbol]
- DIRECTION OF DRAINAGE [Symbol]
- WALK OUT BASEMENT [Symbol]
- EXISTING SEWER MAIN [Symbol]
- EXISTING WATER MAIN [Symbol]
- EXISTING STORM DRAIN [Symbol]
- EXISTING TREES TO REMAIN [Symbol]

ENGINEER'S CERTIFICATE

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

Samuel A. G. G. G.
DATE: 6/10/96

DEVELOPER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION OF THE 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. ALSO AUTHORIZED PERSONNEL INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY.

Richard Blood
DATE: 6/10/96

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER _____ DATE _____

APPROVED: DEPARTMENT OF PLANNING & ZONING

Richard Blood
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH
DATE: 11/22/96

APPROVED: DEPARTMENT OF PUBLIC WORKS

Richard M. Rucker
CHIEF BUREAU OF HIGHWAYS
DATE: 7-24-96

SHEET INDEX

| SHT. NO. | DESCRIPTION |
|----------|-----------------------------------|
| 1 | TITLE SHEET |
| 2,3 | ROAD PLAN |
| 4,5 | LANDSCAPE AND FOREST CONSERVATION |
| 6,7 | GRADING & SEDIMENT CONTROL |
| 8,9 | DRAINAGE AREA MAP |
| 10,11 | STORM DRAIN PROFILES |
| 12 | STORM WATER MANAGEMENT PROFILES |
| 12 | STORM WATER MANAGEMENT DETAILS |
| 13 | SEDIMENT CONTROL DETAILS |
| 14 | SOILS MAP |

| | | | | | |
|-------------|-------|------|--------------|-------------|------------|
| PLAT OR L/T | BLOCK | ZONE | TAX/ZONE MAP | ELEC. DIST. | CENSUS TR. |
| | | R-20 | #1 | | #8 |
| WATER CODE | E-11 | | SEWER CODE | 5330900 | |

**FINAL CONSTRUCTION PLAN
BRITTEN/BRADY PROPERTY**

LOTS 1-58
A SUBDIVISION OF PARCEL NO. 127,151,152,786, & 783
FIRST ELECTION DISTRICT TAX MAP #31
HOWARD COUNTY, MARYLAND.

PREPARED BY:
AMERICAN LAND DEVELOPMENT AND ENGINEERING INC.
CIVIL ENGINEERING CONSULTANTS AND LAND PLANNERS
871-A MAIN STREET LAUREL, MD 20707
BELL (410) 880-3038
WASH. (202) 855-1221

DATE: 6/10/96



| NO. | DATE | DESCRIPTION | BY |
|-----|------|-------------|----|
| | | | |

B.M.S. #1: HOWARD COUNTY CONTROL STATION 31E7
N 174.448.1627 E 410.064.0001
ELEV. 113.21

B.M.S. #2: HOWARD COUNTY CONTROL STATION 31E6
N 173.206.1503 E 410.102.1004
ELEV. 114.53

This plan has been reviewed for the Howard Soil Conservation District and meets the technical requirements for small pond construction, soil erosion and sediment control.

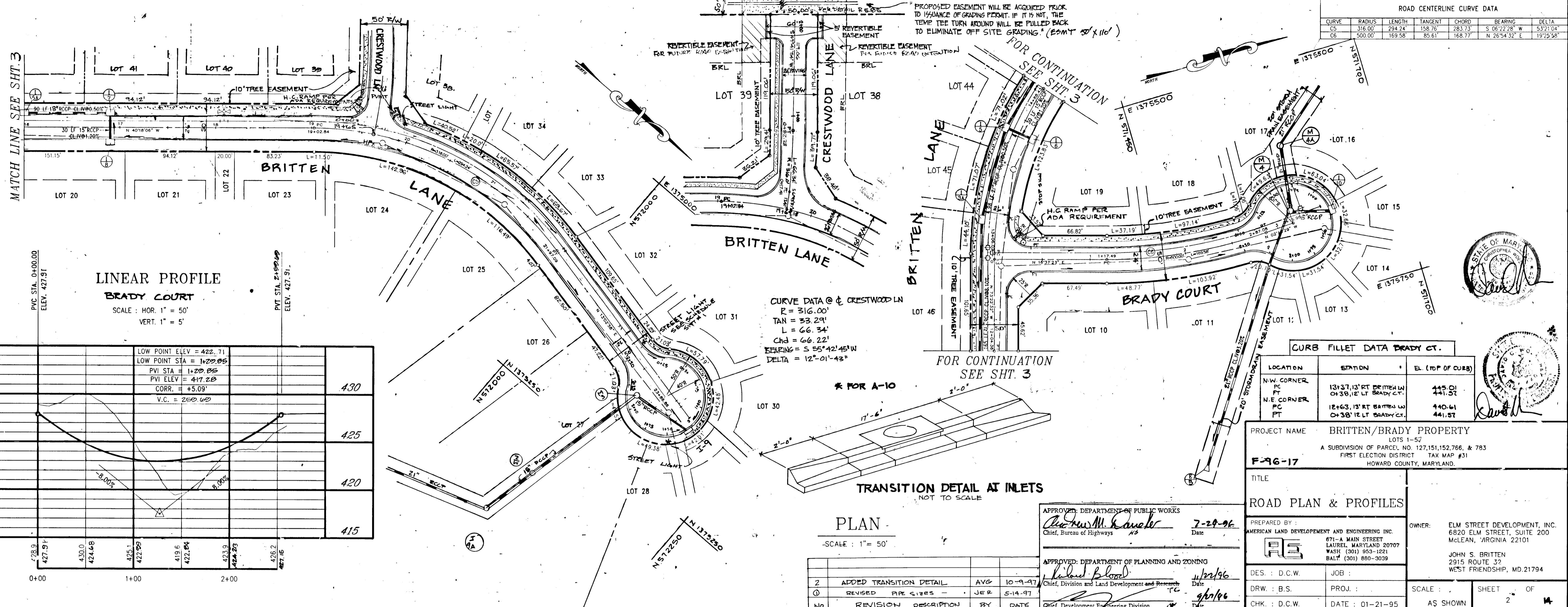
J. G. C. Hill, Jr.
DATE: 6/10/96

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

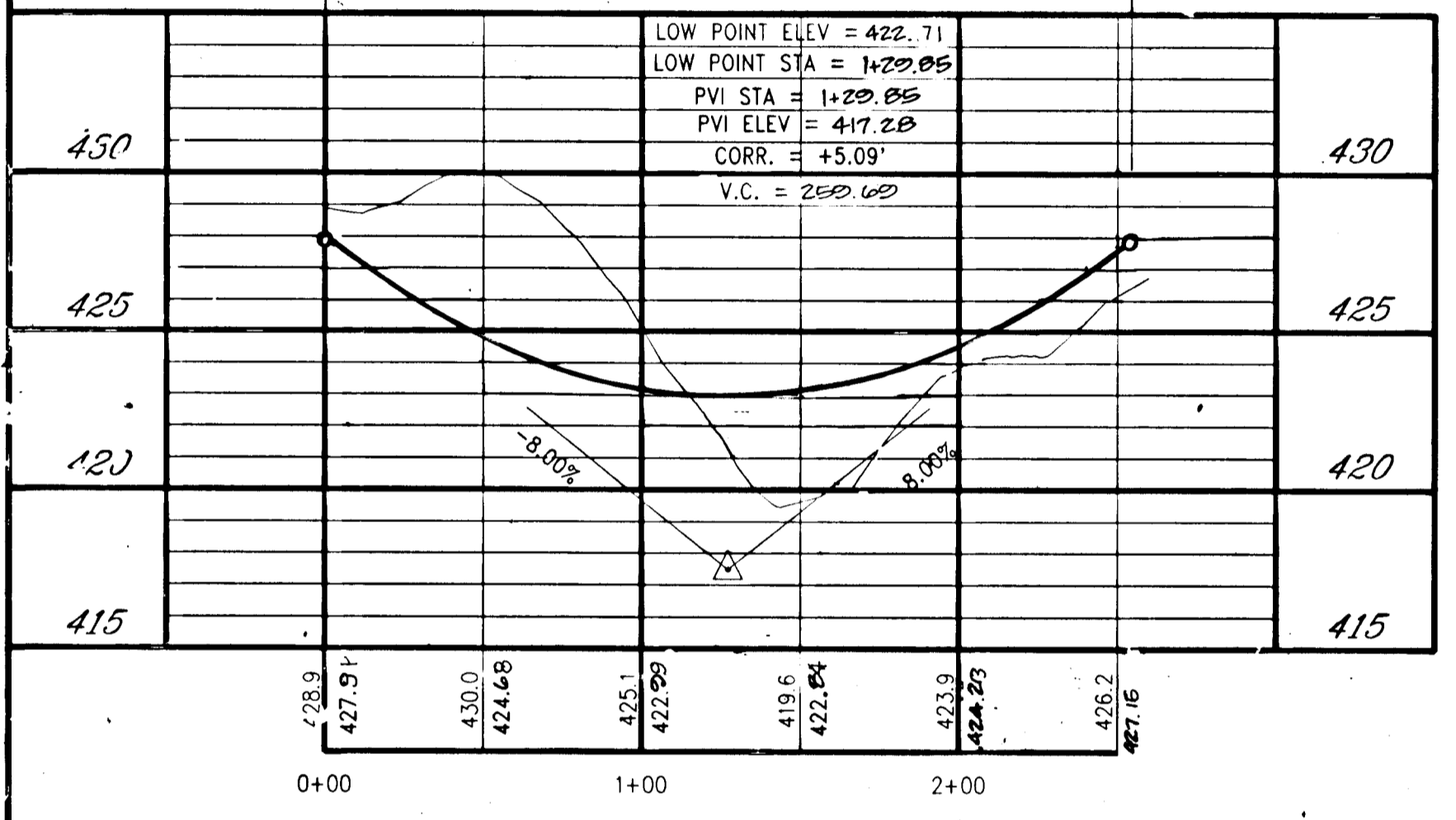
Richard M. Rucker
DATE: 6/10/96

1830

| ROAD CENTERLINE CURVE DATA | | | | | | |
|----------------------------|--------|--------|---------|--------|---------------|-----------|
| CURVE | RADIUS | LENGTH | TANGENT | CHORD | BEARING | DELTA |
| C5 | 316.00 | 294.24 | 158.76 | 283.73 | S 06°22'28" W | 53°21'04" |
| C6 | 500.00 | 169.58 | 85.61 | 168.77 | N 06°54'32" E | 19°25'58" |



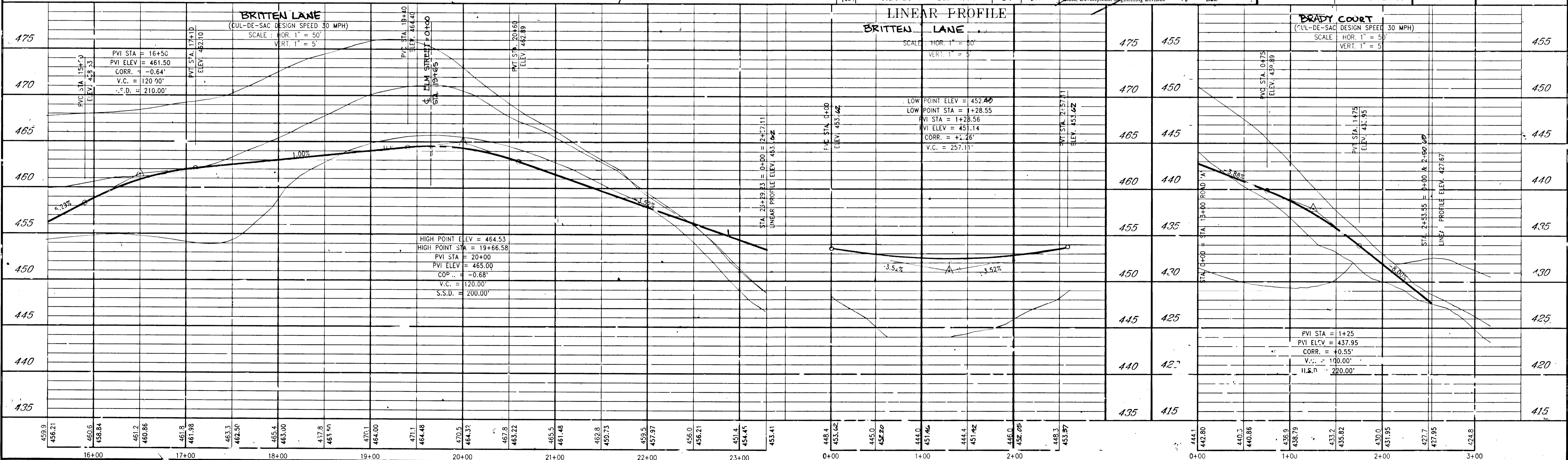
LINEAR PROFILE
 BRADY COURT
 SCALE: HOR. 1" = 50'
 VERT. 1" = 5'



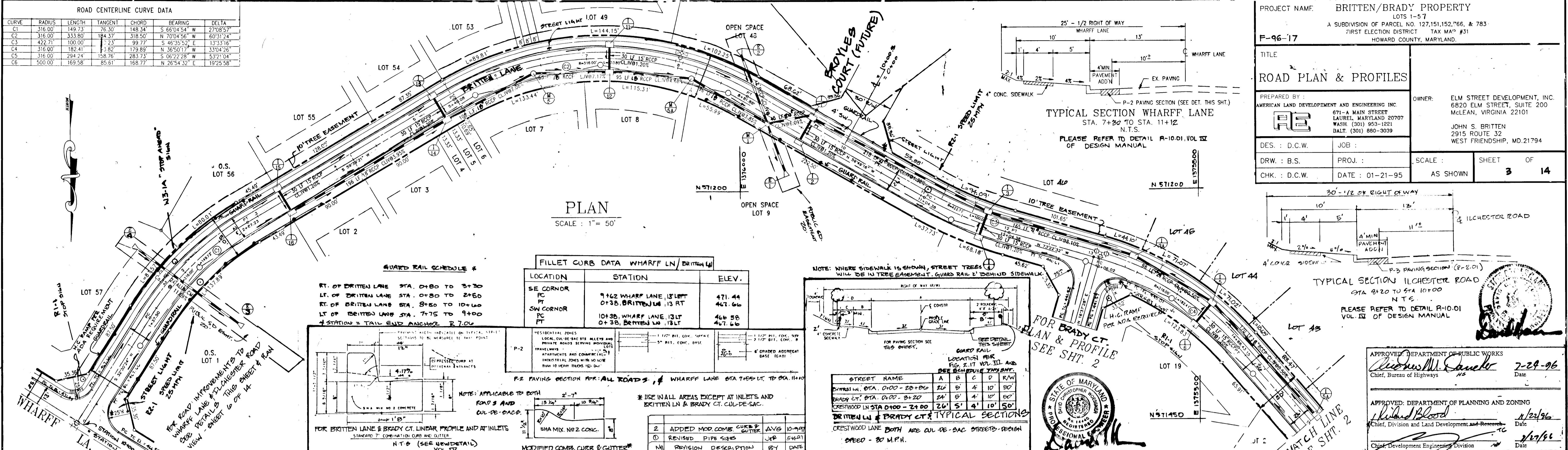
| CURB FILLET DATA BRADY CT. | | |
|----------------------------|-------------------------|-------------------|
| LOCATION | STATION | EL. (TOP OF CURB) |
| N.W. CORNER | 13+13.13' RT BRITTEN LN | 445.01 |
| PT | 0+38.12' LT BRADY CT. | 441.51 |
| N.E. CORNER | 12+63.13' RT BRITTEN LN | 440.61 |
| PT | 0+38.12' LT BRADY CT. | 441.51 |

| | | | |
|--------------|----------------|-----------|----------|
| DES.: D.C.W. | JOB: | SCALE: | SHEET OF |
| DRW.: B.S. | PROJ.: | A/S SHOWN | 2 OF 4 |
| CHK.: D.C.W. | DATE: 01-21-95 | | |

1330



| CURVE | RADIUS | LENGTH | TANGENT | CHORD | BEARING | DELTA |
|-------|--------|--------|---------|--------|---------------|-----------|
| C1 | 316.00 | 149.73 | 76.30 | 148.34 | S 66°04'54" W | 27°08'57" |
| C2 | 316.00 | 333.80 | 184.37 | 318.50 | N 70°04'56" W | 60°31'24" |
| C3 | 422.71 | 100.00 | 11.23 | 99.77 | S 46°35'53" E | 13°33'16" |
| C4 | 316.00 | 182.41 | 91.82 | 179.89 | N 36°50'11" W | 33°04'28" |
| C5 | 316.00 | 294.24 | 158.76 | 283.73 | S 06°22'28" W | 53°21'04" |
| C6 | 500.00 | 169.58 | 85.61 | 168.77 | N 26°54'32" E | 19°25'58" |



PROJECT NAME: BRITTEN/BRADY PROPERTY
LOTS 1-57
A SUBDIVISION OF PARCEL NO. 127,151,152,766, & 783
FIRST ELECTION DISTRICT TAX MAP #31
HOWARD COUNTY, MARYLAND.

