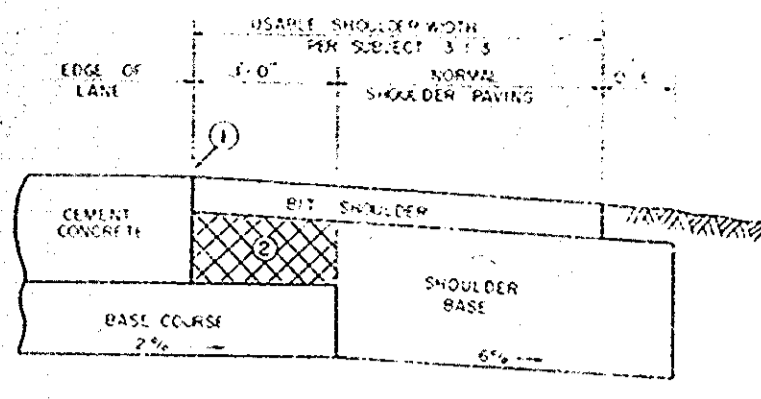
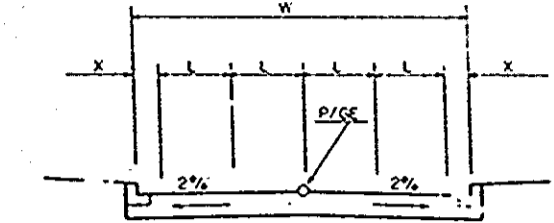


| DATE | REVISIONS | DESCRIPTION |
|--------|-----------|------------------------------|
| 3/2/87 | Δ | ADDED 200' CURB AT STA. 2+58 |



CROSS SECTION ELEMENTS

(1) SHOULDER JOINT DATA PER STANDARD
 (2) SPECIAL PROVISIONS SHALL NOTE THAT PAVEMENT FOR THIS PORTION OF THE SHOULDER IS PROVIDED BY THE "NEW" INCLUDED IN THE CONTRACT WITH THE SHOULDER BASE MATERIAL

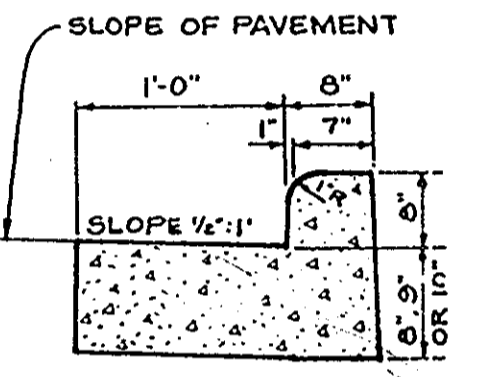


L = WIDTH OF THROUGH LANE
 W = WIDTH OF PAVEMENT
 X = CURB OFFSET DISTANCE (NOT WIDTH OF GUTTER PAN)

| DESIGN SPEED | L | X | W |
|--------------|-----|-----|-----|
| 30 | 11' | 10' | 46' |
| 40 | 11' | 10' | 46' |
| 50 | 12' | 20' | 52' |
| 60 | 12' | 20' | 52' |

WHERE SUBSTANTIAL BI-CYCLE TRAFFIC IS ANTICIPATED, THE OUTSIDE LANES MAY BE CONSTRUCTED TO AN L/D RATIO OF 10:1 FEET. HOWEVER, THE RESULTING JOIN USE LANE IS NOT NORMALLY MARKED OR SIGNED AS A BI-CYCLE FACILITY.

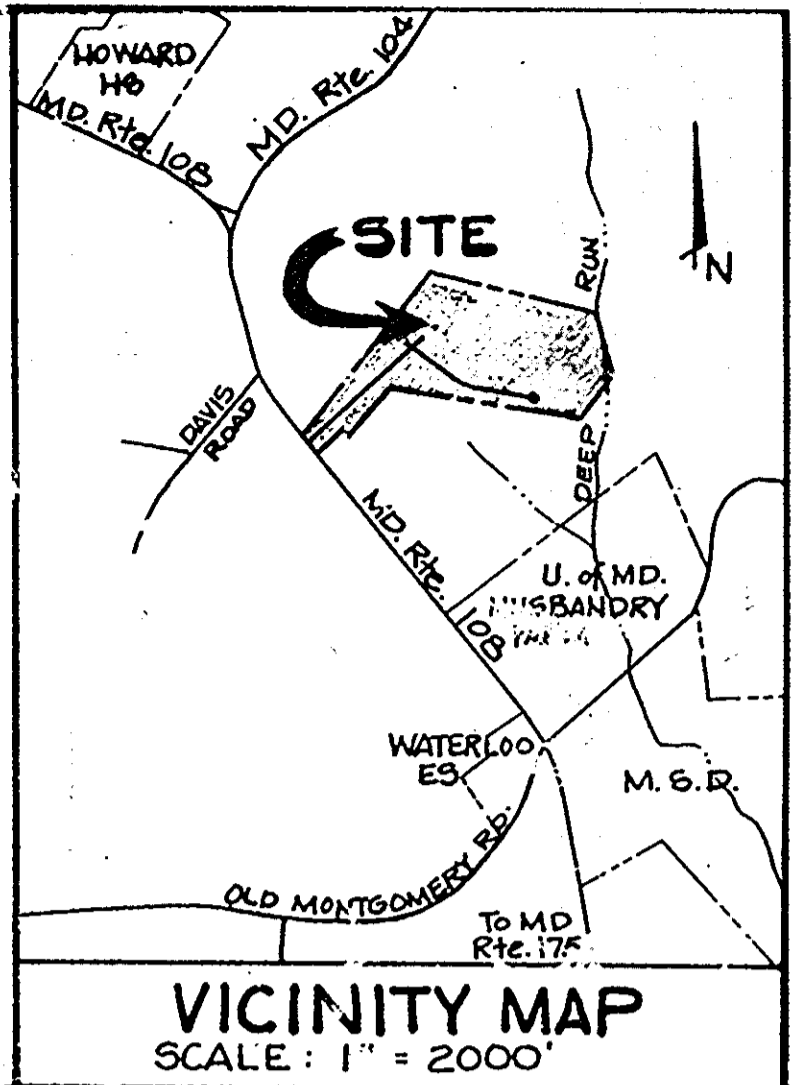
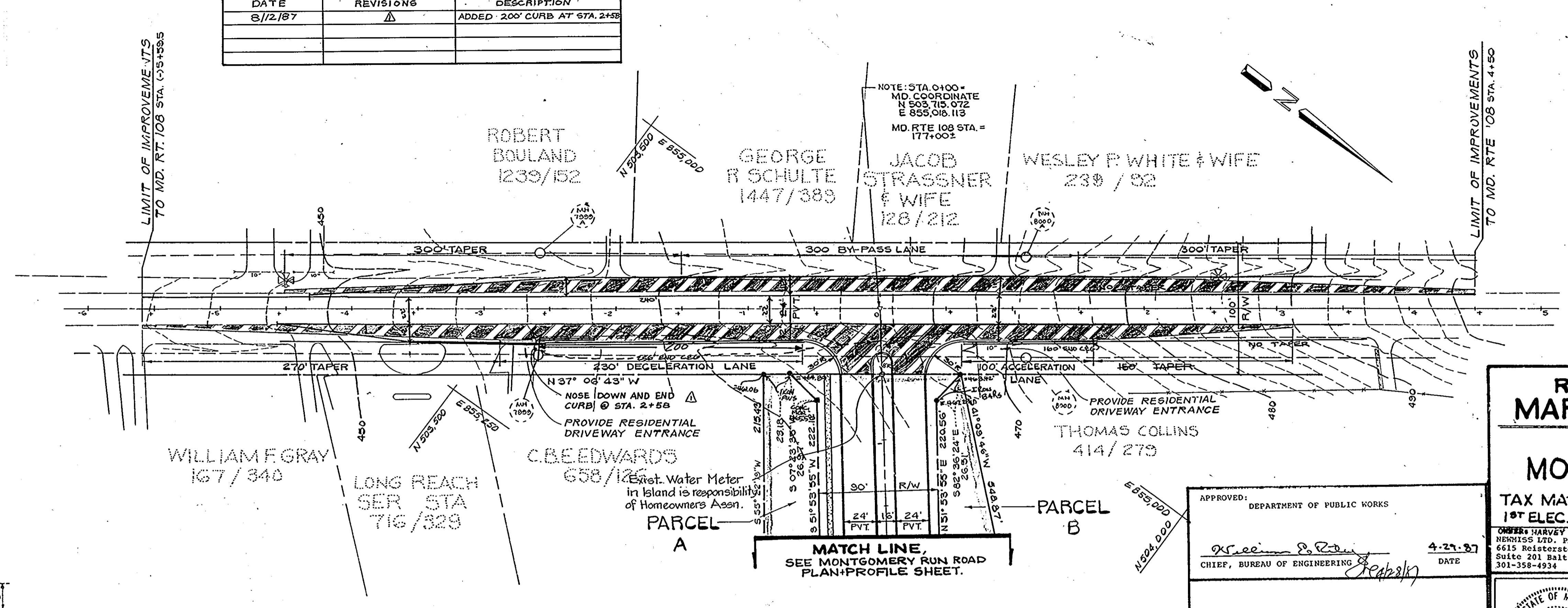
TYPICAL CLOSED SECTION



MARYLAND DEPARTMENT OF TRANSPORTATION & STATE HIGHWAY ADMINISTRATION
 CONCRETE CURB & GUTTER TYPE "A"

MSHA PAVING SECTION

| | | |
|---|----|--|
| 3" BIT CONC. SURFACE 4" BIT CONC. BASE 6" GRAVEL AGGREGATE BASE | OR | 3" BIT CONC. SURFACE 4" BIT CONC. BASE 7" BANK RUN GRAVEL BASE |
|---|----|--|



ROAD IMPROVEMENTS
 MARYLAND ROUTE 108

VILLAGE OF MONTGOMERY RUN
 SEC. 1/1
 TAX MAP'S 31#37 PARCEL 180#233
 1ST ELEC. DIST. HOWARD CO., MD.

APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] 4-27-87
 CHIEF, BUREAU OF ENGINEERING

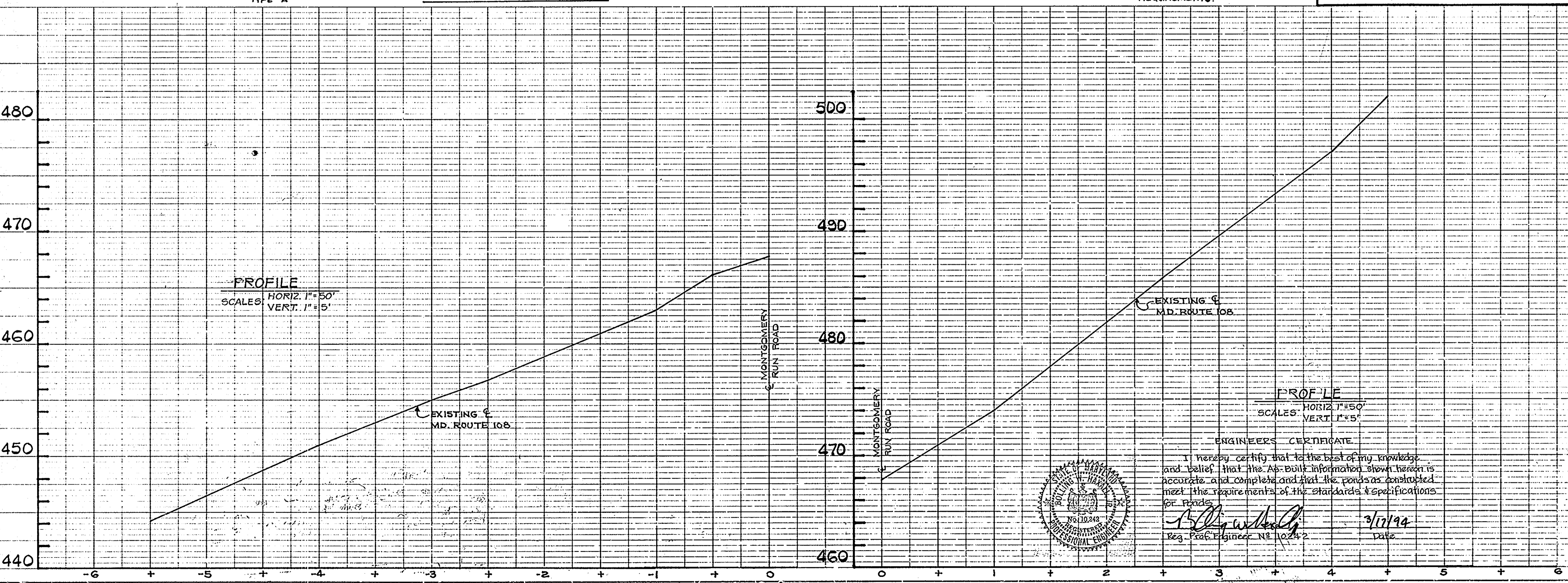
APPROVED: OFFICE OF PLANNING AND ZONING
 [Signature] 4-27-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

KIDDE CONSULTANTS, INC.
 ENGINEERS & PLANNERS - SURVEYORS
 1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
 (301) 953-1821 / 792-6086 (Bell)

SHEET 1 of 14
 DATE DEC. 1986 SCALE AS SHOWN
 KCI JOB # 1694196

MSHA NOTES
 1. CROSS SECTION TO BE AS SHOWN.
 2. CURRENT ROAD PROFILE TO REMAIN.
 3. ALL SHOULDER IMPROVEMENTS TO CONFORM TO MSHA REQUIREMENTS.

PLAN SCALE
 1" = 50'

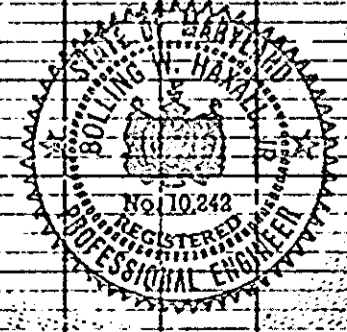


- GENERAL NOTES
- ALL STORM DRAIN & PAVING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST DETAILS AND SPECIFICATIONS OF HOWARD CO. & MD S.E.A.
 - TYPES OF STORM DRAIN STRUCTURES REFER TO THE STANDARD DETAILS OF HOWARD COUNTY & MD S.E.A.
 - TRENCH COMPACTOR FOR STORM DRAINS WITHIN ROADS OR STREET RIGHT OF WAY LIMITS SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD CO. ROAD CODE.
 - INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. FOR THE CONTRACTOR'S USE DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS. BY HAND, AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF CONSTRUCTION.
 - ALL UTILITY LOCATIONS SHALL BE VERIFIED 24 HRS. IN ADVANCE OF CONSTRUCTION, AT 1-800-337-7373.
 - ALL TRAFFIC CONTROL SERVICES, PARKING AND SIGNING TO BE DONE IN ACCORDANCE WITH THE "MANUAL OF TRAFFIC CONTROL DEVICES", 1978 EDITION.
 - SAG AND CRIST VERTICAL CURVES WERE DESIGNED IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME III, ROAD & BRIDGE.
 - PROVIDE CONCRETE SIDEWALK PAVES IN CURBS, WERE SHOWN ON PLAN (MAX. 12:1 SLOPE) SEE HOWARD CO. STD. DETAIL, R-4-103.
 - MINIMUM COVER OF 12" SHALL BE PROVIDED OVER STORM DRAIN PIPES ON ALL AREAS NOT BEING FINAL GRADED BY THESE PLANS.
 - DESIGN SPEED: 35 M.P.H.
 - STREET LIGHTS SHALL BE 175 WATT MODERN MERCURY VAPOR LAMP POST, TOP FIXTURES ON 4 FOOT GRAY FERROUS Poles, INDICATED BY O, OR BELOW ON JOINT DETAIL. PAVEMENT LIGHTS INDICATED BY @.
 - ALL HORIZONTAL AND VERTICAL CONTROL BASED ON MARYLAND STATE DATA.
 - EXISTING TOPOGRAPHY SHOWN WAS FLOWN FEB. 1985.

INDEX OF SHEETS

| SHEET | TITLE |
|---------------|---|
| 1 of 14 | Road Improvement, MD Rte 108 |
| 2, 3 of 14 | Road Plan & Profile, Montgomery Run Rd. |
| 4, 5 of 14 | Road Plan & Profile, Falls Run |
| 6, 7, 8 of 14 | Grading & Sediment Control |
| 9 of 14 | Sediment Control Detail Sheet |
| 10, 11 of 14 | Road Plan & Profile Detail Sheet |
| 12 of 14 | S.W.M. Detail Sheet, Pond #1 |
| 13 of 14 | S.W.M. Detail Sheet, Pond #2 |
| 14 of 14 | Drainage Area Map |