F-96-17

TITLE: ROAD PLAN & PROFILES

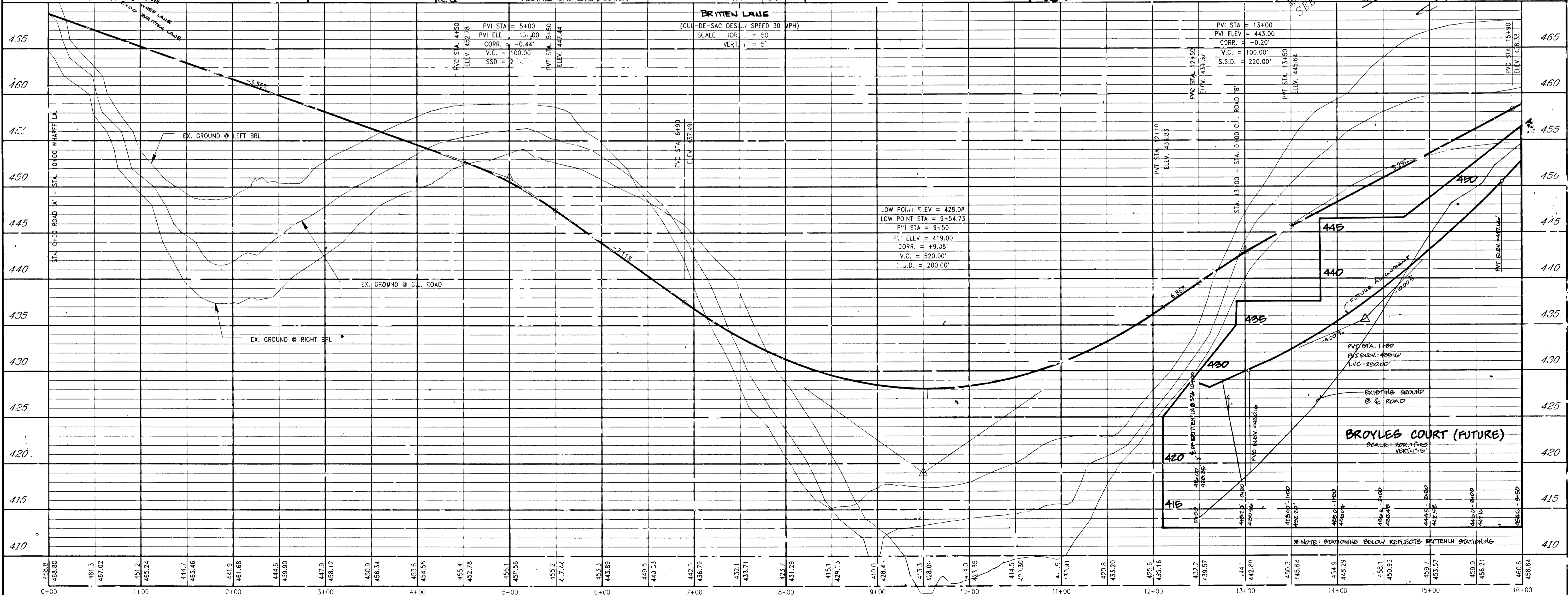
PREPARED BY: AMERICAN LAND DEVELOPMENT AND ENGINEERING, INC.
771-A MAIN STREET
LAUREL, MARYLAND 20707
WASH. (301) 953-1221
DALT. (301) 880-3039

OWNER: ELM STREET DEVELOPMENT, INC.
6820 ELM STREET, SUITE 200
MCLEAN, VIRGINIA 22101

DES.: D.C.W. JOB: JOHN S. BRITTEN
2915 ROUTE 32
WEST FRIENDSHIP, MD. 21794

DRW.: B.S. PROJ.: SCALE: AS SHOWN SHEET 3 OF 14

CHK.: D.C.W. DATE: 01-21-95



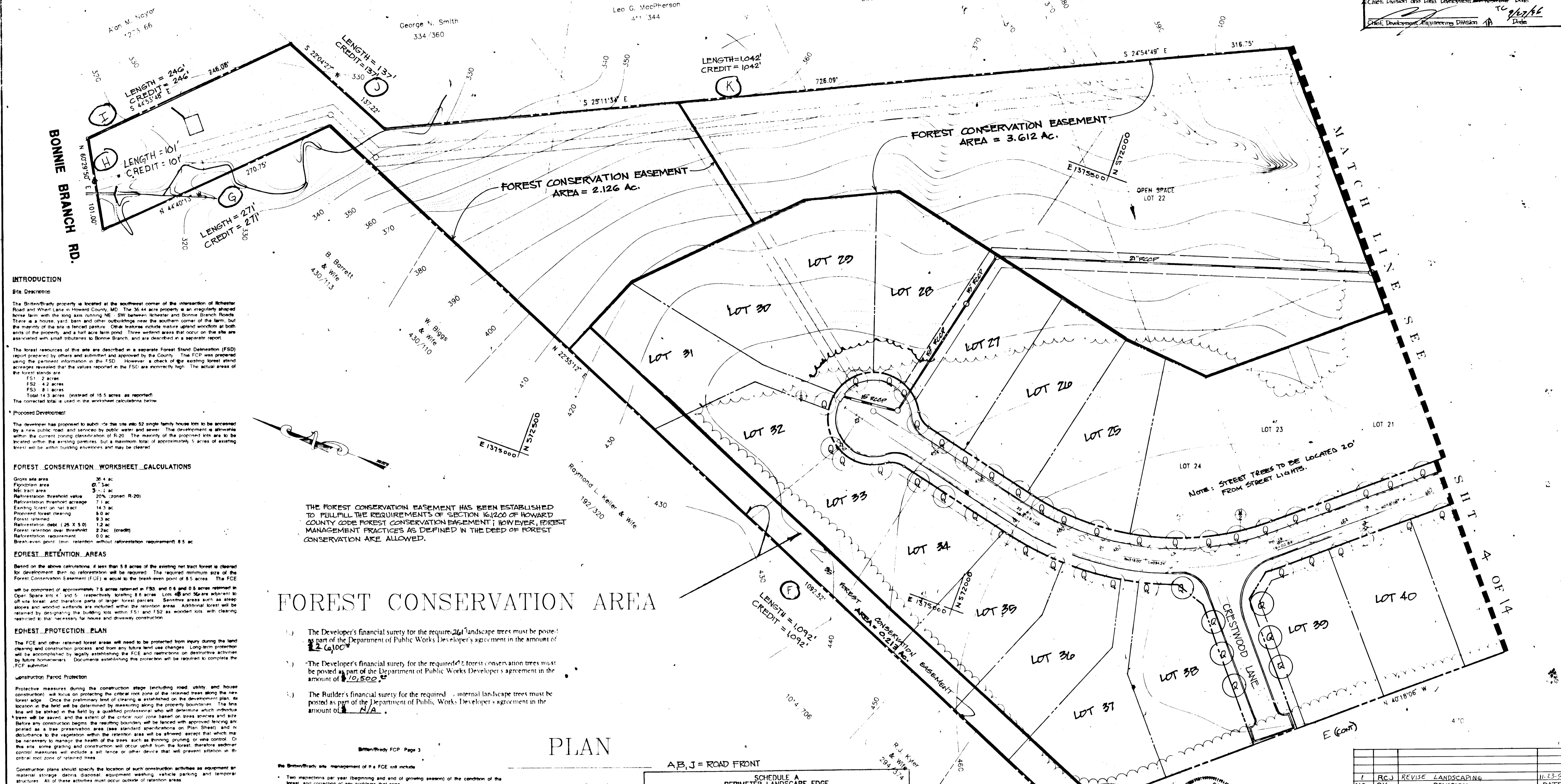
1830

FOREST CONSERVATION AREA

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard H. Bunker 2-26-96
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Richard B. Blood 4/22/96
 Chief, Division and Land Development and Resources Date

TC 9/27/96
 Chief, Development Engineering Division Date



INTRODUCTION
 Site Description
 The Britten/Brady property is located at the southwest corner of the intersection of Ichester Road and Wheel Lane in Howard County, MD. The 36.44 acre property is an irregularly shaped horse farm with the long axis running NE-SW between Ichester and Bonnie Branch Roads. There is a house, yard barn and other outbuildings near the southern corner of the farm, but the majority of the site is fenced pasture. Other features include mature upland woodlots at both ends of the property and a half-acre farm pond. Three wetland areas that occur on the site are associated with small tributaries to Bonnie Branch, and are described in a separate report.

The forest resources of the site are described in a separate Forest Stand Delineation (FSD) report prepared by others and submitted and approved by the County. The FSD was prepared using the pertinent information in the FSD. However, a check of the existing forest stand acreages revealed that the values reported in the FSD are incorrectly high. The actual areas of the forest stands are:

- F51: 2 acres
- F52: 4.2 acres
- F53: 8.1 acres
- Total: 14.3 acres (instead of 15.5 acres as reported)

The corrected total is used in the worksheet calculations below.

Proposed Development
 The developer has proposed to subdivide the site into 52 single family house lots to be accessed by a new public road and serviced by public water and sewer. The development is allowable within the current zoning classification of R-20. The majority of the proposed lots are to be located within the existing pastures, but a maximum total of approximately 5 acres of existing forest will be within building envelopes and may be cleared.

FOREST CONSERVATION WORKSHEET CALCULATIONS

| | |
|---|------------------|
| Gross site area | 36.4 ac |
| Forest area | 14.3 ac |
| Net tract area | 22.1 ac |
| Restoration threshold value | 20% (based R-20) |
| Restoration threshold acreage | 7.1 ac |
| Existing forest on net tract | 14.3 ac |
| Proposed forest clearing | 8.0 ac |
| Forest retained | 9.3 ac |
| Restoration debt (25 X 5.0) | 1.2 ac |
| Forest retention debt threshold | 2.2 ac (credit) |
| Restoration requirement | 0.0 ac |
| Break-even point (min. retention without restoration requirement) | 8.5 ac |

FOREST RETENTION AREAS
 Based on the above calculations, if less than 8.5 acres of the existing net tract forest is cleared for development, then no restoration will be required. The required minimum size of the Forest Conservation Easement (FCE) is equal to the break-even point of 8.5 acres. The FCE will be comprised of approximately 7.5 acres retained in F53 and 0.6 and 0.5 acres retained in Open Space lots 4 and 5, respectively totaling 8.6 acres. Lots 4 and 5 are adjacent to off-site forest and therefore parts of their forest parcels, such as steep slopes and wooded wetlands are included within the retention areas. Additional forest will be retained by designating the building lots within F51 and F52 as wooded lots with clearing restricted to that necessary for house and driveway construction.

FOREST PROTECTION PLAN
 The FCE and other retained forest areas will need to be protected from injury during the land clearing and construction process and from any future land use changes. Long-term protection will be accomplished by legally establishing the FCE and restrictions on destructive activities by future homeowners. Documenting this protection will be required to complete the FCP submittal.

Construction Period Protection
 Protective measures during the construction stage (including road utility and house construction) will focus on protecting the critical root zone of the retained trees along the new forest edge. Once the preliminary limit of clearing is established on the development plan, its location in the field will be determined by measuring along the property boundaries. The line line will be staked in the field by a qualified professional who will determine which individual trees will be saved and the extent of the critical root zone based on trees species and size. Before any construction begins, the resulting boundary will be fenced with approved fencing and no disturbance to the vegetation within the retention area will be allowed, except that which may be necessary to maintain the health of the trees, such as thinning, pruning or pest control. On this site, some grading and construction will occur uphill from the forest, therefore sediment control measures will include a silt fence or other device that will prevent siltation in the critical root zone of retained trees.

Construction plans should specify the location of such construction activities as equipment or material storage, debris disposal, equipment washing, vehicle parking, and temporary structures. All of these activities must occur outside of retention areas.

Construction Monitoring
 A qualified professional familiar with the FCP will conduct regular site inspections during construction to assure compliance with the forest protection plan and maintenance, fencing and signage.

Certification of Completion
 At the completion of construction, a qualified professional will prepare and submit Certification of Completion to the administrator of the Howard County Forest Conservation Program. This certifies that all forest retention areas have been preserved and that protection measures required for the post-construction period have been implemented.

TWO-YEAR POST-CONSTRUCTION MANAGEMENT PROGRAM
 Howard County requires the developer to commit to a minimum of two years of responsibility for the management of the FCE. The program must be reviewed by a qualified professional at the beginning of the construction Certification of Completion by the County. F

THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF HOWARD COUNTY CODE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION ARE ALLOWED.

FOREST CONSERVATION AREA

- The Developer's financial surety for the required landscape trees must be posted as part of the Department of Public Works Developer's agreement in the amount of \$2,600.
- The Developer's financial surety for the required forest conservation trees must be posted as part of the Department of Public Works Developer's agreement in the amount of \$10,500.
- The Builder's financial surety for the required internal landscape trees must be posted as part of the Department of Public Works Developer's agreement in the amount of N/A.

PLAN

A, B, J = ROAD FRONT
 SCALE: 1" = 50'

| SCHEDULE A PERIMETER LANDSCAPE EDGE | | |
|---|---|---|
| CATEGORY | ADJACENT TO ROADWAY'S PERIMETER (A, B, H) | ADJACENT TO FUTURE PROPERTIES PERIMETER (C, G, I, J, K) |
| LANDSCAPE TREE | N/A | 6016' |
| LINEAR FEET OF ROADWAY FRONTAGE PERIMETER | 240' | 313' |
| CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED) | 101' | 5029' |
| CREDIT FOR WALL FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED) | - | - |
| NUMBER OF PLANTS REQUIRED | | |
| SHADE TREES | 0 | 4 |
| EVERGREEN TREES | 0 | 5 |
| SHRUBS | 0 | 0 |
| NUMBER OF PLANTS PROVIDED | | |
| SHADE TREES | 0 | 4 |
| EVERGREEN TREES | 0 | 5 |
| OTHER TREES (2:1 SUBSTITUTE SHRUBS (10:1 SUBSTITUTE)) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED) | 0 | 0 |

| SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING | |
|---|--------------------------|
| LINEAR FEET OF PERIMETER | NUMBER OF TREES REQUIRED |
| 1040' | 1040 |
| (5 SHADE) | 21 (32 M) |
| EVERGREEN TREES | 26 |
| CREDIT FOR EXISTING VEGETATION (NO, YES AND M) | - |
| CREDIT FOR OTHER LANDSCAPING (NO, YES AND M) | - |
| NUMBER OF TREES PROVIDED | |
| SHADE TREES | 5 |
| EVERGREEN TREES | 58 |
| OTHER TREES (2:1 SUBSTITUTE) | 0 |

PROJECT NAME: BRITTEN BRADY PROPERTY
 LOTS 1-57
 A SUBDIVISION OF PARCEL NO. 127,151,152,766, & 783
 FIRST ELECTION DISTRICT TAX MAP #31
 HOWARD COUNTY, MARYLAND

F-96-17

DATE: 11-23-98

OWNER: ELM STREET DEVELOPMENT, INC.
 6820 ELM STREET, SUITE 200
 MCLEAN, VIRGINIA 22101

OWNER: JOHN S. BRITTEN
 2915 ROUTE 32
 WEST FRIENDSHIP, MD. 21194

DESIGNER: D.C.W. JOB: FOREST CONSERVATION AND LANDSCAPE PLAN
 DRAWN BY: B.S. PROJ.:
 CHECKED BY: D.C.W. DATE: 01-21-95

SCALE: 1" = 50'
 SHEET: 5 OF 14

1830

F-96-17

SEQUENCE OF CONSTRUCTION

1. Obtain grading permit and install tree protection fencing. **1 WEEK**
2. Install stabilized construction entrance. **1 DAY**
3. **INSTALL SUPER-SILT FENCE UPSTREAM AND DOWNSTREAM OF E1-E2-E3-E4 1 WEEK**
4. **SEE BELOW.**
5. Dewater existing pond. **2 DAYS**
6. Install silt fence downstream of proposed SWM pond and construct pond. Brick up inlet structure low flow weir to elevation (per 11) **INSTALL CLEAR WATER DIVERSION E-2 TO M-4 SWM facility will serve as temporary sediment basin until all areas draining to the pond are sod seeding and stabilized. 1 WEEK**
7. Install all other sediment control devices, especially SDF at E-9 AND E-2. **1 WEEK**
8. After obtaining approval from Sediment Control Inspector, clear and grub per plan. **3 WEEKS**
9. Grade and construct roads, storm drains, and utilities per plans. Place inlet protection on inlets per detail on sheet 13, of 14. **6 WEEKS**
10. After sub-base for the road are installed, remove stabilized construction entrance. **1 DAY**
11. Inspect each sediment control device daily, and after each rainfall. Sediment shall be removed from traps when the cleanout elevation has been reached.
12. Complete site grading per plan. **6 WEEKS**
13. Stabilize all disturbed areas with permanent seeding mixture per plan. **6 WEEKS**
14. When road construction is complete, with the approval of Sediment Control Inspector remove Traps No. 2 and 3 along with the associated dikes. Silt fence will then be placed at toe of all fill slopes created during the grading operation. **1 WEEK**
15. After all areas are sod, seeded and stabilized, with permission from the Sediment Control Inspector, remove all sediment control devices. Convert the Sediment Trap No. 1 as a SWM facility per plans. Remove block and low flow weir. **1 WEEK**
16. All areas disturbed during the removal of the sediment control devices shall be sod, seeded with permanent seeding. **1 WEEK**

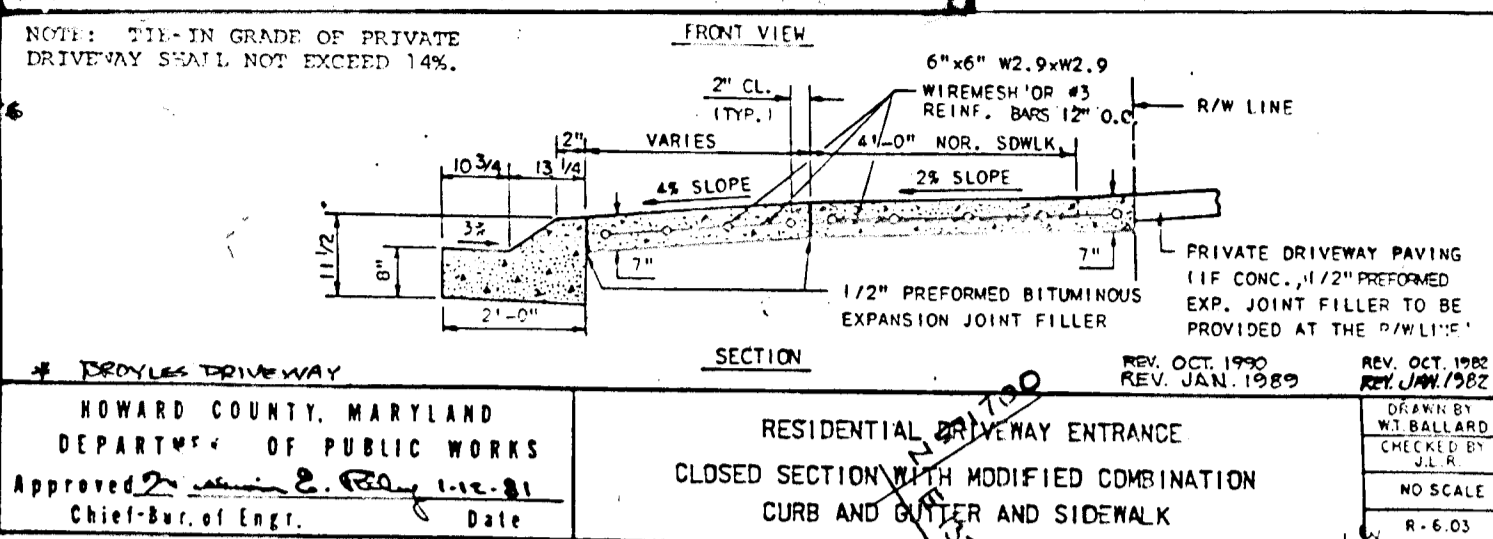
These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.

USDA-Natural Resources Conservation Service Date

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

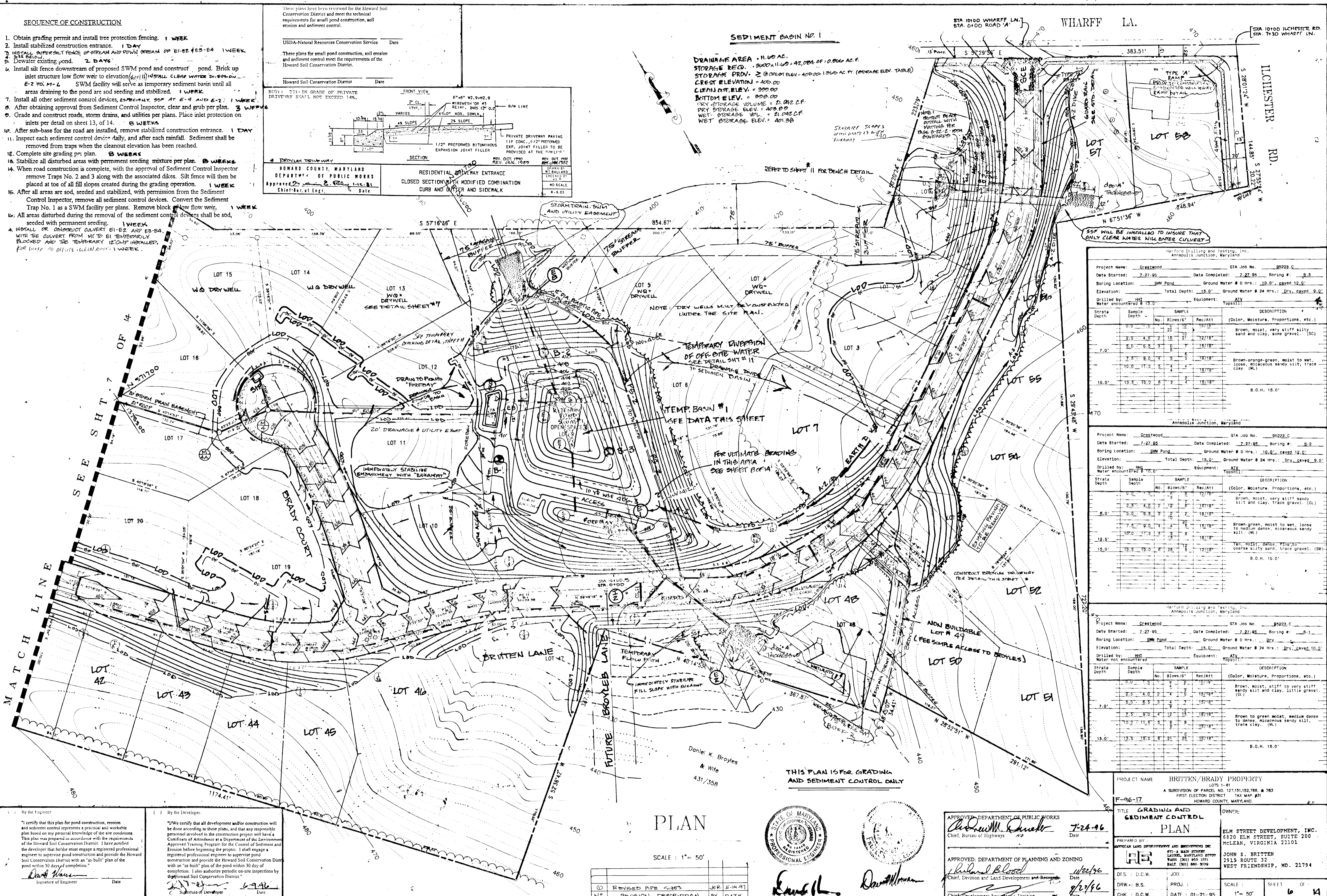
NOTE: 2'-11" IN GRADE OF PRIVATE DRIVEWAY SHALL NOT EXCEED 14%.



RESIDENTIAL DRIVEWAY ENTRANCE
CLOSED SECTION WITH MODIFIED COMBINATION CURB AND GUTTER AND SIDEWALK

SEDIMENT BASIN NO. 1

DRAINAGE AREA = 11.10 AC.
STORAGE REQ. = 3,000 x 11.10 = 47,000 GALS OF 0.004 AC.F.
STORAGE PROD. ≥ @ CREST ELEV. 405.00 13,650 GALS (ORAGE ELEV. TABLE)
CREST ELEVATION = 405.00
CLEANOUT ELEV. = 399.00
BOTTOM ELEV. = 399.00
DRY STORAGE VOLUME = 21,042 C.F.
WET STORAGE VOL. = 21,042 C.F.
WET STORAGE ELEV. = 401.38



Project Name: Crestwood
Date Started: 7-27-95
Boring Location: SWM Pond
Elevation: 16.0'
Drilled by: JHI
Water encountered @ 13.0'

| Strata Depth | SAMPLE | | Rec/Att | DESCRIPTION |
|--------------|--------|----------|---------|--|
| | No. | Blows/6" | | |
| 0.0' | 1 | 12 | 12/18" | Brown, moist, very stiff silty sand and clay, some gravel. (SC) |
| 2.5' | 4 | 16 | 12/18" | |
| 5.0' | 6 | 18 | 15/18" | Brown-orange-green, moist to wet, loose, micaceous sandy silt, trace clay. (M) |
| 7.5' | 8 | 20 | 18/18" | |
| 10.0' | 11 | 24 | 18/18" | B.O.H. 15.0' |
| 15.0' | 13 | 28 | 18/18" | |

Project Name: Crestwood
Date Started: 7-27-95
Boring Location: SWM Pond
Elevation: 15.0'
Drilled by: JHI
Water encountered @ 10.0'

| Strata Depth | SAMPLE | | Rec/Att | DESCRIPTION |
|--------------|--------|----------|---------|--|
| | No. | Blows/6" | | |
| 0.0' | 8 | 12 | 12/18" | Brown, moist, very stiff sandy silt and clay, trace gravel. (CL) |
| 2.5' | 12 | 18 | 18/18" | |
| 5.0' | 16 | 24 | 18/18" | Brown-green, moist to wet, loose to medium dense, micaceous sandy silt. (ML) |
| 7.5' | 20 | 28 | 18/18" | |
| 10.0' | 24 | 32 | 18/18" | Tan, moist, dense, fine to coarse silty sand, trace gravel. (SM) |
| 15.0' | 28 | 36 | 18/18" | |

Project Name: Crestwood
Date Started: 7-27-95
Boring Location: SWM Pond
Elevation: 15.0'
Drilled by: JHI
Water not encountered

| Strata Depth | SAMPLE | | Rec/Att | DESCRIPTION |
|--------------|--------|----------|---------|---|
| | No. | Blows/6" | | |
| 0.0' | 4 | 8 | 18/18" | Brown, moist, stiff to very stiff sandy silt and clay, little gravel. (CL) |
| 2.5' | 8 | 16 | 18/18" | |
| 5.0' | 12 | 24 | 18/18" | Brown to green moist, medium dense to dense, micaceous sandy silt, trace clay. (ML) |
| 7.5' | 16 | 32 | 18/18" | |
| 10.0' | 20 | 40 | 18/18" | B.O.H. 15.0' |
| 15.0' | 24 | 48 | 18/18" | |

PROJECT NAME: BRITTON/BRADY PROPERTY
LOTS 1-51
A SUBDIVISION OF PARCEL NO. 127,151,152,786, & 783
FIRST ELECTION DISTRICT: TAX MAP #31
HOWARD COUNTY, MARYLAND

TITLE: GRADING AND SEDIMENT CONTROL PLAN

OWNER: ELM STREET DEVELOPMENT, INC. 5820 ELM STREET, SUITE 200 MCLAREN, VIRGINIA 22101

PREPARED BY: JOHN S. BRITTON 2915 ROUTE 32 WEST FRIENDSHIP, MD. 21194

APPROVED: DEPARTMENT OF PUBLIC WORKS
Date: 7-24-96

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Date: 11/22/96

DATE: 01-21-95

SCALE: 1" = 50'

SHEET 6 OF 14

By the Engineer: David H. Hines, 6-9-96

By the Developer: [Signature], 6-9-96

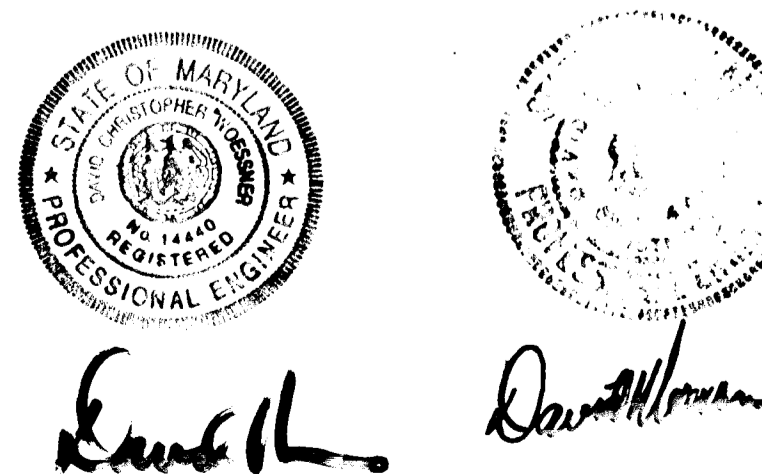
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have justified the developer 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."

"I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of 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. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

PLAN

SCALE: 1" = 50'

| NO. | REVISION DESCRIPTION | BY | DATE |
|-----|----------------------|-----|---------|
| 1 | REVISED PIPE SIZES | JER | 5-14-91 |



Daniel K. Broyles & Wife
431/358

THIS PLAN IS FOR GRADING AND SEDIMENT CONTROL ONLY

1330

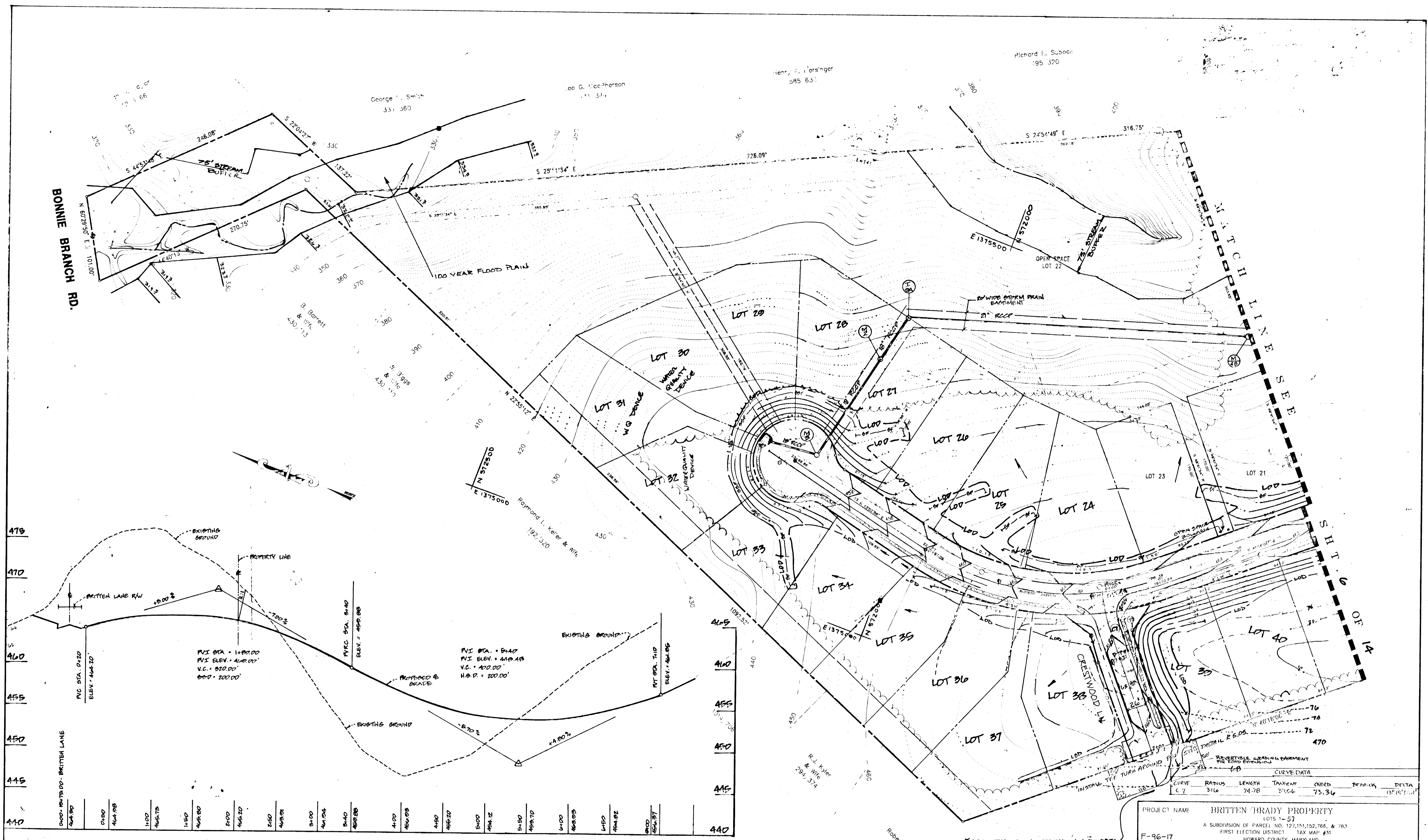
F-96-17

BONNIE BRANCH RD.

Richard L. Subock
195 370

Henry A. Hersinger
885 651

George L. Smith
331 360



LINEAR PROFILE - CRESTWOOD LN. (FUTURE)

SCALE: HORIZ. = 1" = 50', VERT. = 1" = 5'

"I 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."

Robert E. Blodgett
GDRK
Supervisor of Engineers

"I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of 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. I also authorize periodic on-site inspections by the Howard Soil Conservation District."

Robert E. Blodgett
6996
Date

| NO. | REVISIONS | DATE | BY | DATE |
|-----|--------------------|------|-----|---------|
| 1 | REVISED PIRE SIZES | | JER | 5-14-97 |
| 2 | DESCRIPTION | | BY | DATE |

APPROVED: DEPARTMENT OF PUBLIC WORKS
Robert M. Cauley 7-24-96
Chief, Bureau of Highways

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Richard Blodgett 11/22/96
Chief, Division of Land Development and Research

PROJECT NAME: BRITTEN/BRADY PROPERTY
LOTS 1-57
A SUBDIVISION OF PARCEL NO. 127,151,152,766, & 783
FIRST ELECTION DISTRICT TAX MAP #31
HOWARD COUNTY, MARYLAND.

TITLE: GRADING, SEDIMENT CONTROL & LINEAR ROAD PROFILE PLAN

PREPARED BY: AMERICAN LAND DEVELOPMENT AND ENGINEERING, INC.
671-A MAIN STREET
LAUREL, MARYLAND 20707
PHONE: (301) 950-1221
FAX: (301) 950-3000

ELM STREET DEVELOPMENT, INC.
6870 ELM STREET, SUITE 200
MCLEAN, VIRGINIA 22101

JOHN S. BRITTEN
2515 ROUTE 32
W107 FFF31MDE31P, MD. 21784

DATE: 01-21-95

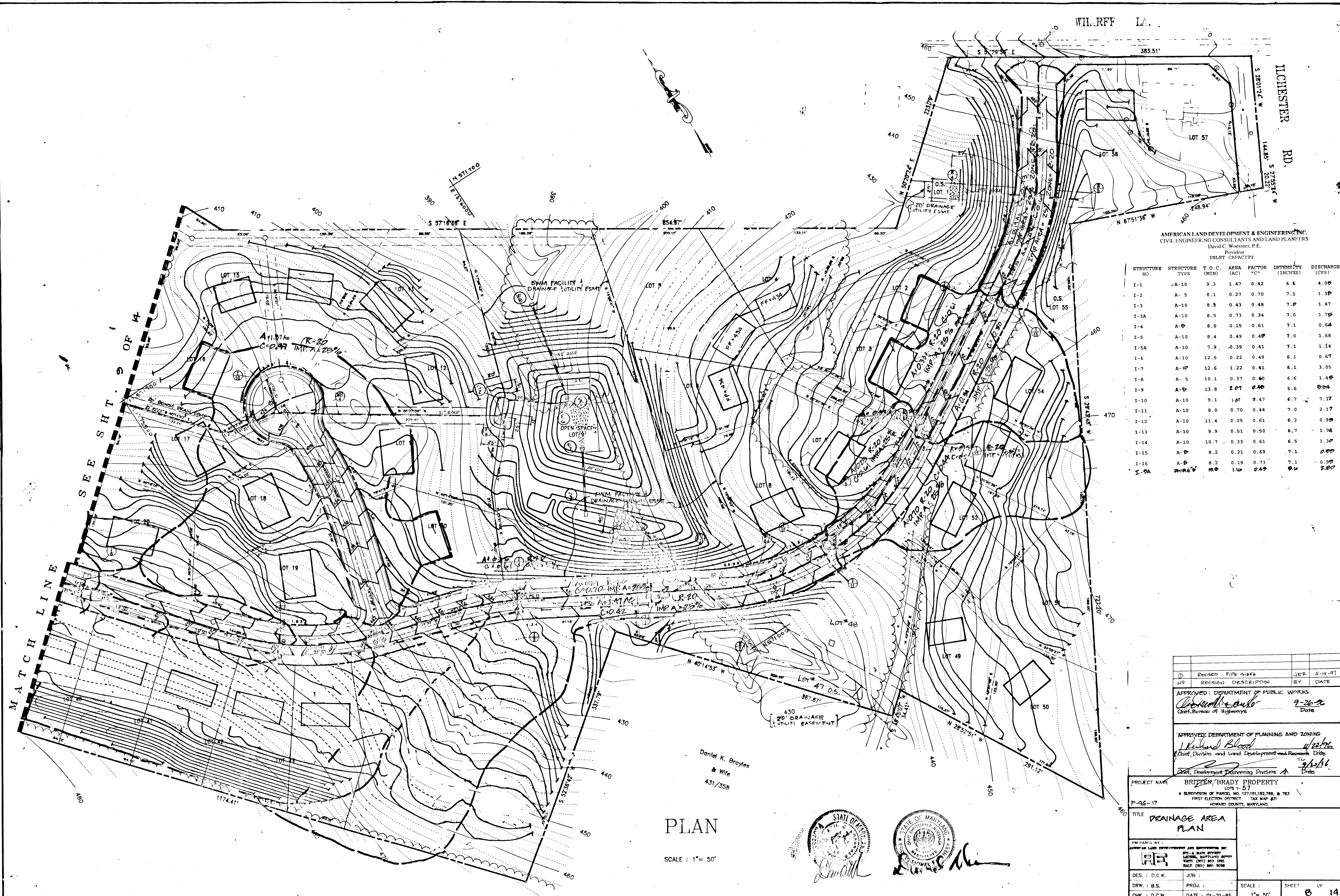
SCALE: 1" = 50'