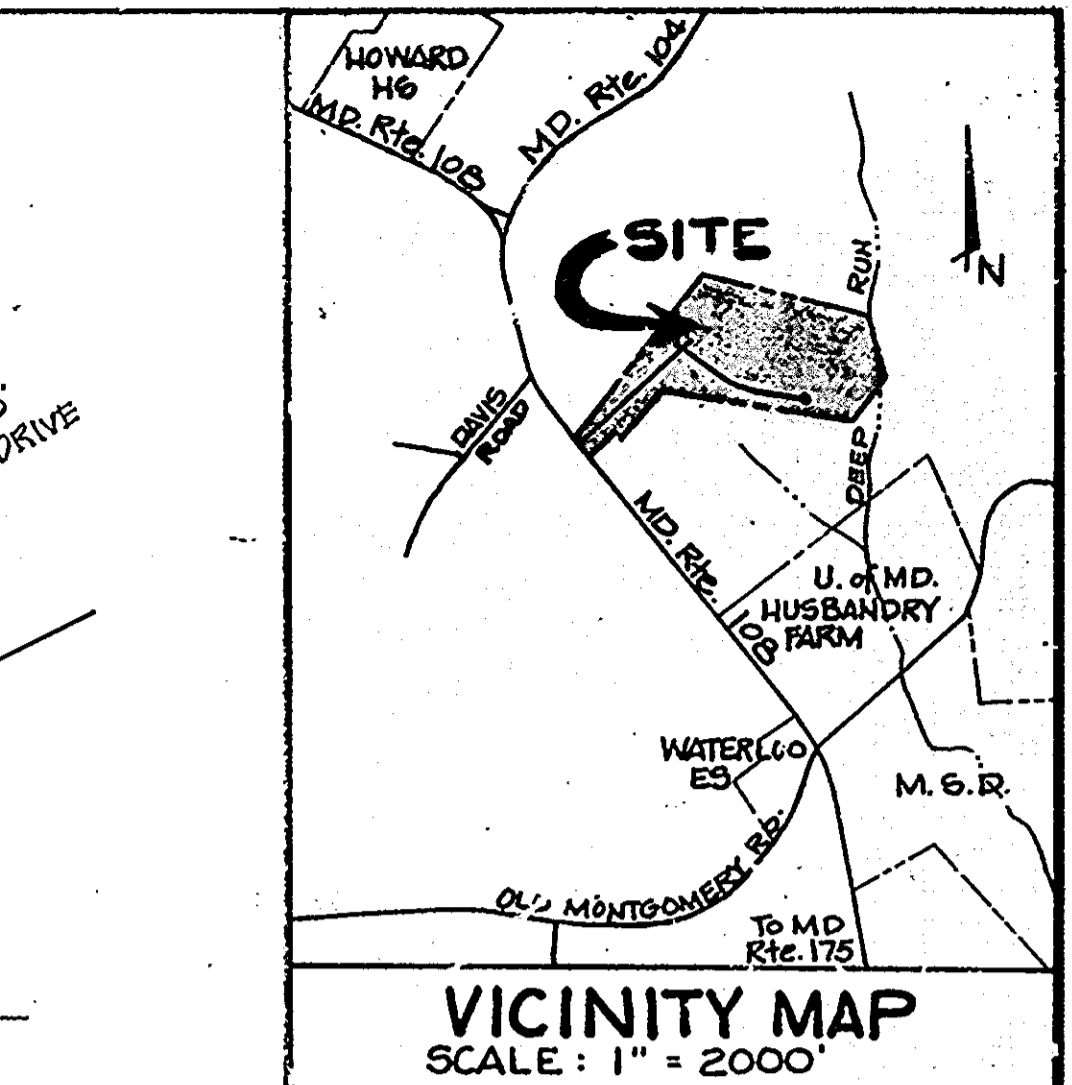
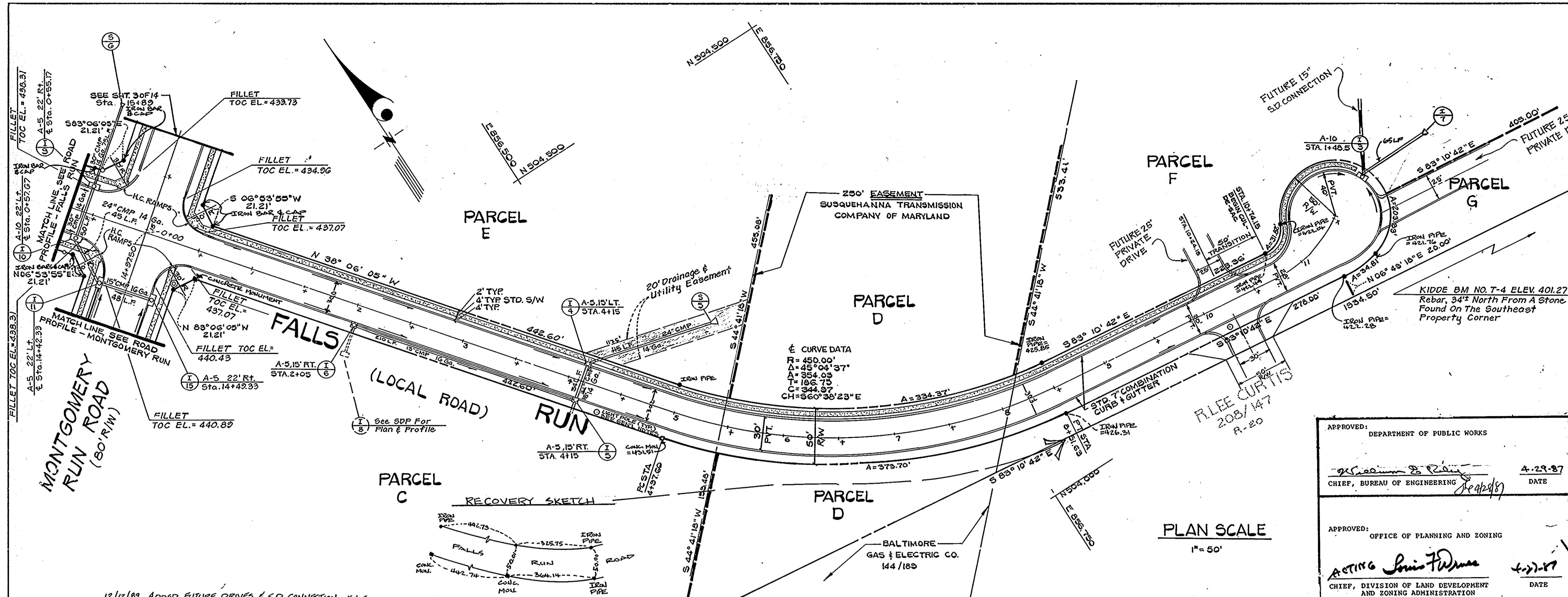
ENGINEERS CERTIFICATE
 I hereby certify that to the best of my knowledge and belief that the As-Built information shown herein is accurate and complete and that the ponds as constructed meet the requirements of the standards & specifications for ponds.
 [Signature] 3/17/92
 Reg. Prof. Engineer No. 10242 Date



1262

PLAN
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: 4-29-87
 NO. OF SHEETS: 14
 SHEET NO.: 1

PROFILE
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: 4-29-87
 NO. OF SHEETS: 14
 SHEET NO.: 1



**ROAD PLAN & PROFILE
 FALLS RUN**

VILLAGE OF
MONTGOMERY RUN
 SEC. 1/1

TAX MAPS 31437 PARCEL 1804285
 1ST ELEC. DIST. HOWARD CO., MD.

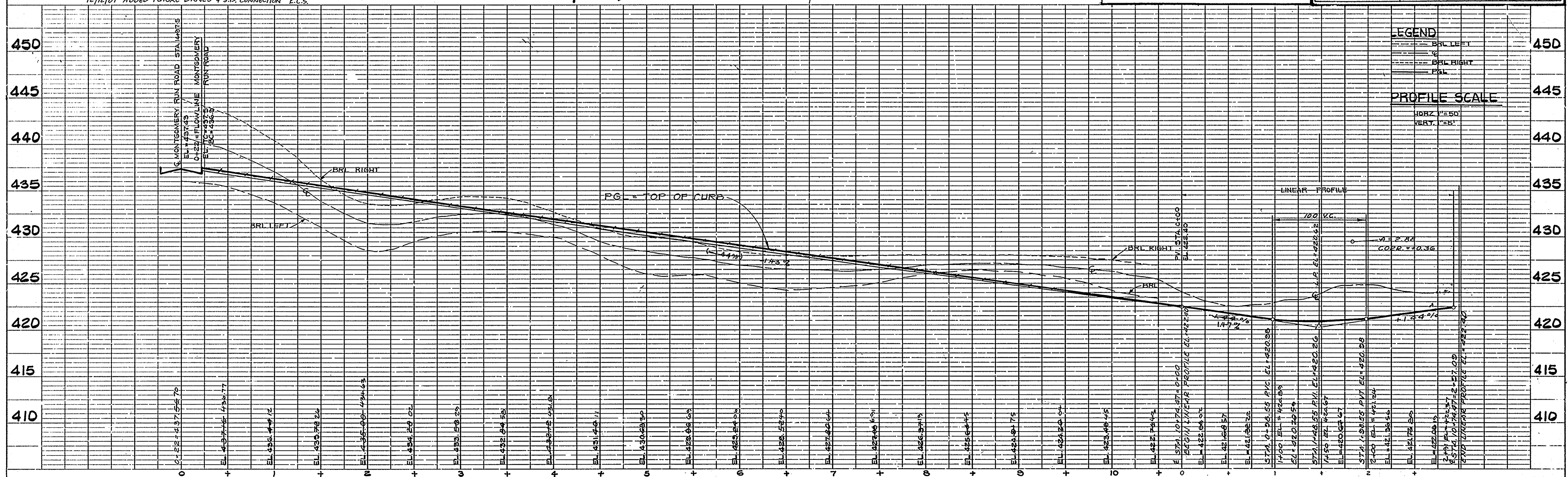
APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] DATE 4-29-87
 CHIEF, BUREAU OF ENGINEERING

APPROVED: OFFICE OF PLANNING AND ZONING
 [Signature] DATE 4-29-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

DEVELOPER:
 NEMHISS LTD. PARTNERSHIP
 6615 Reisterstown Road
 Suite 201 Balt. Md. 21215
 301-358-4934

ENGINEERS & SURVEYORS:
KIDDE CONSULTANTS, INC.
 1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
 (PASH.) (301) 953-1821 / 792-8065 (Balt.)