SHEET: 1 OF 14

1320

1320

1830



AMERICAN LAND DEVELOPMENT & ENGINEERING, INC.
 CIVIL ENGINEERING CONSULTANTS AND LAND PLANNERS
 President
 David C. Woessner, P.E.

| STRUCTURE NO. | STRUCTURE TYPE | T.O.C. (MIN) | AREA (AC) | FACTOR °C | INTENSITY (INCHES) | DISCHARGE (CFS) |
|---------------|----------------|--------------|-----------|-----------|--------------------|-----------------|
| I-1 | A-10 | 9.3 | 1.47 | 0.42 | 6.6 | 4.00 |
| I-2 | A-5 | 8.1 | 0.27 | 0.70 | 7.1 | 1.30 |
| I-3 | A-10 | 8.3 | 0.43 | 0.48 | 7.0 | 1.47 |
| I-3A | A-10 | 8.5 | 0.73 | 0.34 | 7.0 | 1.70 |
| I-4 | A-5 | 8.0 | 0.15 | 0.61 | 7.1 | 0.64 |
| I-5 | A-10 | 8.4 | 0.49 | 0.49 | 7.0 | 1.68 |
| I-5A | A-10 | 7.9 | -0.39 | 0.41 | 7.1 | 1.14 |
| I-6 | A-10 | 12.5 | 0.22 | 0.49 | 6.1 | 0.67 |
| I-7 | A-10 | 12.6 | 1.22 | 0.41 | 6.1 | 3.05 |
| I-8 | A-5 | 10.1 | 0.37 | 0.60 | 6.6 | 1.40 |
| I-9 | A-5 | 13.8 | 2.07 | 0.40 | 5.6 | 0.94 |
| I-10 | A-10 | 9.1 | 1.07 | 0.47 | 6.7 | 7.37 |
| I-11 | A-10 | 8.0 | 0.70 | 0.44 | 7.0 | 2.17 |
| I-12 | A-10 | 11.4 | 0.25 | 0.61 | 6.2 | 0.90 |
| I-13 | A-10 | 9.9 | 0.51 | 0.50 | 6.7 | 1.74 |
| I-14 | A-10 | 10.7 | 0.33 | 0.61 | 6.5 | 1.30 |
| I-15 | A-5 | 8.2 | 0.21 | 0.69 | 7.1 | 0.80 |
| I-16 | A-5 | 8.2 | 0.19 | 0.73 | 7.1 | 0.80 |
| I-20A | DOUBLE | 10.0 | 1.10 | 0.40 | 6.0 | 2.00 |

| NO. | REVISION DESCRIPTION | BY | DATE |
|-----|----------------------|-----|---------|
| 1 | REVISED PIPE SIZES | JER | 5-14-97 |

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard Blood 9-26-98
 Chief, Bureau of Highways Date

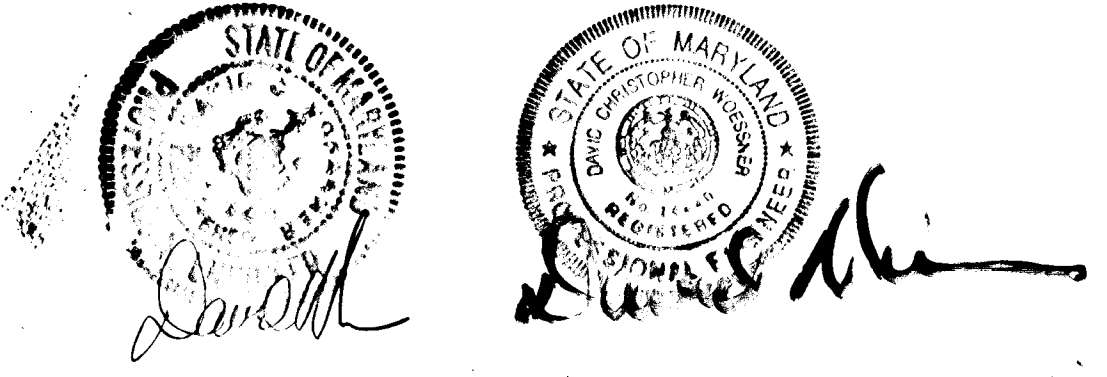
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Richard Blood 4/22/96
 Chief, Division and Land Development and Research Date

PROJECT NAME: BRITISH BRADY PROPERTY
 LOTS 1-57
 A SUBDIVISION OF PARCEL NO. 127,151,152,786, & 783
 FIRST ELECTION DISTRICT TAX MAP #31
 HOWARD COUNTY, MARYLAND.

TITLE: DRAINAGE AREA PLAN
 PREPARED BY: [Signature]
 DES.: D.C.W. JOB: [Blank]
 DRW.: B.S. PROJ.: [Blank]
 CHK.: D.C.W. DATE: 01-21-95 SCALE: 1" = 50' SHEET 8 OF 14

PLAN

SCALE: 1" = 50'



Daniel K. Broyles
 & Wife
 431/358

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard E. Subock 0-26-96
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Richard Blood 11/22/96
 Chief, Division and Lead Development and Planning Date

1/2/96
 Chief, Development Engineering Division Date

Richard E. Subock
 495/320

Henry A. Mersinger
 585/634

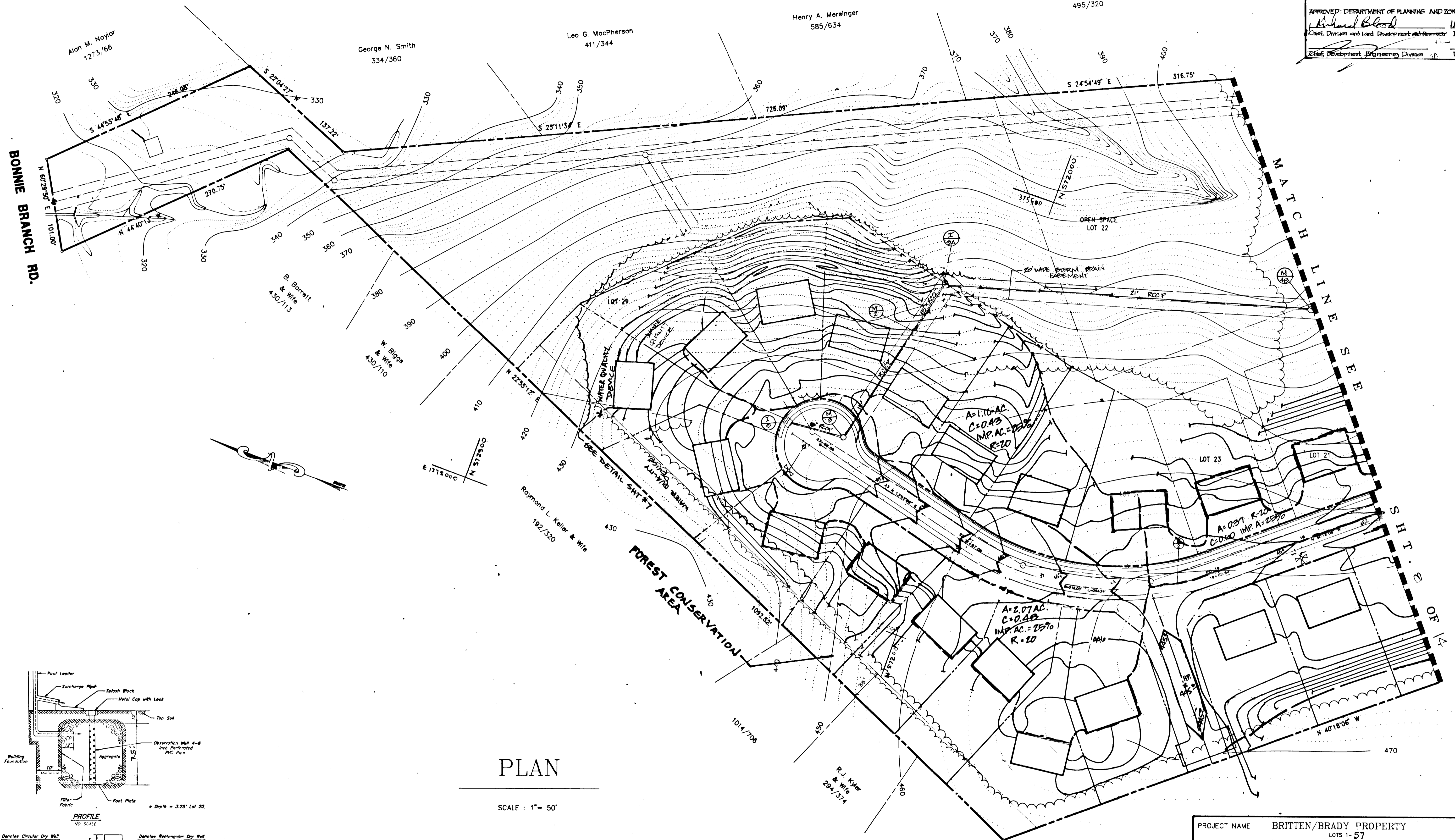
Leo G. MacPherson
 411/344

George N. Smith
 334/360

Alan M. Naylor
 1275/66

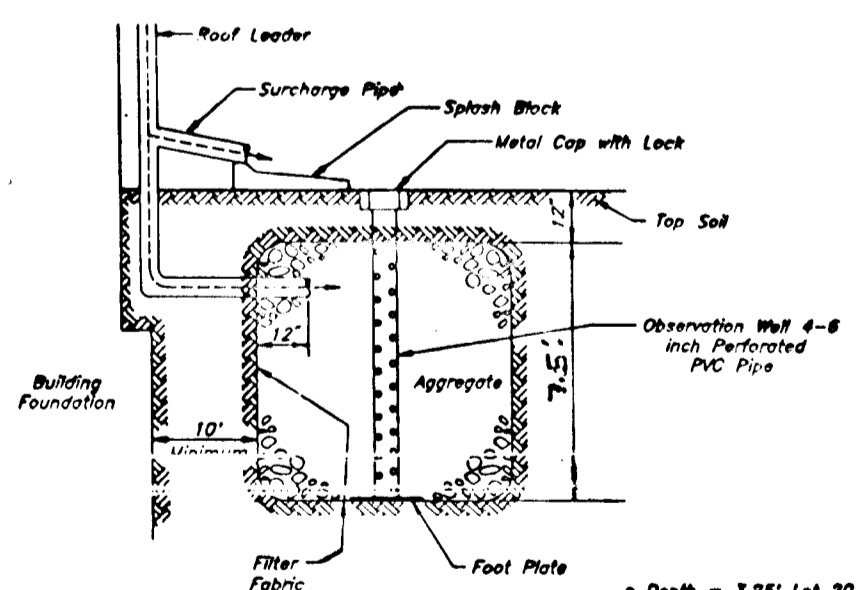
BONNIE BRANCH RD.

MATCH LINE SEE SHEET OF 14

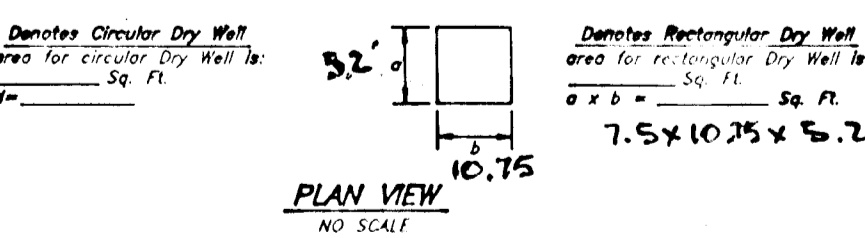


PLAN

SCALE: 1" = 50'



PROFILE NO SCALE



PLAN VIEW NO SCALE

TYPICAL DRY WELL CROSS SECTION (TO BE CONSTRUCTED AS PART OF SITE DEVELOPMENT PLAN) INfiltration MANUAL NOT TO SCALE

| LOT No. | AREA REQUIRED | AREA PROVIDED |
|-------------------|---------------|---------------|
| 4, 12, 13, 24, 31 | 470 sq. ft. | 470 sq. ft. |

PROJECT NAME: BRITTEN/BRADY PROPERTY
 LOTS 1-57
 A SUBDIVISION OF PARCEL NO. 127,151,152,766, & 783
 FIRST ELECTION DISTRICT TAX MAP #31
 HOWARD COUNTY, MARYLAND.

F-96-17

TITLE: DRAINAGE AREA PLAN

PREPARED BY: AMERICAN LAND DEVELOPMENT AND ENGINEERING INC.
 671-A MAIN STREET
 LAUREL, MARYLAND 20707
 WASH. (301) 963-1221
 BALT. (301) 880-3030

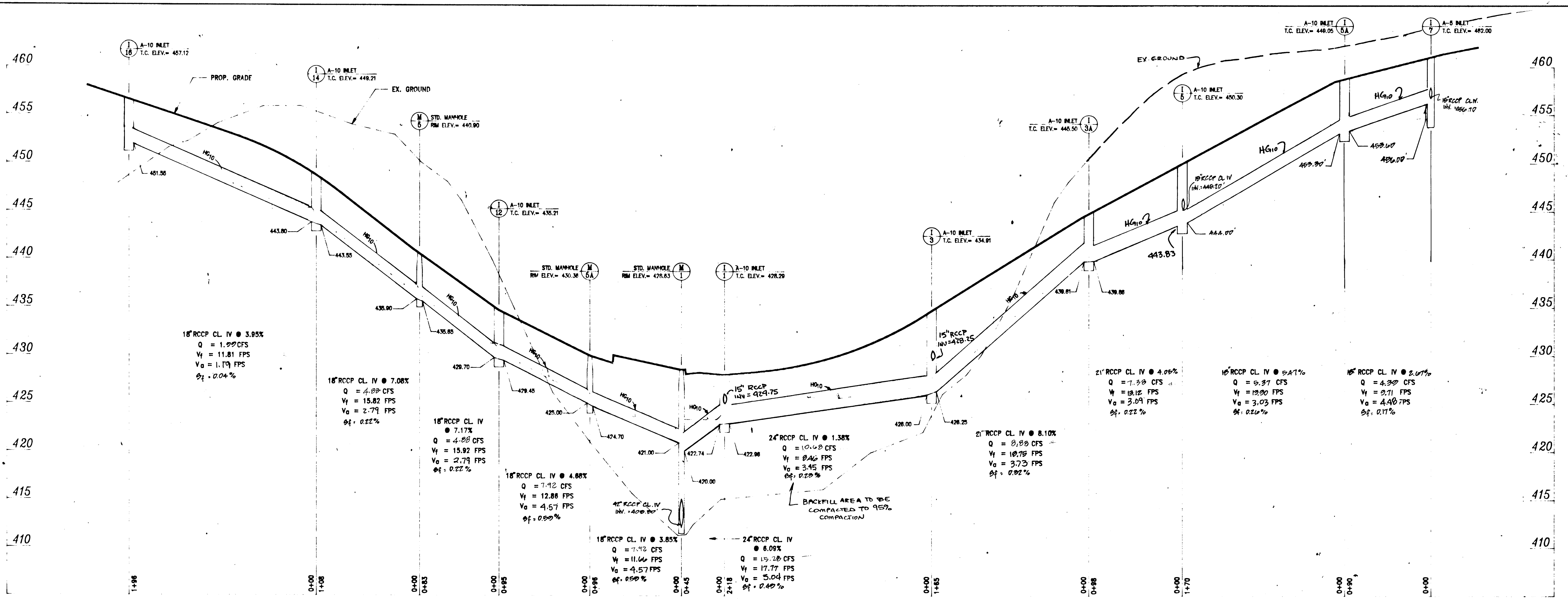
OWNER: ELN STREET DEVELOPMENT, INC.
 6820 ELN STREET, SUITE 200
 MCLEAN, VIRGINIA 22101
 JOHN E. BRITTEN
 2915 ROUTE 32
 WEST FRIENDSHIP, MD. 21794

DES.: D.C.W. JOB: _____
 DRW.: B.S. PROJ.: _____
 CHK.: D.C.W. DATE: 01-21-95

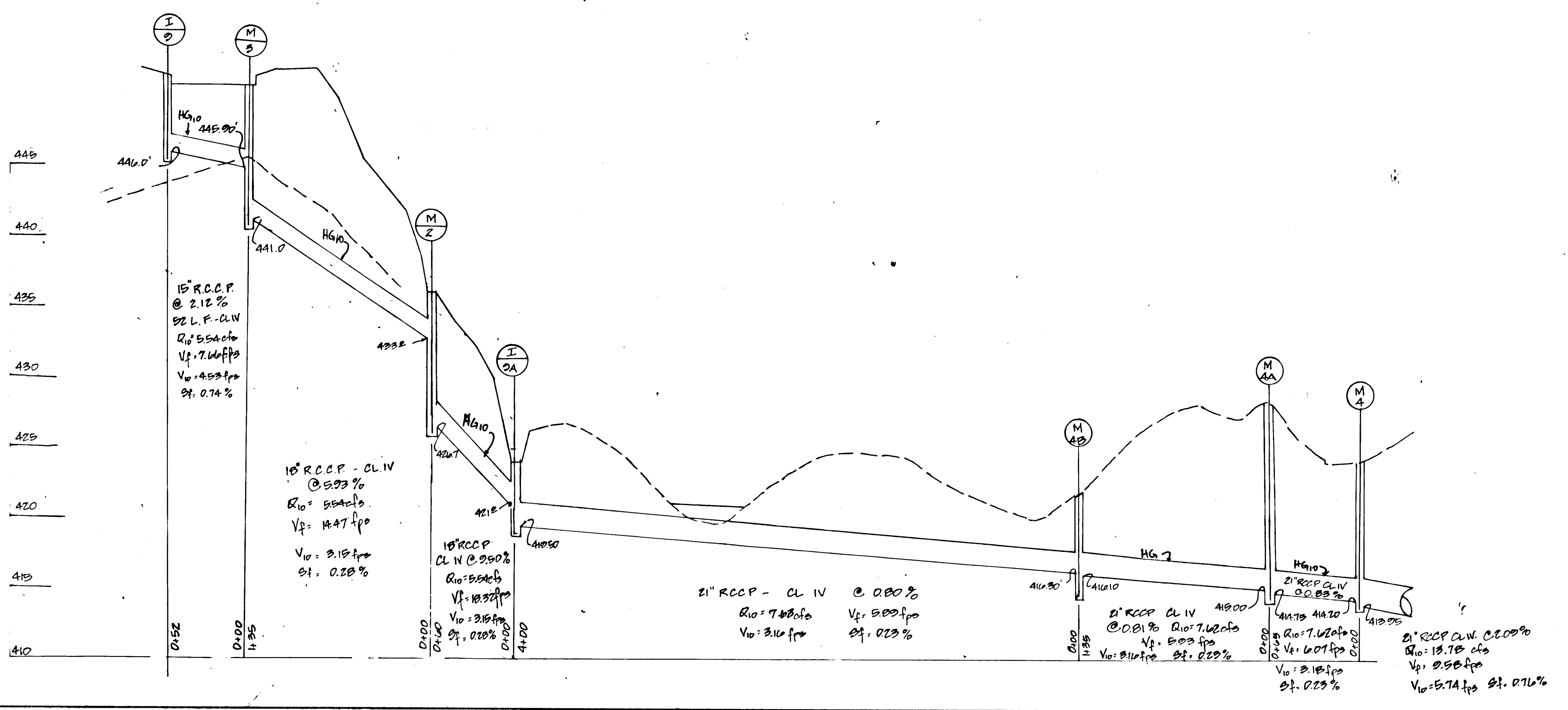
SCALE: 1" = 50'
 SHEET 9 OF 14



F-96-17



1830



APPROVED DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways
 Date: 7/24/96

APPROVED DEPARTMENT OF PLANNING AND ZONING
 Chief, Division and Land Development and Research
 Date: 7/22/96

APPROVED DEPARTMENT OF ENGINEERING
 Chief, Development Engineering Division
 Date: 7/22/96

PROJECT NAME: BRITTEN, BRADY PROPERTY
 A SUBDIVISION OF PARCEL NO. 127,151,152,768, & 783
 FIRST ELECTION DISTRICT TAX MAP #31
 HOWARD COUNTY, MARYLAND.