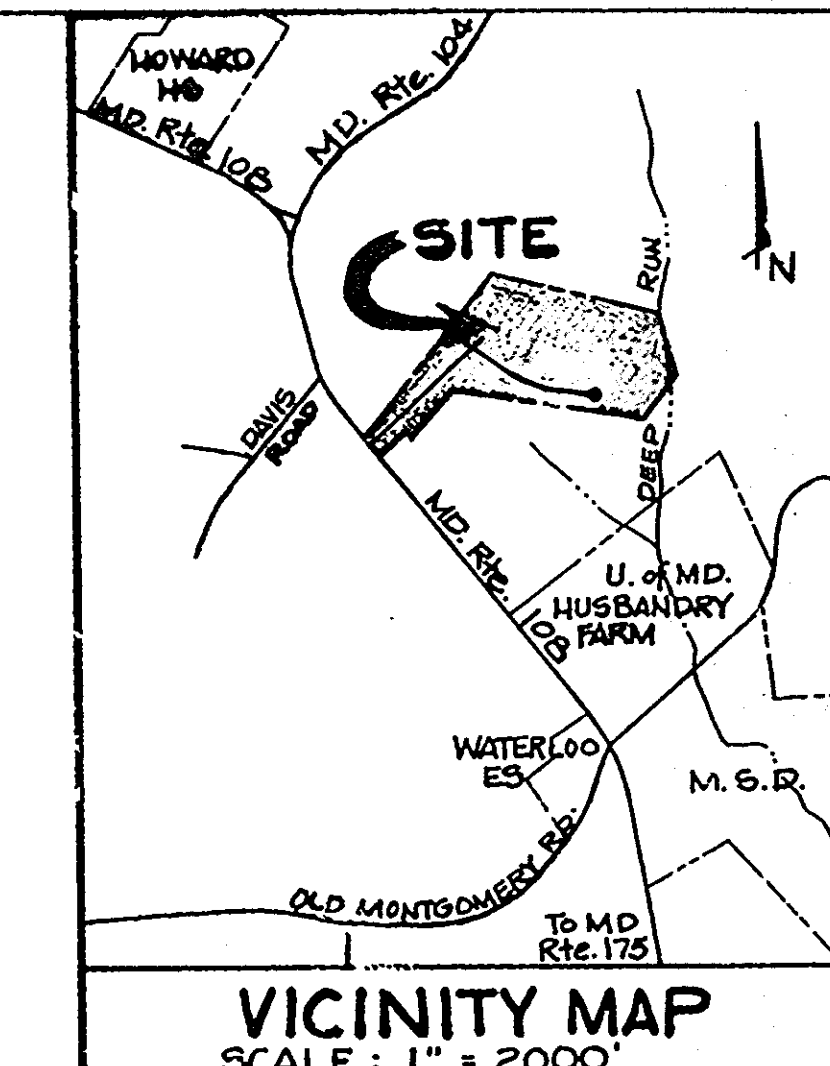
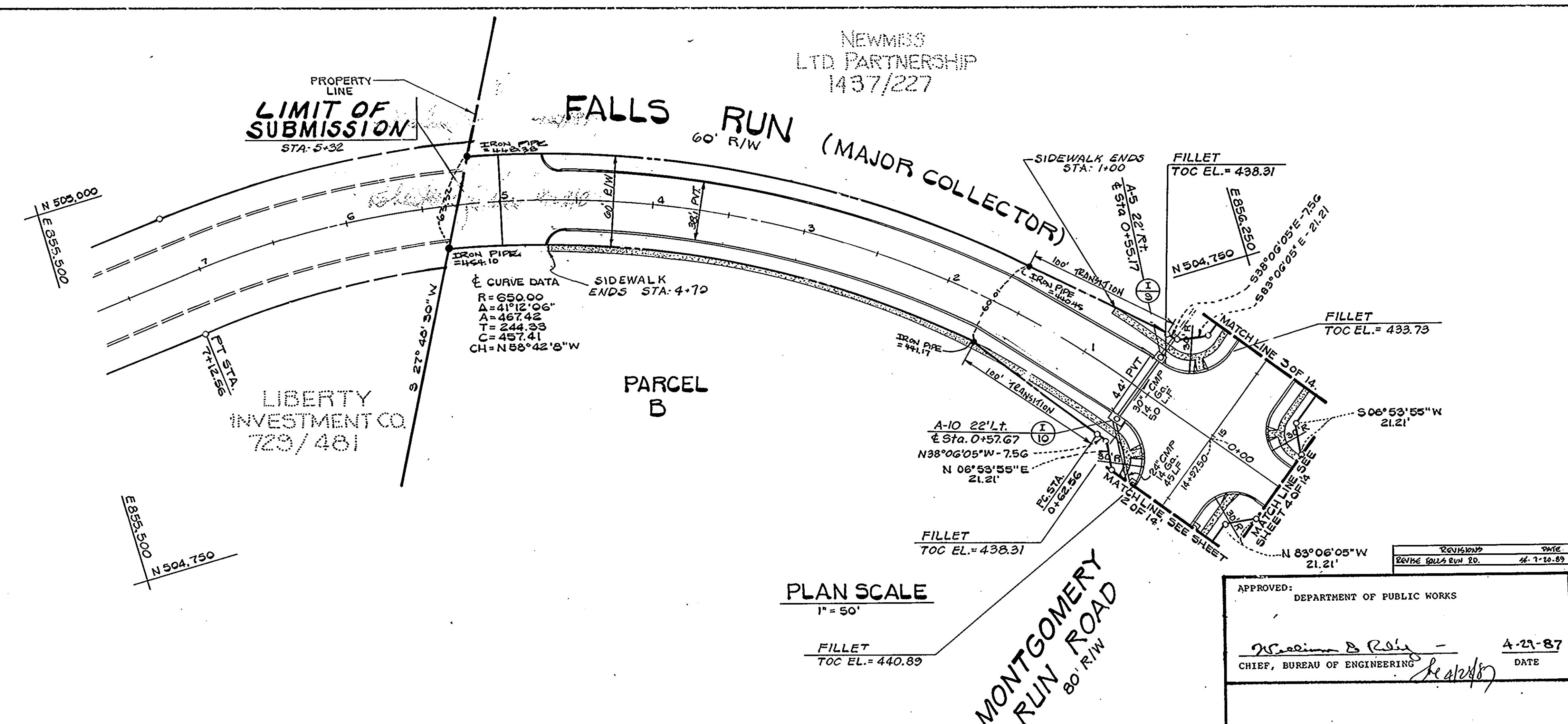
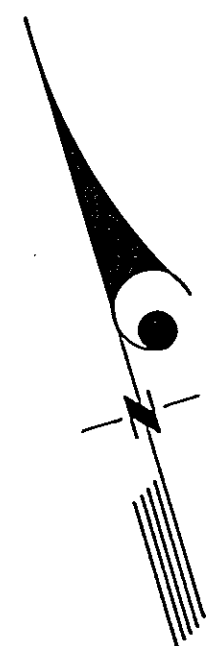
SHEET 4 OF 14.
 DATE DEC., 1986 SCALE AS SHOWN
 KCI JOB # 1684136



1262

PLAN
 DRAWN BY: [blank]
 CHECKED BY: [blank]
 DATE: [blank]
 NO. [blank]

PROFILE
 DRAWN BY: [blank]
 CHECKED BY: [blank]
 DATE: [blank]
 NO. [blank]



PLAN SCALE
 1" = 50'

APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] 4-21-87
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: OFFICE OF PLANNING AND ZONING
 [Signature] 4-27-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

ROAD PLAN & PROFILE
FALLS RUN

VILLAGE OF
MONTGOMERY RUN

SEC. 1/1
 TAX MAPS 31437 PARCEL 180+285
 1ST ELEC. DIST. HOWARD CO., MD.