TITLE: STORM DRAIN PROFILES

PREPARED BY: AFRICAN LAND DEVELOPMENT AND ENGINEERING INC.
 671-A MAIN STREET
 LAUREL, MARYLAND 20707
 WASH. (301) 908 1277
 BALT. (301) 860-3000

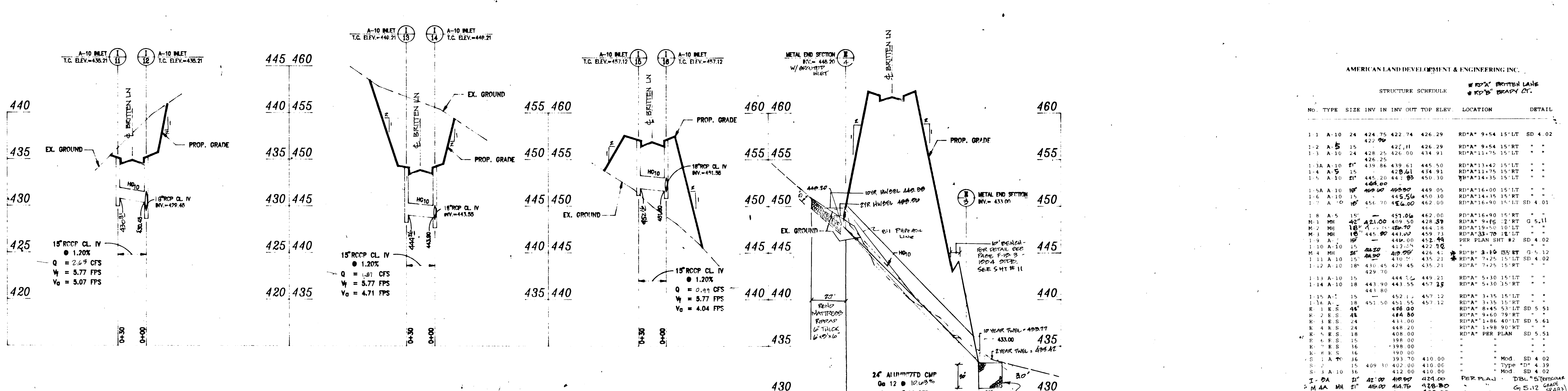
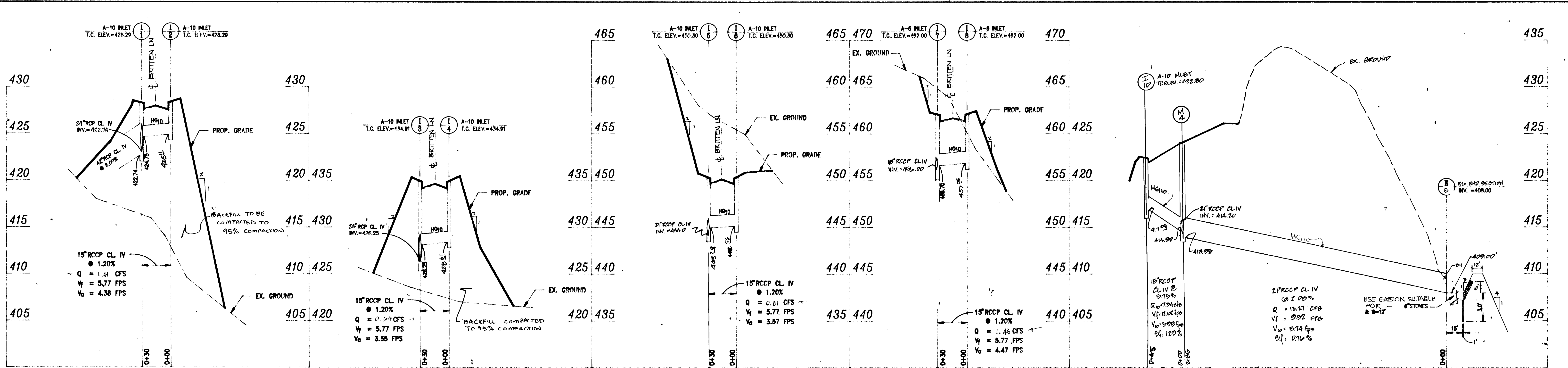
DES.: D.C.W. JOB:
 DRW.: B.S. PROJ.:
 CHK.: D.C.W. DATE: 01-21-95

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

SHEET 10 OF 14

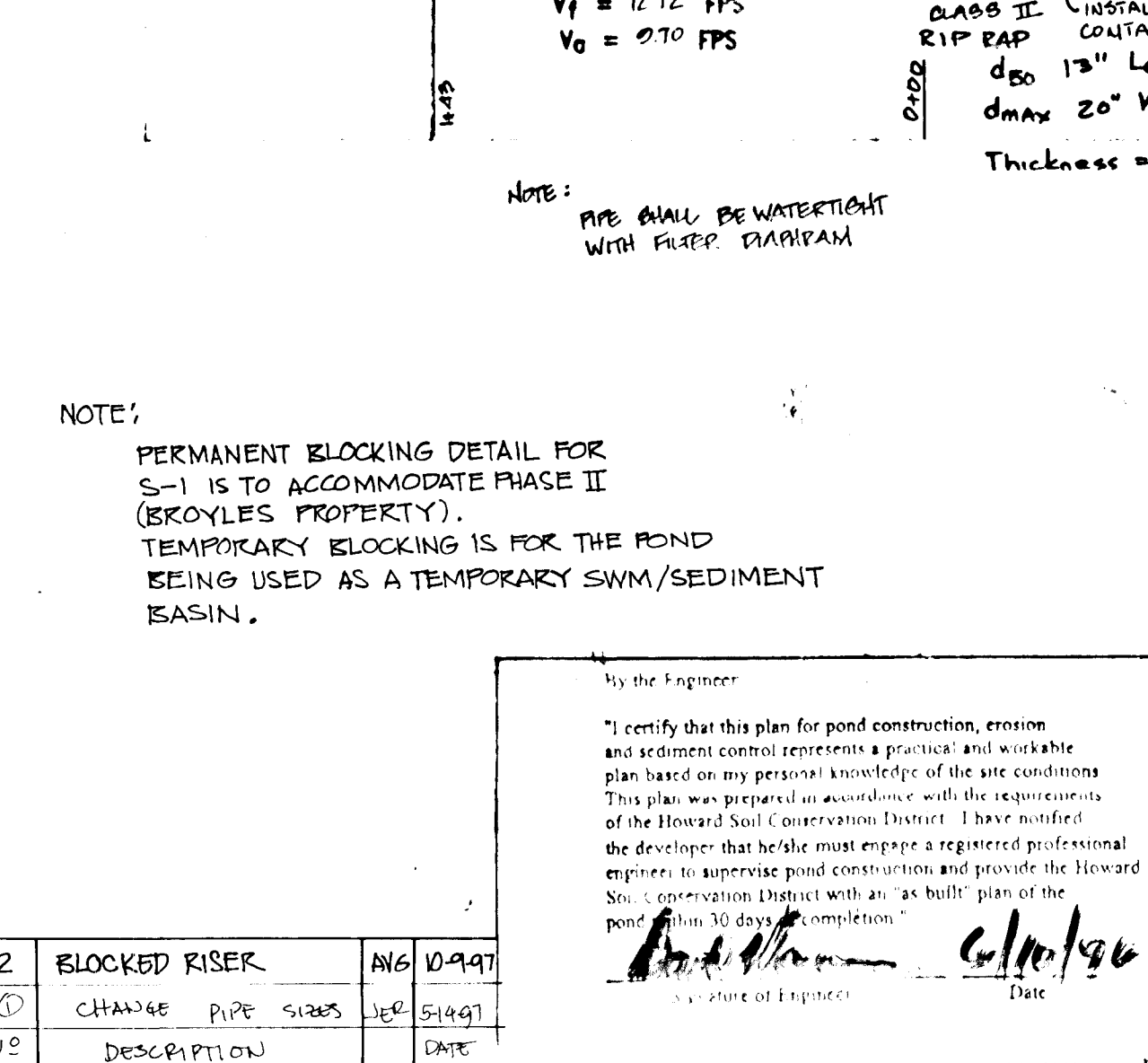
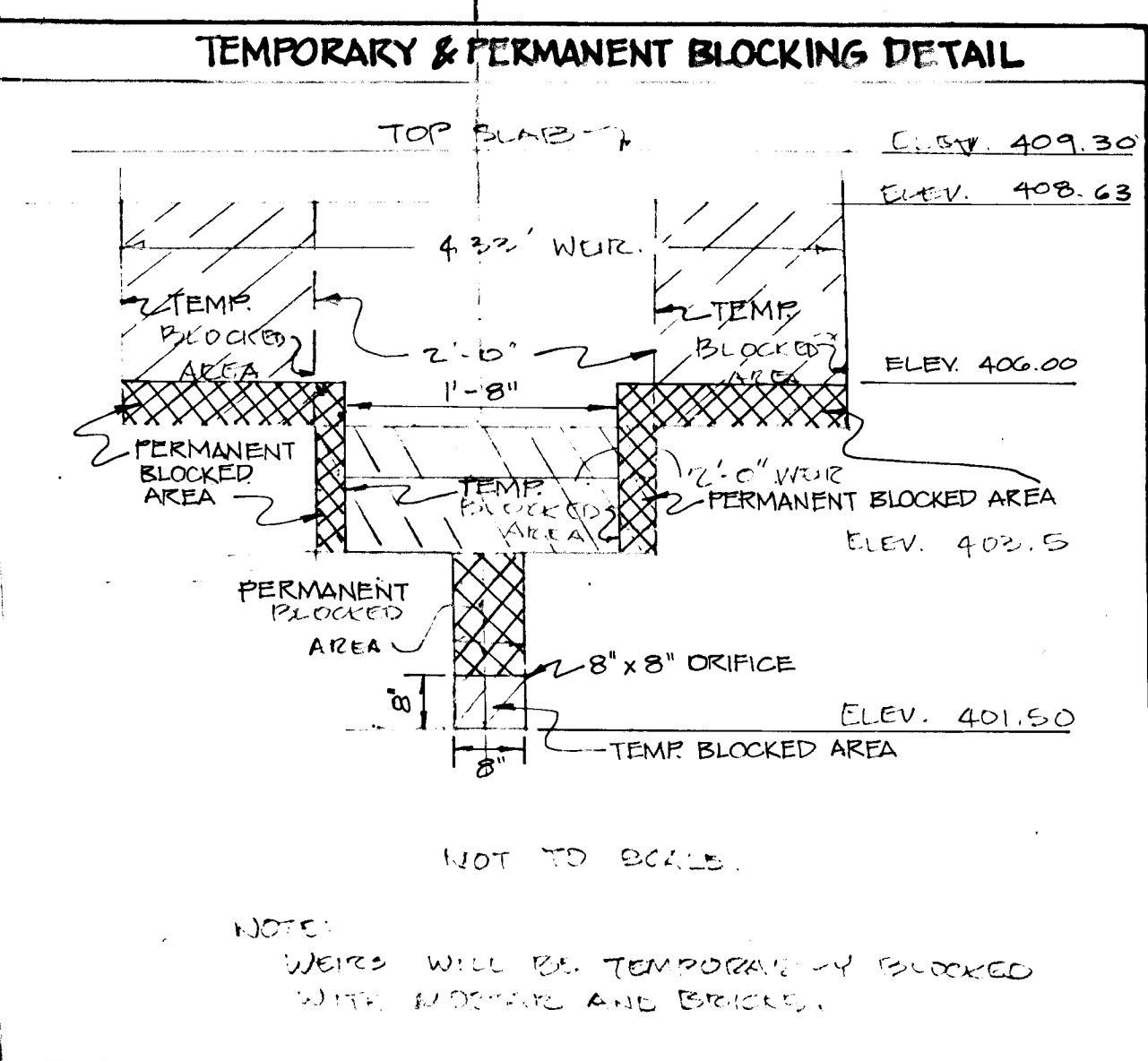
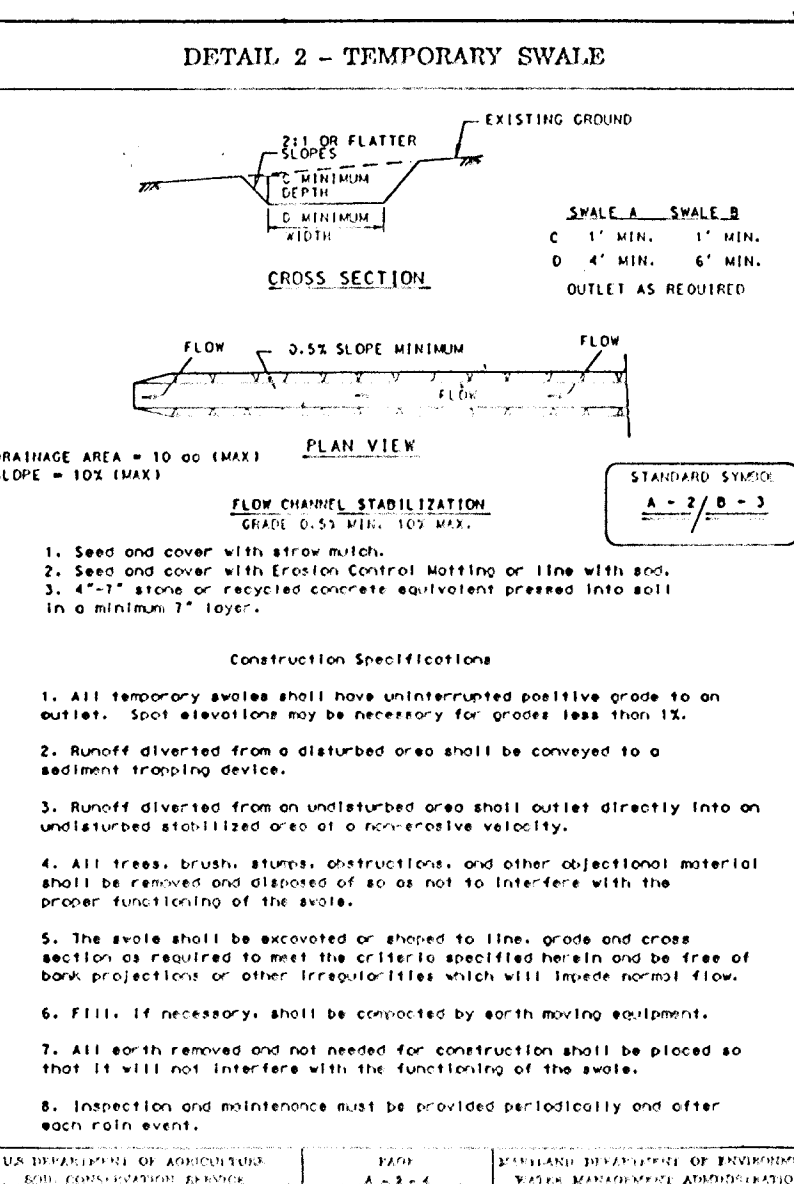
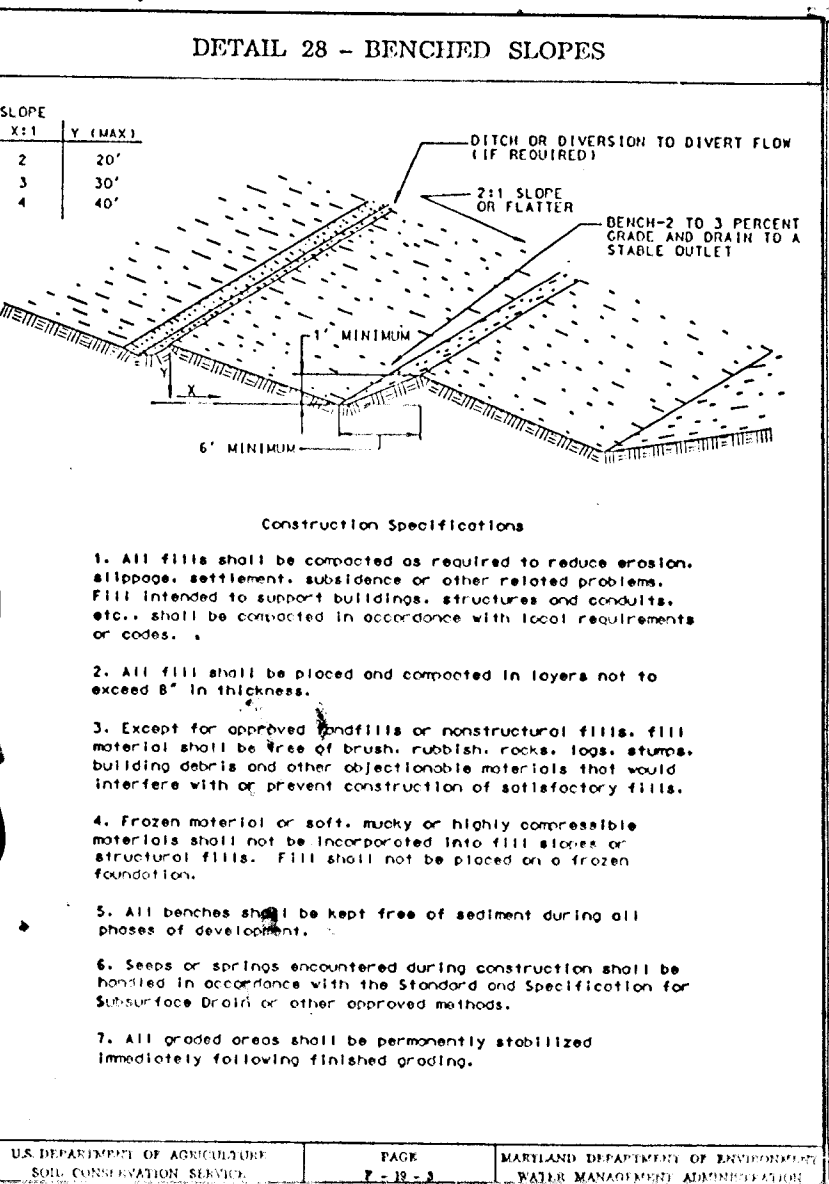
Signature of Engineer: *David Blum* 6/10/96

1830



AMERICAN LAND DEVELOPMENT & ENGINEERING INC.
1802A BRITTEN LANE
1802B BRADY CT.

| NO. | TYPE | SIZE | INV IN | INV OUT | TOP ELEV. | LOCATION | DETAIL |
|-----------|------|------|--------|---------|-----------|------------------|------------------|
| 1-1 | A-10 | 24 | 424.75 | 422.74 | 426.29 | RD* 9.54 15' LT | SD 4.02 |
| 1-2 | A-5 | 15 | 422.74 | 422.11 | 426.29 | RD* 9.54 15' RT | " |
| 1-3 | A-10 | 24 | 426.25 | 426.00 | 434.91 | RD* 11.75 15' LT | " |
| 1-3A | A-10 | 21 | 429.88 | 429.63 | 445.50 | RD* 13.42 15' LT | " |
| 1-4 | A-5 | 15 | 429.63 | 429.11 | 434.91 | RD* 11.75 15' RT | " |
| 1-5 | A-10 | 21 | 445.20 | 444.05 | 450.30 | RD* 14.35 15' LT | " |
| 1-5A | A-10 | 18 | 445.20 | 444.05 | 449.05 | RD* 16.00 15' LT | " |
| 1-6 | A-10 | 15 | 445.56 | 445.30 | 450.30 | RD* 14.35 15' RT | " |
| 1-7 | A-10 | 18 | 456.70 | 456.00 | 462.00 | RD* 16.90 15' LT | SD 4.01 |
| 1-8 | A-5 | 15 | 457.06 | 457.00 | 462.00 | RD* 16.90 15' RT | " |
| 1-9 | MH | 48" | 421.00 | 409.50 | 428.59 | RD* 9.16 22' RT | G 5.11 |
| 1-10 | MH | 18" | 428.25 | 428.00 | 434.18 | RD* 19.50 10' LT | " |
| 1-11 | MH | 18" | 445.00 | 441.00 | 459.73 | RD* 33.70 18' LT | " |
| 1-9 A | A-5 | 15 | 441.00 | 442.44 | 442.76 | PER PLAN SH# 2 | SD 4.02 |
| 1-10 A | A-10 | 15 | 442.44 | 442.76 | 442.76 | " | " |
| 1-11 A | MH | 24" | 419.05 | 426.41 | 426.41 | RD* 3.16 28' RT | G 5.12 |
| 1-11 A 10 | A-10 | 15 | 442.76 | 440.00 | 435.21 | RD* 7.25 15' LT | SD 4.02 |
| 1-12 | A-10 | 18 | 440.45 | 429.45 | 435.21 | RD* 7.25 15' RT | " |
| 1-13 | A-10 | 15 | 444.30 | 449.21 | 449.21 | RD* 5.30 15' LT | " |
| 1-14 | A-10 | 18 | 443.90 | 443.55 | 457.25 | RD* 5.30 15' RT | " |
| 1-15 | A-1 | 15 | 452.11 | 457.12 | 457.12 | RD* 3.35 15' LT | " |
| 1-16 | A-1 | 18 | 451.50 | 451.55 | 457.12 | RD* 3.35 15' RT | " |
| R-1 | E S | 48" | 446.00 | 446.00 | 446.00 | RD* 8.45 53' LT | SD 5.51 |
| R-2 | E S | 48" | 444.00 | 444.00 | 444.00 | RD* 9.60 79' RT | " |
| R-3 | E S | 24" | 443.00 | 443.00 | 443.00 | RD* 1.86 40' LT | SD 5.61 |
| R-4 | E S | 24" | 448.20 | 448.20 | 448.20 | RD* 1.96 90' RT | " |
| R-5 | E S | 18" | 408.00 | 408.00 | 408.00 | RD* PER PLAN | SD 5.51 |
| R-6 | E S | 15" | 398.00 | 398.00 | 398.00 | " | " |
| R-7 | E S | 16" | 390.00 | 390.00 | 390.00 | " | " |
| R-8 | E S | 16" | 190.00 | 190.00 | 190.00 | " | " |
| S-1 | A | 16 | 393.70 | 410.00 | 410.00 | " | Mod. SD 4.02 |
| S-2 | A | 15 | 409.30 | 402.00 | 410.00 | " | Type "D" SD 4.39 |
| S-3 | A | 16 | 412.00 | 410.00 | 410.00 | " | Mod. SD 4.02 |
| I-1 | MH | 24" | 405.00 | 405.00 | 405.00 | PER PLAN | DBL "S" TERMINAR |
| I-2 | MH | 24" | 405.00 | 405.00 | 405.00 | " | DBL "S" TERMINAR |
| I-3 | MH | 24" | 405.00 | 405.00 | 405.00 | " | DBL "S" TERMINAR |



By the Engineer:
I 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. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

By the Developer:
I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance and 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. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

APPROVED DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways
Date: 7-24-96

APPROVED DEPARTMENT OF PLANNING AND ZONING
Chief, Division of Planning and Zoning
Date: 11/22/96

PROJECT NAME: BRITTEN, BRADY PROPERTY

LOT 1-57

A SUBDIVISION OF PARCEL NO. 127,151,152,788, & 783

FIRST ELECTION DISTRICT TAX MAP #31

HOWARD COUNTY, MARYLAND.