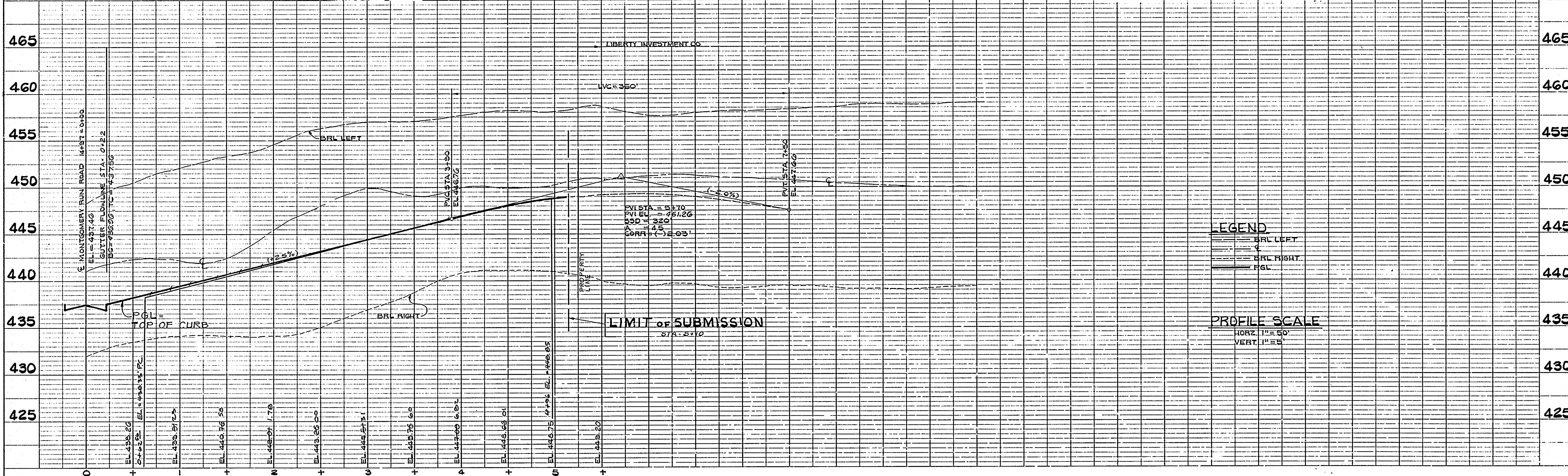
OWNER:
 NEWMISS LTD. PARTNERSHIP
 6615 Reisterstown Road
 Suite 201 Balt., Md. 21215
 301-358-4934

DEVELOPER:
 HANES & HANES, INC.
 6415 Reisterstown Road,
 BALTIMORE, MD 21215

KIDDE CONSULTANTS, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 1100 WEST STREET / SUITE 105 / LUMBER, MD 20707
 (Wash.) (301) 953-1621 / 792-6655 (toll.)

SHEET 5 OF 14.

DATE DEC., 1986 SCALE AS SHOWN
 KCI JOB # 1684136



LEGEND
 --- BRL LEFT
 --- BRL RIGHT
 --- PGL

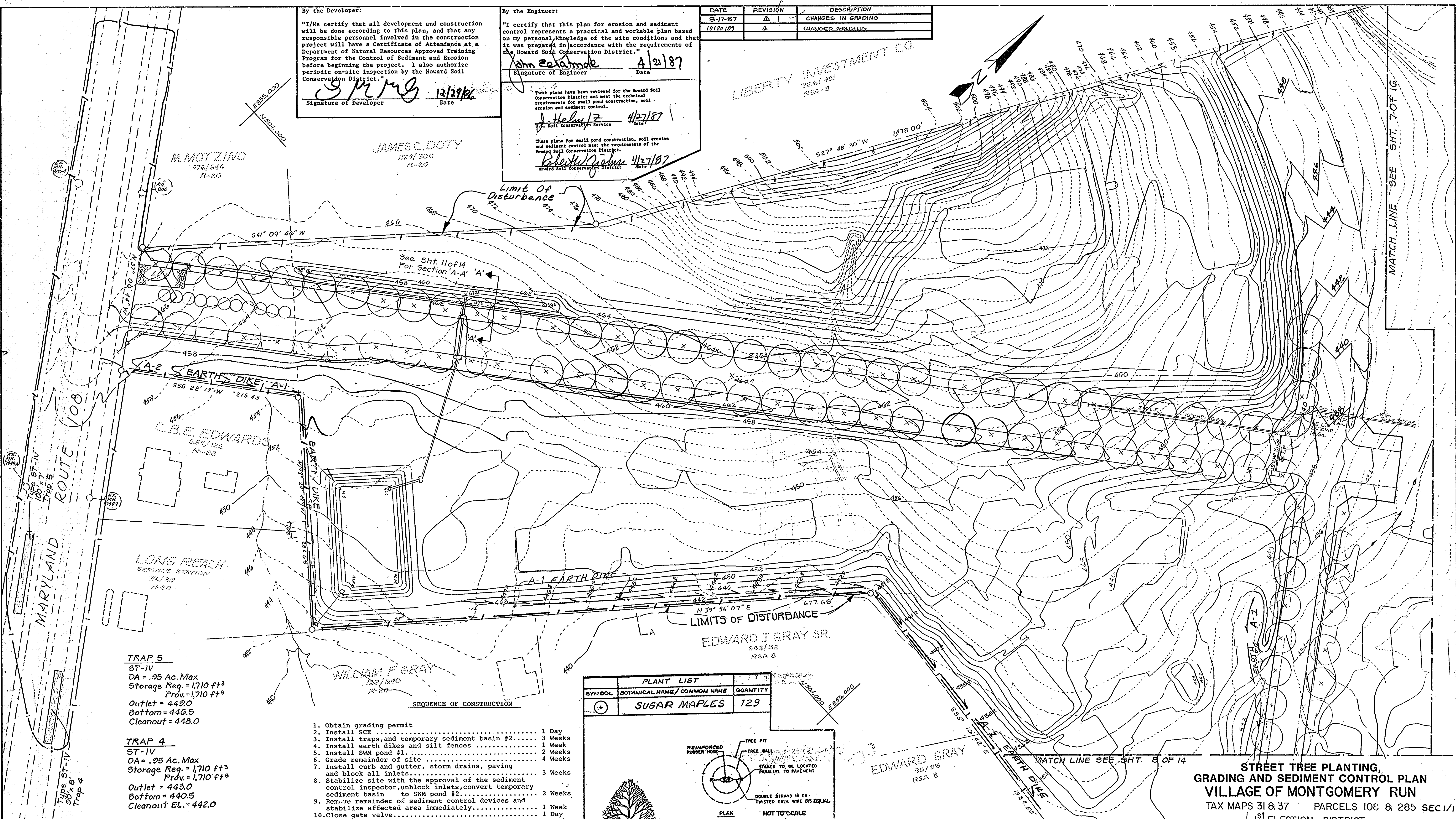
PROFILE SCALE
 HORIZ. 1" = 50'
 VERT. 1" = 5'

1262

By the Developer:
 "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 Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."
S.M. Mag 12/29/87
 Signature of Developer Date

By the Engineer:
 "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 Soil Conservation District."
John Eckhardt 4/21/87
 Signature of Engineer Date
J. Helms 4/27/87
 Signature of Engineer Date
Robert J. Johns 4/27/87
 Signature of Engineer Date

| DATE | REVISION | DESCRIPTION |
|----------|----------|--------------------|
| 8-17-87 | A | CHANGES IN GRADING |
| 10/20/87 | A | CHANGED GRADING |



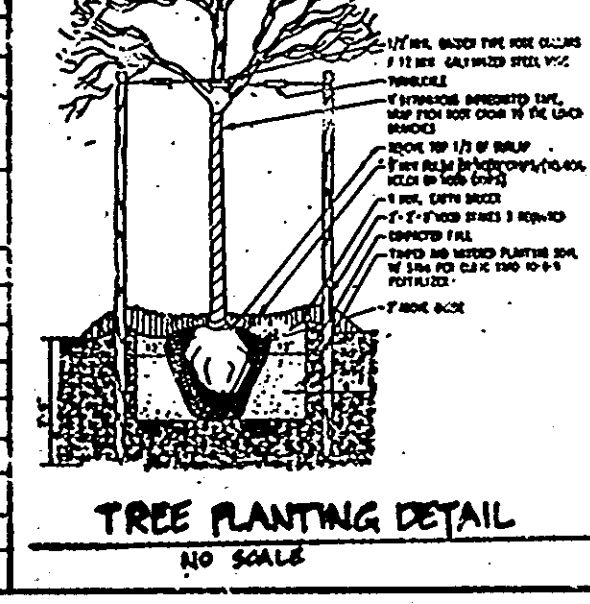
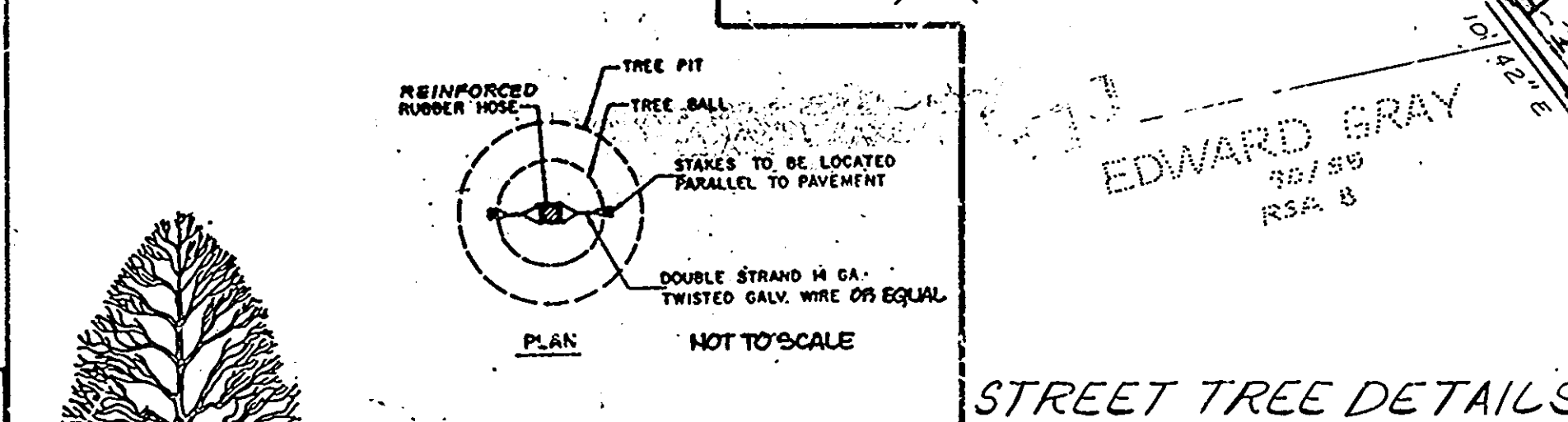
TRAP 5
 ST-IV
 DA = .95 Ac. Max
 Storage Req. = 1,710 ft³
 Prov. = 1,710 ft³
 Outlet = 442.0
 Bottom = 440.5
 Cleanout = 448.0

TRAP 4
 ST-IV
 DA = .95 Ac. Max
 Storage Req. = 1,710 ft³
 Prov. = 1,710 ft³
 Outlet = 442.0
 Bottom = 440.5
 Cleanout EL. = 442.0

- SEQUENCE OF CONSTRUCTION
- Obtain grading permit
 - Install SCE
 - Install traps, and temporary sediment basin #2
 - Install earth dikes and silt fences
 - Install SWM pond #1
 - Grade remainder of site
 - Install curb and gutter, storm drains, paving and block all inlets
 - Stabilize site with the approval of the sediment control inspector, unblock inlets, convert temporary sediment basin to SWM pond #2
 - Remove remainder of sediment control devices and stabilize affected area immediately
 - Close gate valve

PLANT LIST

| SYMBOL | BOTANICAL NAME / COMMON NAME | QUANTITY |
|--------|------------------------------|----------|
| (+) | SUGAR MAPLES | 129 |



APPROVED: DEPARTMENT OF PUBLIC WORKS
OC 4-27-87
 CHIEF, BUREAU OF ENGINEERING
 APPROVED: OFFICE OF PLANNING AND ZONING
ACTING 4-27-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

TRAP SCHEDULE

| TRAP NUMBER | 1 | 2 | 3 | 4 |
|-------------------------|----------|---------|-----------|-----------|
| TRAP TYPE | RIP-RAP | RIP-RAP | RIP-RAP | RIP-RAP |
| DRAINAGE AREA | 8.3 MAX. | 44 MAX. | 14.2 MAX. | .616 MAX. |
| STORAGE REQ'D (cu. ft.) | 14,940 | 7920 | 25560 | 108.8 |
| PROV. | 26,100 | 19,006 | 38,352 | 1,112.6 |
| OUTLET ELEV. | 427.0' | 404.0' | 431.0' | 417.0' |
| WIDTH/EMBANK. | 4.0' | 4.0' | 4.0' | 4.0' |
| BOTTOM/ELEV. | 422.0' | 398.0' | 425.0' | 415.0' |
| TOP/EMBANK. | 429.00' | 405.0' | 433.00' | 418.0' |
| WEIR LENGTH | 10' | 11' | 16' | 4' |
| CLEANOUT ELEV. | 424.50' | 401.0' | 429.00' | 416.0' |
| STORAGE DEPTH | 5' | 6' | 4' | N/A |
| 2-YEAR WSEL | 427.51' | 427.21' | 431.41' | N/A |
| 10-YEAR WSEL | 427.94' | 427.20' | 431.75' | N/A |

OWNER:
 NEWWISE LTD. PARTNERSHIP
 6615 Reisterstown Road
 Suite 205
 Baltimore, MD 21215
 (301) 358-4934
 DEVELOPER:
 MACK & MACKS
 6615 Reisterstown Rd.
 Suite 205
 Baltimore, Md. 21215
 (301) 358-4934

KIDDE CONSULTANTS, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
 (Wash.) (301) 953-1821 / 792-8066 (Balt.)
 (301) 358-4934
 DATE DEC. 1986 SCALE 1"=50'
 SHEET 6 OF 14
 AS-BUILT 87-103

By the Developer:
 "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 Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."
S.M. 18 12/27/86
 Signature of Developer Date

By the Engineer:
 "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 Soil Conservation District."
John E. Carmale 4/21/87
 Signature of Engineer Date

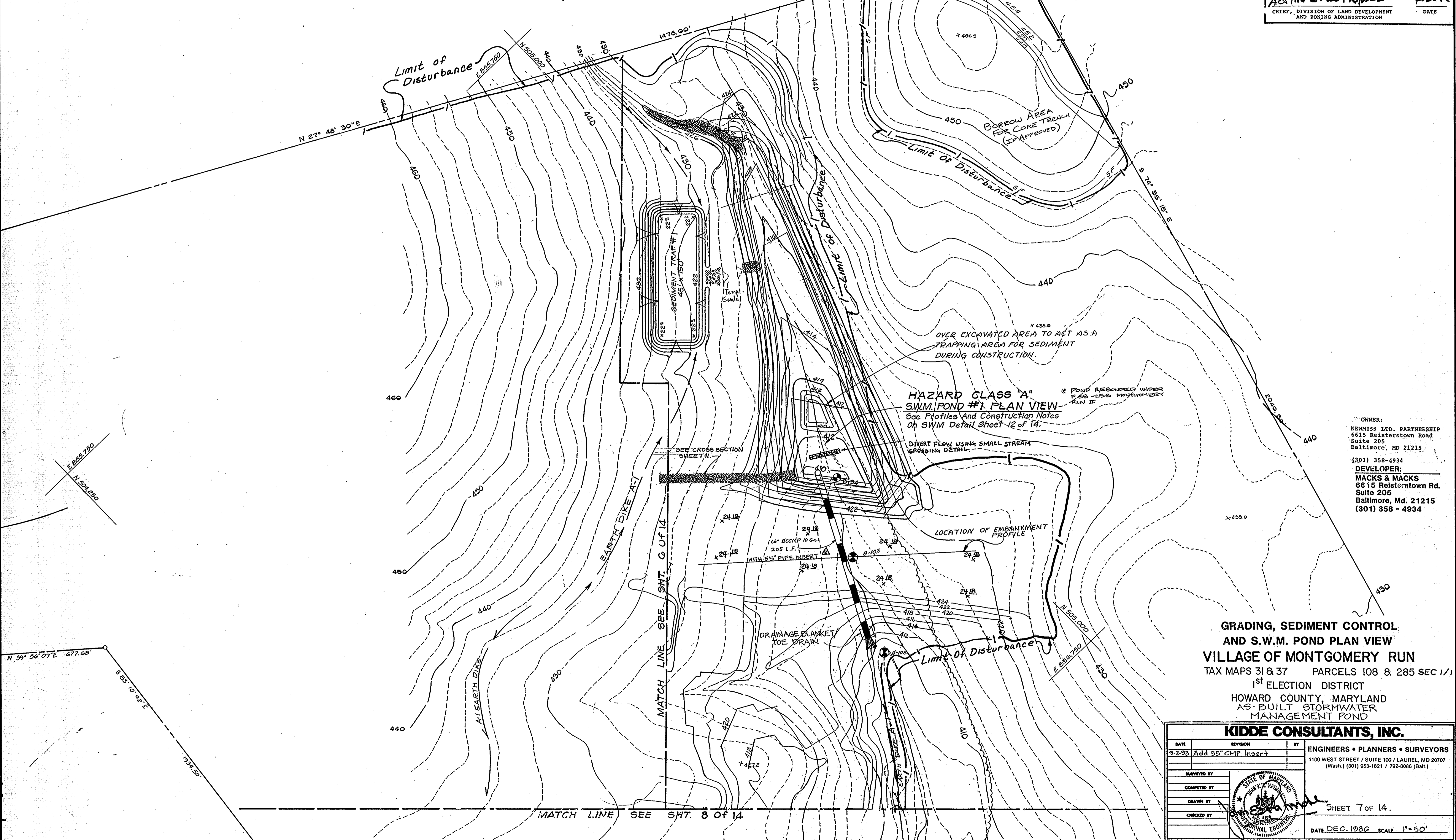
These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements for small pond construction, soil erosion and sediment control.
J. Helms 4/21/87
 U.S. Soil Conservation Service Date