TITLE: STORM DRAIN PROFILES

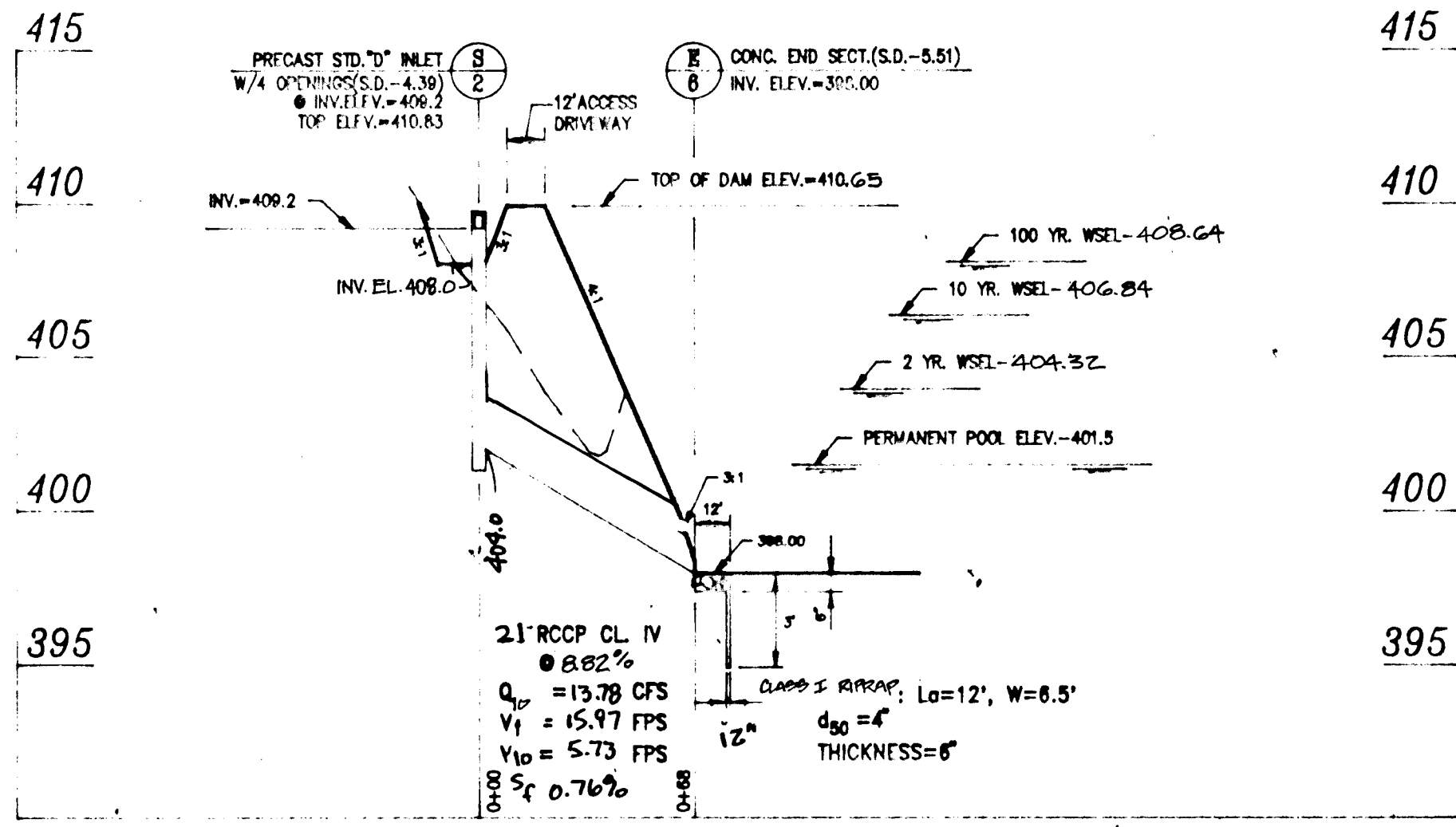
DES.: D.C.W. JOB: PROJECT

DRW.: B.S. PROJ.: PROJECT

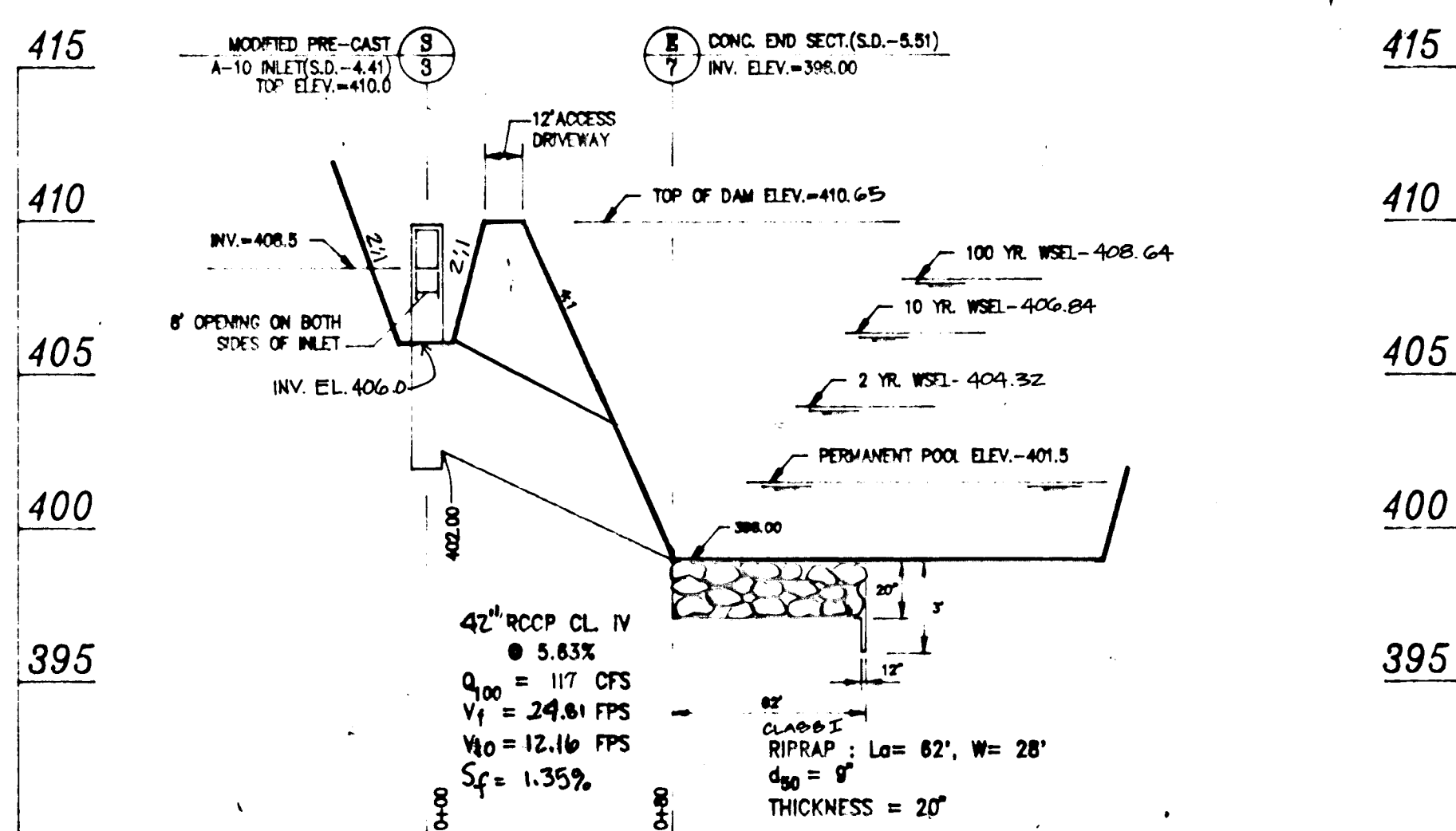
CHK.: D.C.W. DATE: 01-21-95

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

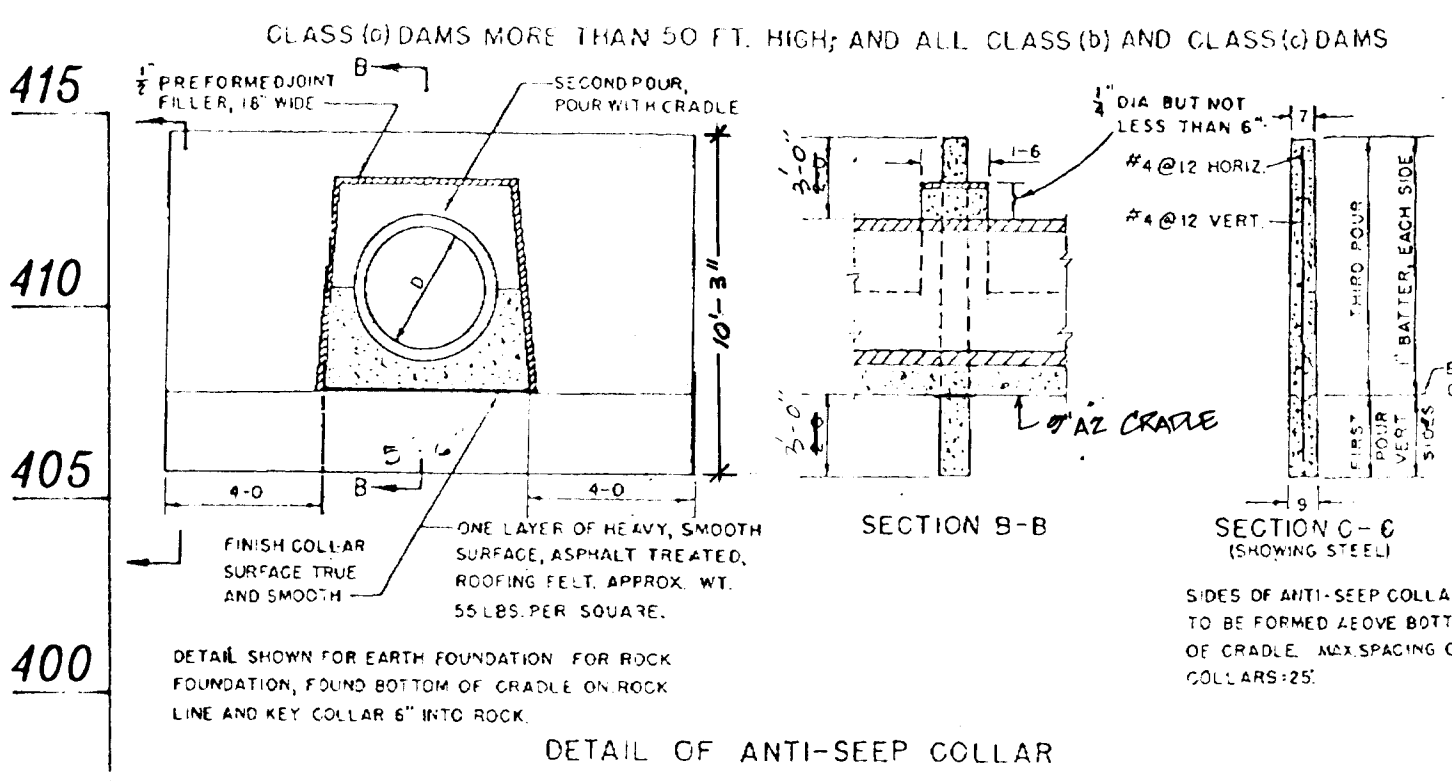
SHEET 11 OF 14



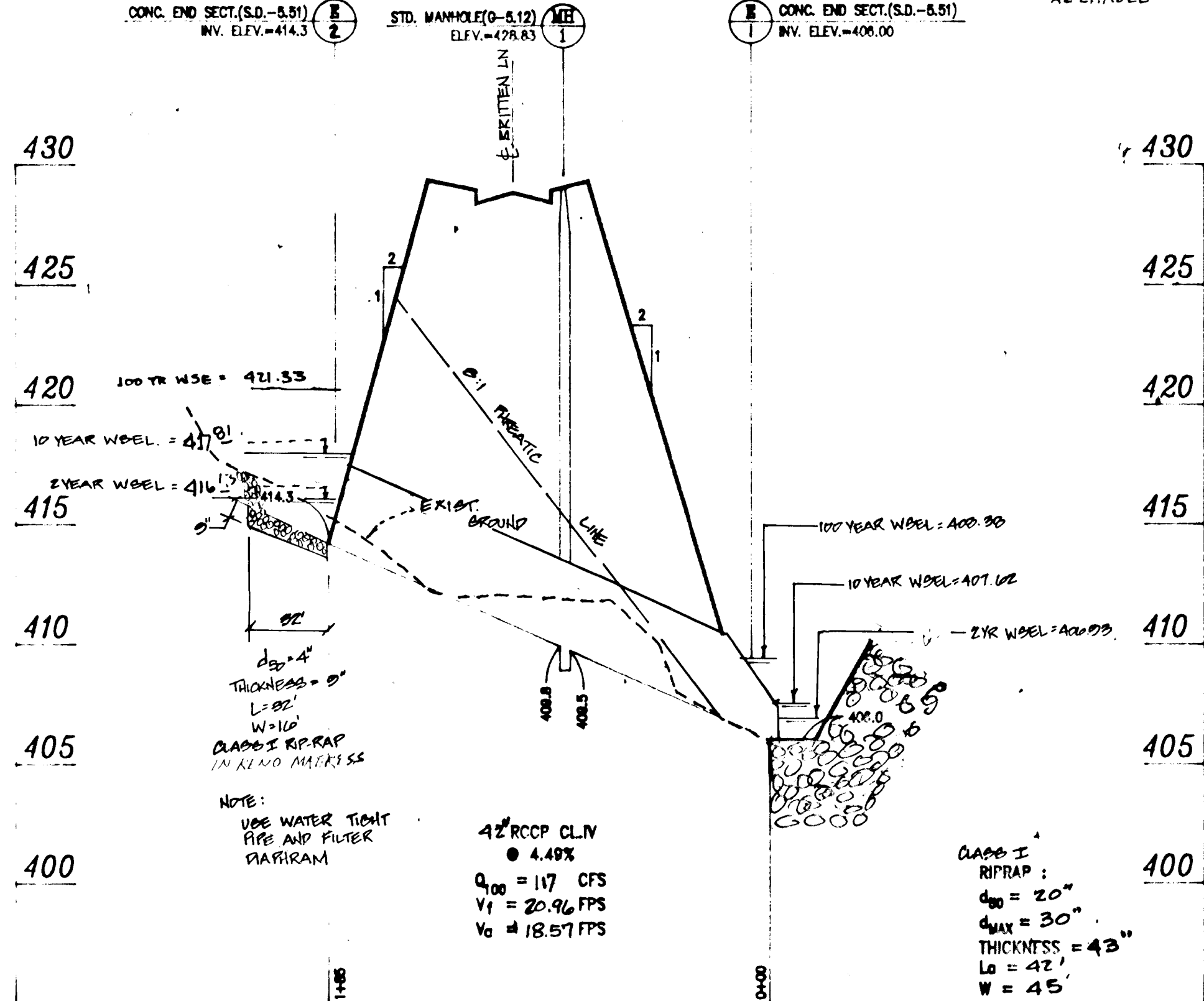
PROFILE INLET PIPE S-2 TO E-6
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



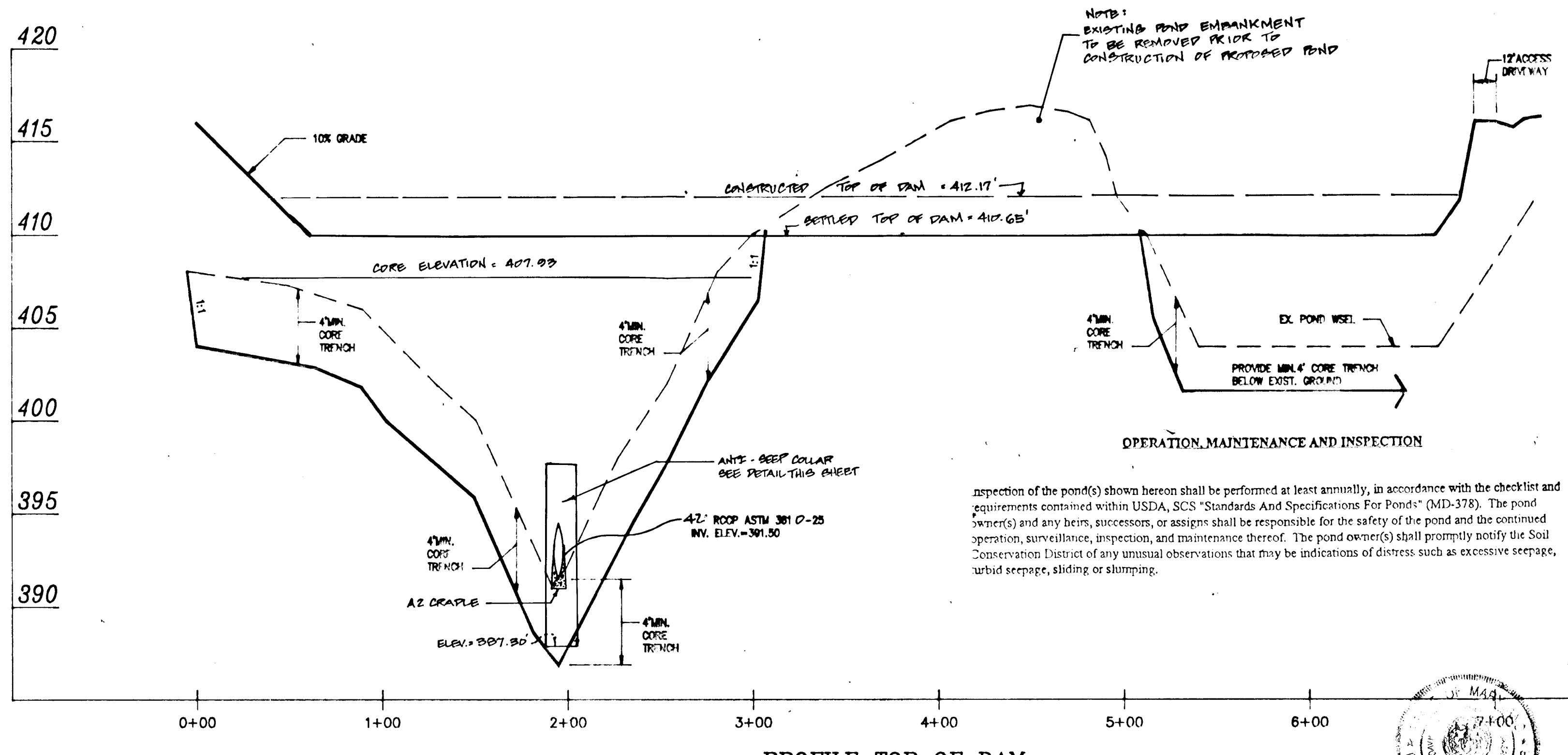
PROFILE INLET PIPE S-3 TO E-7
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



DETAIL OF ANTI-SEEP COLLAR



PROFILE E-1 TO E-2
SCALE: HORIZ. 1"=50'
VERT. 1"=5'



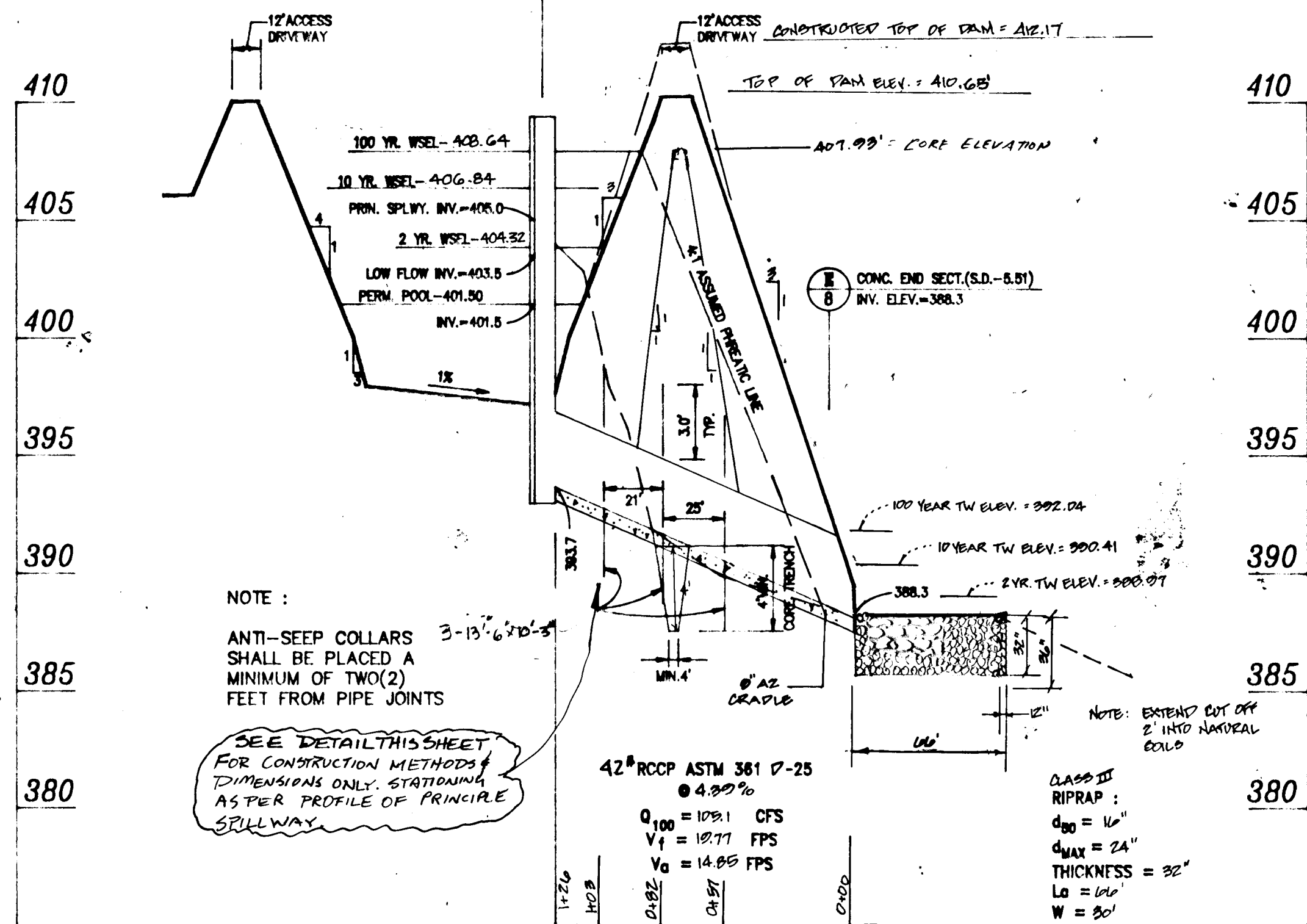
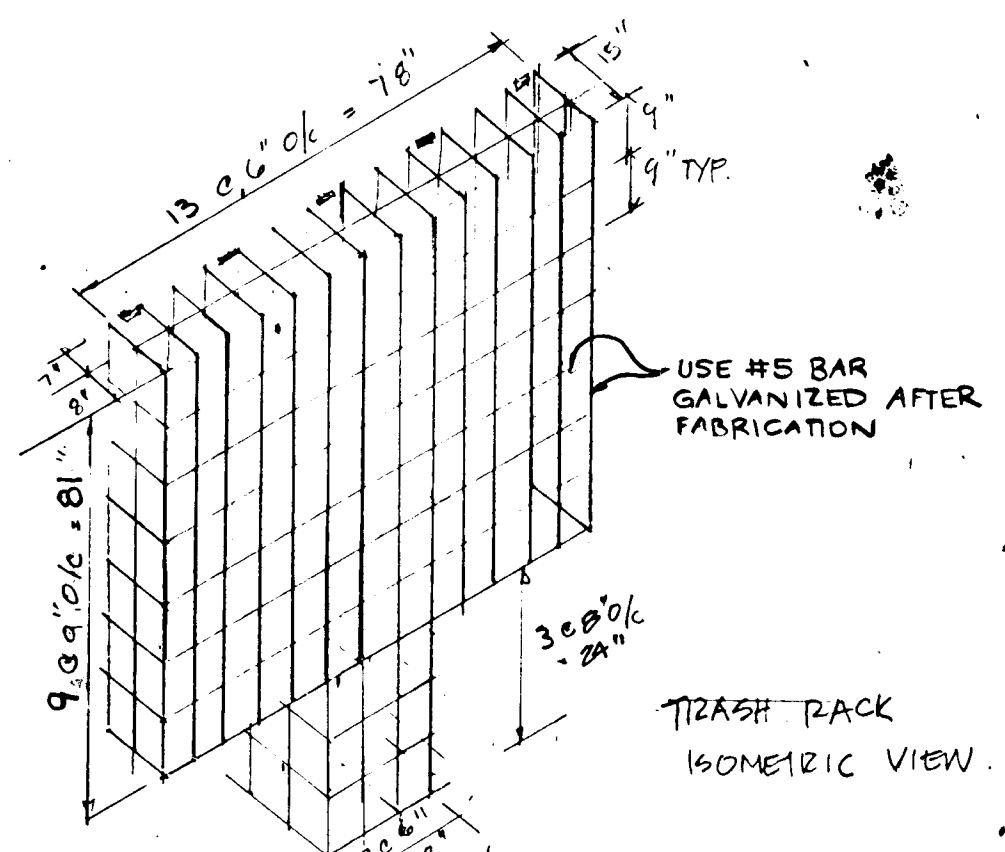
PROFILE TOP OF DAM
SCALE: HORIZ. 1"=50'
VERT. 1"=5'

inspection of the pond(s) shown hereon shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS "Standards and Specifications For Ponds" (MID-378). The pond owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observations that may be indications of distress such as excessive seepage, turbid seepage, sliding or slumping.

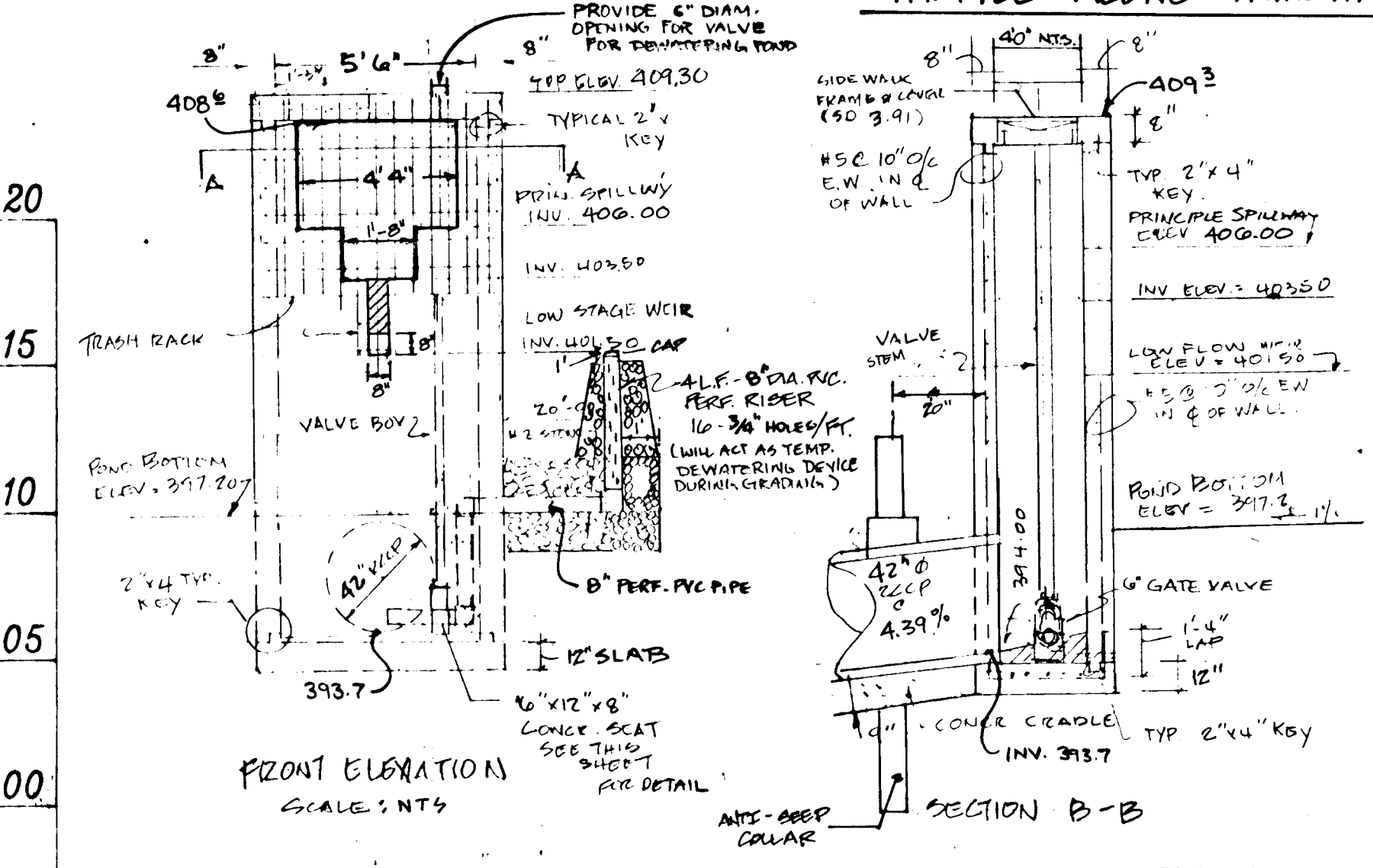
By the Engineer: [Signature] Date: 6/10/96
By the Developer: [Signature] Date: 6/9/96

STORMWATER MANAGEMENT OPERATIONS AND MAINTENANCE SCHEDULE (FOR HOME OWNER ASSOCIATION)

- Top and side slopes of the embankment shall be mowed a minimum of two(2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.
- Debris and litter next to the outlet structure shall be removed during regular mowing operations and as needed.
- When deemed necessary for aesthetic reasons, sediment should be removed from the pond. Approval of the Department of Public Works is required.