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.
Robert W. Zehn 4/21/87
 Howard Soil Conservation District Date

| DATE | REVISION | DESCRIPTION |
|----------|----------|-------------------------|
| 8-17-87 | △ | GRADING CHANGES |
| 8-26-87 | △ | MOVED 66" BCCMP |
| 10-20-87 | △ | CHANGED GRADING OF POND |

APPROVED: DEPARTMENT OF PUBLIC WORKS
John E. Carmale 4-23-87
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: OFFICE OF PLANNING AND ZONING
ACTING Smith 4-22-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE



OWNER:
 NEWMISS LTD. PARTNERSHIP
 6615 Reisterstown Road
 Suite 205
 Baltimore, MD 21215
 (301) 358-4934

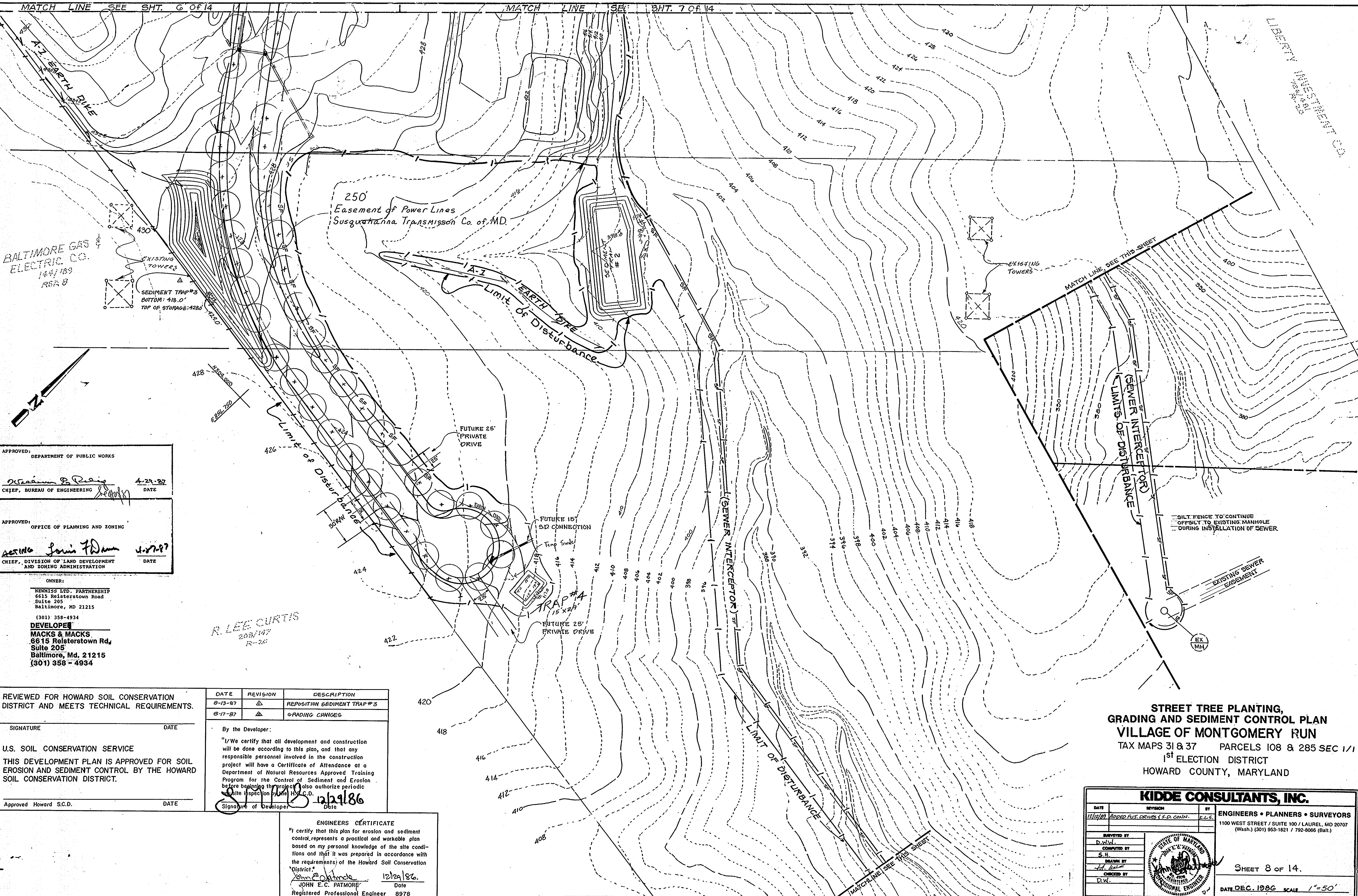
DEVELOPER:
 MACKS & MACKS
 6615 Reisterstown Rd.
 Suite 205
 Baltimore, Md. 21215
 (301) 358-4934

GRADING, SEDIMENT CONTROL,
 AND S.W.M. POND PLAN VIEW
 VILLAGE OF MONTGOMERY RUN
 TAX MAPS 31 & 37 PARCELS 108 & 285 SEC 1/1
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 AS-BUILT STORMWATER
 MANAGEMENT POND

KIDDE CONSULTANTS, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
 (Wash.) (301) 953-1821 / 792-8066 (Balt.)

DATE: 3-2-93
 REVISION: Add 55" CMP Inset
 BY: [Signature]
 SURVEYED BY: [Signature]
 COMPUTED BY: [Signature]
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]

SHEET 7 of 14.
 DATE DEC. 1986 SCALE 1"=50'



BALTIMORE GAS & ELECTRIC CO.
144/189
REA 8

250
Easement of Power Lines
Susquehanna Transmission Co. of MD.

APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 4-29-87
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: OFFICE OF PLANNING AND ZONING
[Signature] 4-27-87
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

OWNER:
NEMISS LTD. PARTNERSHIP
6615 Reisterstown Road
Suite 205
Baltimore, MD 21215
(301) 358-4934

DEVELOPER:
MACKS & MACKS
6615 Reisterstown Rd.,
Suite 205
Baltimore, Md. 21215
(301) 358-4934

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

SIGNATURE DATE

U.S. SOIL CONSERVATION SERVICE

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

Approved Howard S.C.D. DATE

| DATE | REVISION | DESCRIPTION |
|---------|----------|-----------------------------|
| 8-13-87 | Δ | REPOSITION SEDIMENT TRAP #3 |
| 8-17-87 | Δ | GRADING CHANGES |

By the Developer:
"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 Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the H.S.C.D."

[Signature] 12/29/86
Date

ENGINEERS CERTIFICATE

"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 Soil Conservation District."

[Signature] 12/29/86
JOHN E. C. PATMORE Date
Registered Professional Engineer 8978

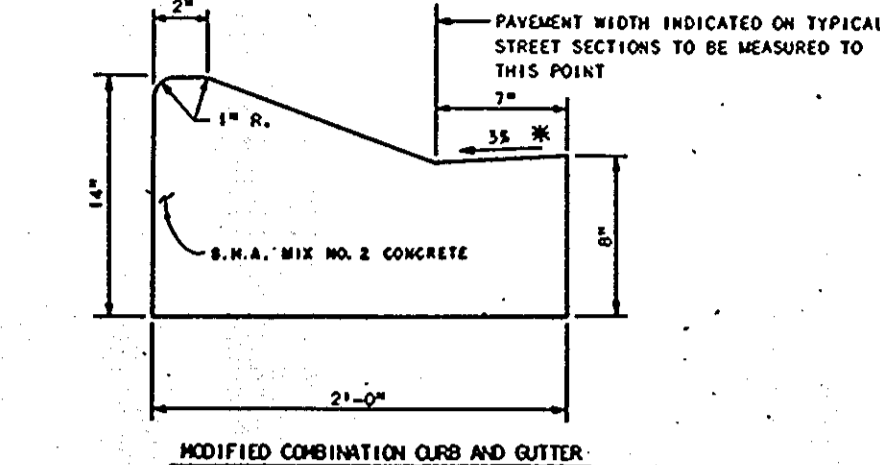
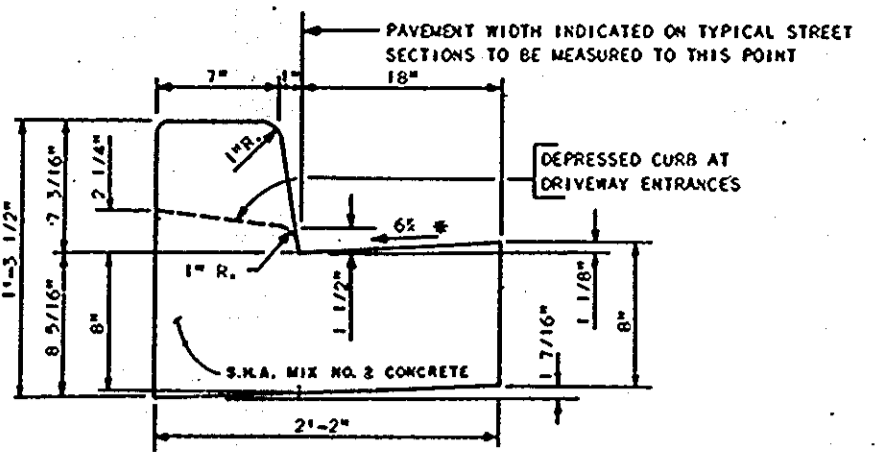
STREET TREE PLANTING,
GRADING AND SEDIMENT CONTROL PLAN
VILLAGE OF MONTGOMERY RUN
TAX MAPS 31 & 37 PARCELS 108 & 285 SEC 1/1
1ST ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
(Wash.) (301) 953-1821 / 792-8088 (Balt.)