PROFILE ALONG PRINCIPAL SPILLWAY



RISER DETAILS

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.
[Signature] Date: 7/10/96
These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
[Signature] Date: 2/16/96

APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] Date: 7-29-96
Chief, Bureau of Highways
APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] Date: 11/22/96
Chief, Division and Land Development and Research
[Signature] Date: 9/16/96
Chief, Development Engineering Division

PROJECT NAME: BRITTON/BRADY PROPERTY
LOTS 1-87
A SUBDIVISION OF PARCEL NO. 127,151,182,786, & 783
FIRST ELECTION DISTRICT TAX MAP #31
HOWARD COUNTY, MARYLAND.

TITLE: STORM DRAIN PROFILES.

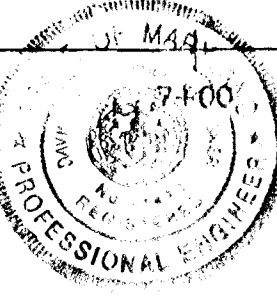
PREPARED BY: [Signature]
DESIGNER: [Signature]
DRAWN BY: [Signature]
CHECKED BY: [Signature]

DES.: D.C.W. JOB: [Blank]
DRW.: B.S. PROJ.: [Blank]
CHK.: D.C.W. DATE: 01-21-95

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

SHEET 12 OF 14

1830



[Signature]

F-96-17

STORMWATER MANAGEMENT NOTES

Site Preparation
 Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and shore breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds a minimum of a 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and embankment as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill
 Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6" in diameter, frozen or other objectionable materials. Fill material for the center of the embankment and cut and backfill shall conform to Unified Soil Classification (UC, SC, GH, or CL). Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and it to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment or along the slope. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The bottom shall be compacted with construction equipment, rollers, or hand tampers to ensure maximum density and minimum permeability.

Structure Backfill
 Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the bedding. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material nearest to the pipe or structure shall be compacted by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Backfilling operation shall drive equipment adjacent to the pipe or structure. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material nearest to the pipe or structure shall be compacted by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Backfilling operation shall drive equipment adjacent to the pipe or structure. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material nearest to the pipe or structure shall be compacted by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller.

Pipe Conduits
 All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:
 1. **Materials** - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with wetting coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes with polyethylene coating shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nepon, Plast-Coat, Corlo, and Beth-On-Low. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

Materials - (Aluminum Coated Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with wetting coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-198 or M-211 with wetting coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of the chrome primer. Hot dip galvanized bolts may be used for connections. The pitch of the surrounding soils shall be between 4 and 8.

2. **Coupling bands, anti-seep collars, and sections, etc., must be covered of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating material at least 24 mil in thickness.**

3. **Connections** - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the rear shall be welded all around when the pipe and rear are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Drains pipes are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be reinforced an adequate number of corrugations to accommodate the bend with the following type connections are acceptable for pipes less than 48" in diameter: Flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick steel coil or rubber neoprene gasket; and a 12" wide huggo type band with O-ring gaskets having a minimum diameter of 1/2" for the corrugations. Pipes 48" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and nuts. A 12" wide by 3/8" thick closed coil or rubber neoprene gasket will be installed on the end of each pipe for a total of 24". Helical corrugated pipe shall have other continuously welded seams or have lock seams.

Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. **Backfilling shall conform to "Structure Backfill."**

5. **Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.**

SEDIMENT CONTROL NOTES

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:
 1. **Materials** - Reinforced concrete pipe shall have bel and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-301. An approved equivalent AWWA Specification C-302.

2. **Bedding** - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high strength concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.

3. **Laying pipe** - Bell and spigot pipe shall be placed with the bell and upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding should be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the rear.

4. **Backfilling shall conform to "Structure Backfill"**

5. **Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.**

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:
 1. **Materials** - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.

2. **Joints and connections to anti-seep collars shall be completely watertight.**

3. **Bedding** - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. **Backfilling shall conform to "Structure Backfill."**

5. **Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.**

Concrete
 Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 60A, Mix No. 3.

Rock Riprap
 All rock shall be dense, sound, and free from cracks, seams, and other defects conducive to accelerated weathering. The rock fragments shall be angular in shape. The maximum dimension of an individual rock fragment shall be not less than one third the greatest dimension of the fragment.

The rock shall have the following properties:
 1. Bulk specific gravity (saturated surface-dry basis) not less than 2.5.
 2. Absorption not more than three percent.
 3. Soundness: Weight loss in five cycles not more than 20 percent when sodium sulfate is used.

Bulk specific gravity and absorption shall be determined according to ASTM C 88. The test for soundness shall be performed according to ASTM C 88.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 619.12.

Care of Water during Construction
 All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary cofferdams, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavation, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having saved this purpose, all temporary protective works shall be removed or lowered and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the piling and casting of material in required excavations, the water level at the locations being filled shall be maintained below the bottom of the excavation of such location which may require draining the water to pumps from which the water shall be pumped.

Stabilization
 All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control
 Construction operations will be carried out in such a manner that erosion will be controlled and water and pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION. (313-1830).

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL, REVISIONS THERE TO.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 372 HOURS OF DAYS FOR ALL PERMITS, SEDIMENT CONTROL, STRUCTURES, DICES, PERMETER SLOPES AND ALL SLOPES GREATER THAN 1:1, 10 DAYS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4. ALL SEDIMENT TRAPS/BASINS MUST 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SETTINGS (SEC. 51) SOO (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SETTING DATES DO NOT ALLOW FOR PROPER ESTABLISHMENT AND ESTABLISHMENT OF GRASSES.

6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7. SITE ANALYSIS:
 TOTAL AREA OF SITE: 35 ACRES
 AREA TO BE ROOFED OR PAVED: 15 ACRES
 AREA TO BE VEGETATED/STABILIZED: 20 ACRES
 TOTAL CUT (SWAYD-TOPSOIL): 60,000 CY TOTAL
 OTHER WASTE/BORROW AREA LOCATION: 1/2 MILE APPROXIMATE

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF REDISTURBANCE.

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 AGENCY SHALL BE REQUIRED UPON COMPLETION OF INSTALLATION OF PERMETER PROTECTION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

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.

TEMPORARY SEEDING PREPARATION
 APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDING PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.
 SOIL AMENDMENTS: APPLY 800 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).
 SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2 1/2 BURLIPS PER ACRE OF ANNUAL RYE (3 LBS/1000 SQ FT) FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF KEEPING LOVEGRASS (07 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOO.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROOTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING WELLS ANCHORING TOOL, OR 218 GALLONS PER ACRE (9 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 6 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDING PREPARATION
 LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISING 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 PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 800 LBS PER ACRE OF ANNUAL RYE (3 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (8 LBS/1000 SQ FT).

2. ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.6 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ FT) OF KEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY OPTION (1) 2 TONS PER ACRE OF WELLS ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OPTION (2) USE SOO, OPTION (3) SEED WITH 10 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELLS ANCHORED STRAW.

MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROOTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING WELLS ANCHORING TOOL, OR 218 GALLONS PER ACRE (9 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 6 FEET 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 RESEEDINGS.

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

DETAIL 20A - REMOVABLE PUMPING STATION

DETAIL 20B - BUMP FIT

DETAIL 23 - BILT FENCE

DETAIL 1 - EARTH DIRT

DETAIL 23C - CURB INLET PROTECTION (COG OR COG INLETS)

DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II

DETAIL 33 - SUPER SILT FENCE

DETAIL SHEET BRITTEN BRADY PROPERTY

LOT 15
 A SUBDIVISION OF PARCEL NO. 10, 151, 152, 266, & 273
 FIRST ELECTION DISTRICT TAX MAP #1
 HOWARD COUNTY, MARYLAND

PREPARED BY:
 AMERICAN LAND DEVELOPMENT AND ENGINEERING INC.
 CIVIL ENGINEERING CONSULTANTS
 AND LAND PLANNERS

DATE: 4-24-84
 SCALE: 1" = 30' SHEET 13 OF 14

PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 LICENSE NO. 11512

PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 LICENSE NO. 11512

PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 LICENSE NO. 11512

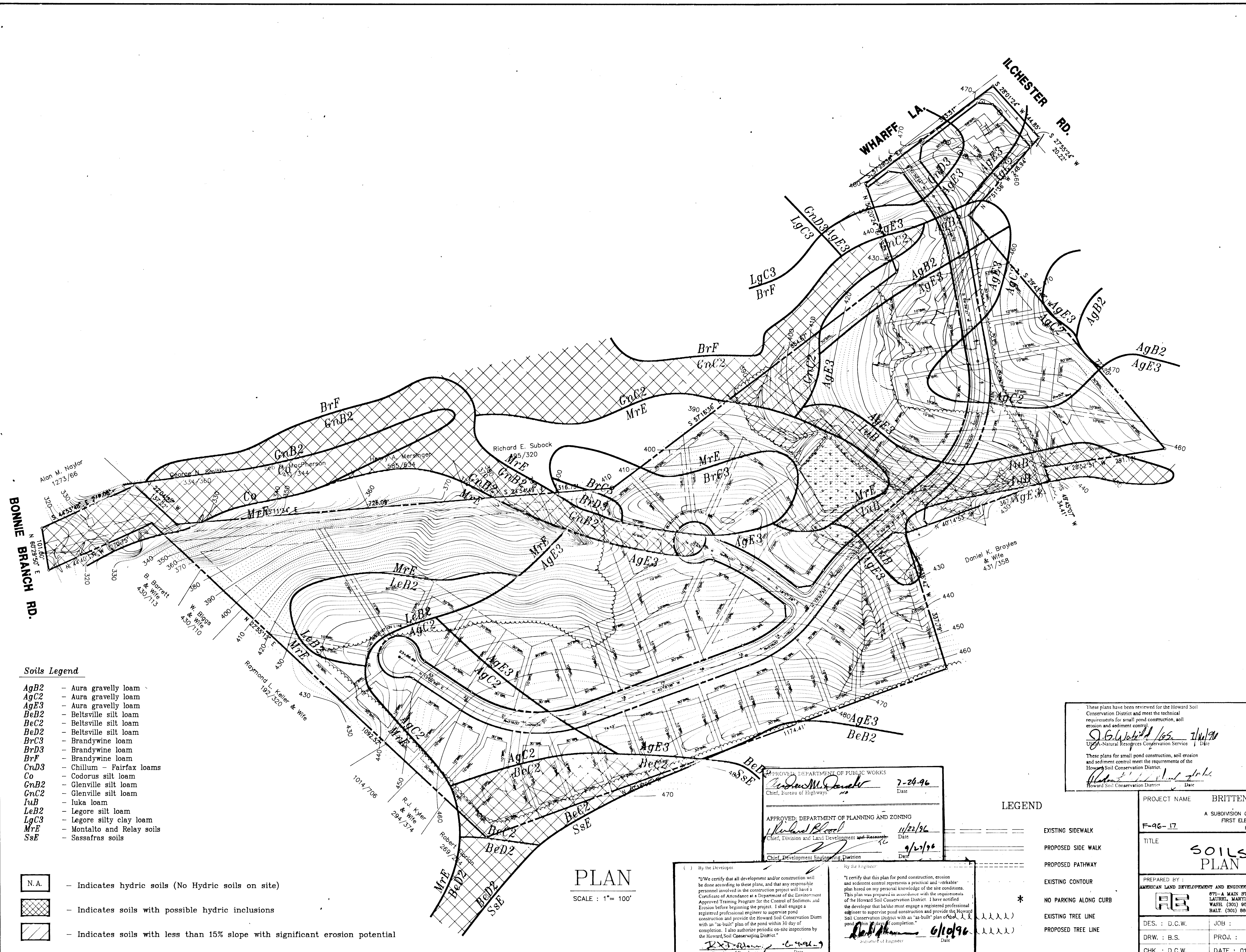
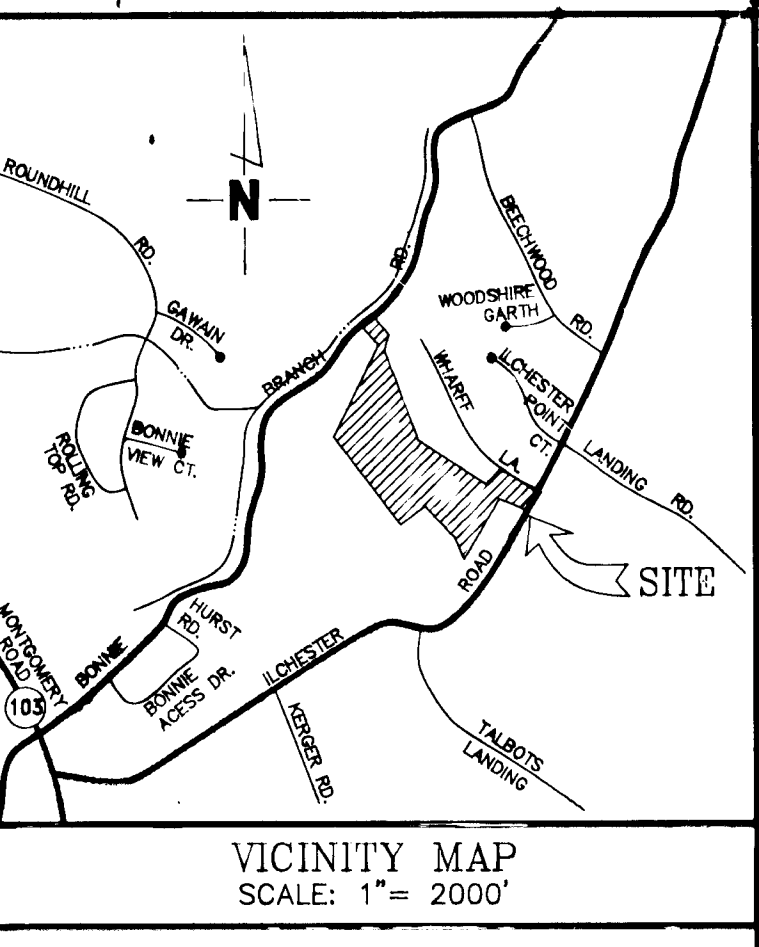
PROFESSIONAL ENGINEER
 STATE OF MARYLAND
 LICENSE NO. 11512

1330

TREE PROTECTION FENCE

1. FENCE POSTS SHALL BE 4" DIA. GALVANIZED STEEL PIPE.
 2. FENCE SHALL BE 42" HIGH AND CONSTRUCTED IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE DRAWINGS.
 3. THE FENCE SHALL BE 42" HIGH AND CONSTRUCTED IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE DRAWINGS.
 4. THE FENCE SHALL BE 42" HIGH AND CONSTRUCTED IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE DRAWINGS.
 5. THE FENCE SHALL BE 42" HIGH AND CONSTRUCTED IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE DRAWINGS.
 6. THE FENCE SHALL BE 42" HIGH AND CONSTRUCTED IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE DRAWINGS.

F-96-17



Soils Legend

- AgB2 - Aura gravelly loam
- AgC2 - Aura gravelly loam
- AgE3 - Aura gravelly loam
- BeB2 - Beltsville silt loam
- BeC2 - Beltsville silt loam
- BeD2 - Beltsville silt loam
- BrC3 - Brandywine loam
- BrD3 - Brandywine loam
- BrF - Brandywine loam
- CnD3 - Chillum - Fairfax loams
- Co - Codorus silt loam
- CnB2 - Glenville silt loam
- CnC2 - Glenville silt loam
- LuB - luka loam
- LeB2 - Legore silt loam
- LgC3 - Legore silty clay loam
- MrE - Montalto and Relay soils
- SsE - Sassafras soils

- N.A. - Indicates hydric soils (No Hydric soils on site)
- Indicates soils with possible hydric inclusions
- Indicates soils with less than 15% slope with significant erosion potential

PLAN
SCALE: 1" = 100'

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Daniel 7-24-96
 Chief, Bureau of Highways Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Richard Blood 11/22/96
 Chief, Division of Land Development and Research Date

APPROVED: *[Signature]* 9/23/96
 Chief, Development Engineering Division Date

LEGEND

- EXISTING SIDEWALK
- PROPOSED SIDEWALK
- PROPOSED PATHWAY
- EXISTING CONTOUR
- NO PARKING ALONG CURB
- EXISTING TREE LINE
- PROPOSED TREE LINE

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.
J.G. White 1/6/96 7/11/96
 USDA-Natural Resources Conservation Service Date
 These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
[Signature]
 Howard Soil Conservation District Date



| | | | |
|--------------|----------------|---|----------------|
| PROJECT NAME | | BRITTEN/BRADY PROPERTY | |
| F-96-17 | | A SUBDIVISION OF PARCEL NO. 127,151,152,766, & 783 FIRST ELECTION DISTRICT TAX MAP #31 HOWARD COUNTY, MARYLAND. | |
| TITLE | | SOILS PLAN | |
| PREPARED BY: | | OWNER: ELM STREET DEVELOPMENT, INC. 6820 ELM STREET, SUITE 200 MCLEAN, VIRGINIA 22101 | |
| | | JOHN S. BRITTEN 2915 ROUTE 32 WEST FRIENDSHIP, MD. 21794 | |
| DES.: D.C.W. | JOB: [Blank] | SCALE: 1" = 100' | SHEET 14 OF 14 |
| DRW.: B.S. | PROJ.: [Blank] | DATE: 01-21-95 | |
| CHK.: D.C.W. | DATE: 01-21-95 | | |

1830