| DATE | REVISION | BY |
|----------|---------------------------------|------|
| 12/12/87 | Added Priv. Drives (S.D. Conn.) | D.W. |

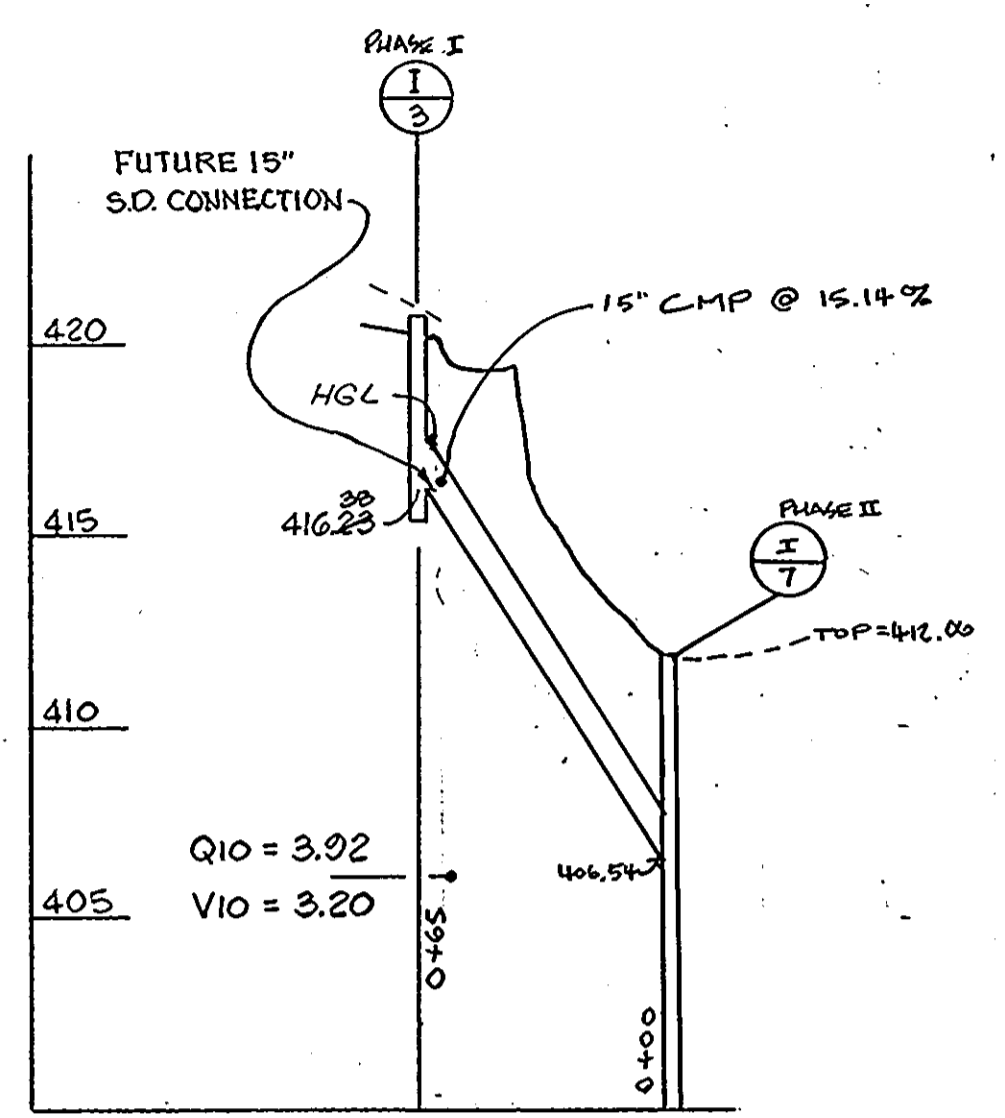
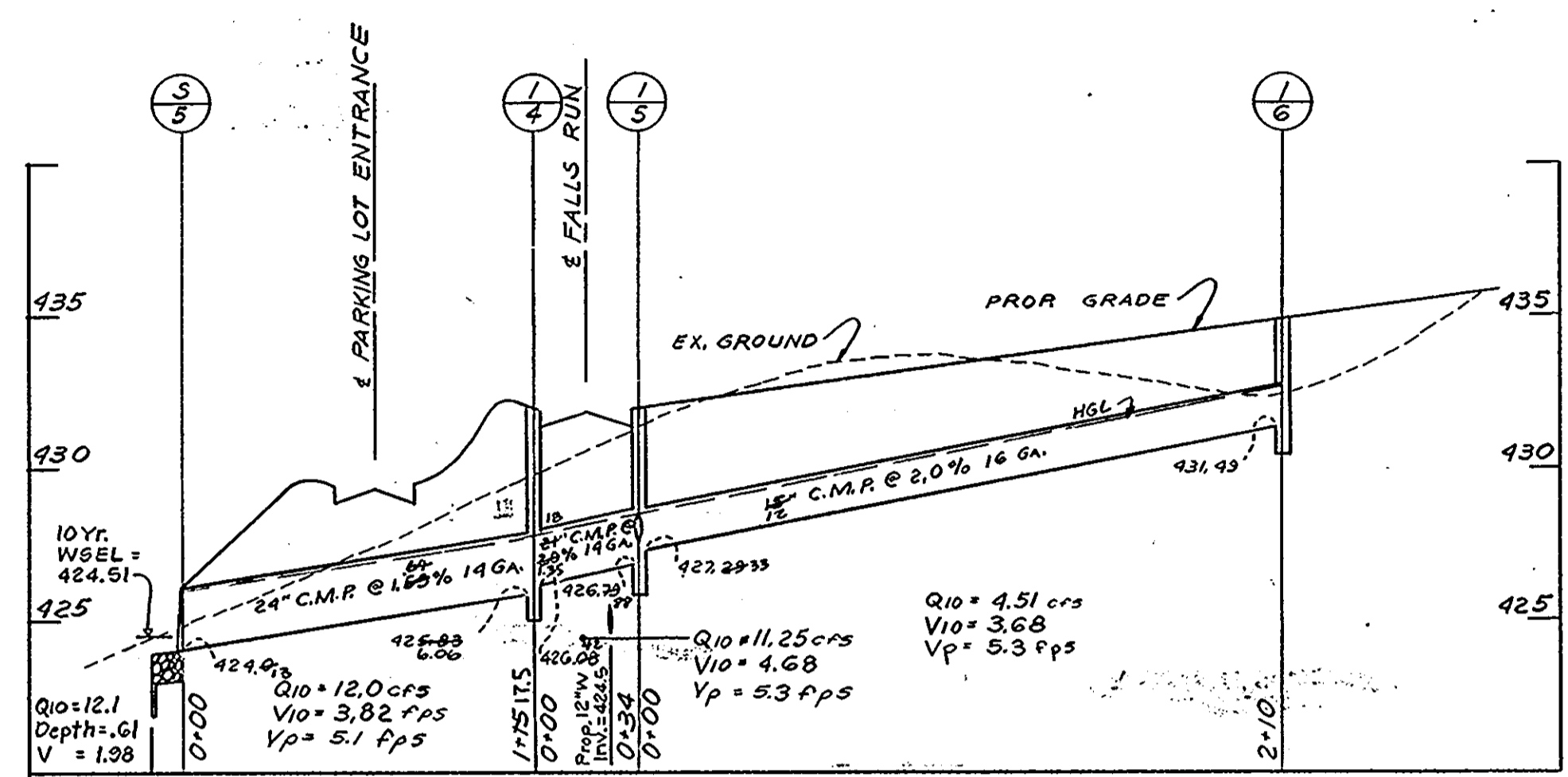
DESIGNED BY: D.W.
COMPUTED BY: S.H.
DRAWN BY: J.L.
CHECKED BY: D.W.

SHEET 8 OF 14.
DATE DEC. 1986 SCALE 1"=50'



GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.

REV. MAR. 1986
 HOWARD COUNTY, MARYLAND
 DEPARTMENT OF PUBLIC WORKS
 APPROVED: [Signature]
 CHIEF, BUREAU OF ENGINEERING

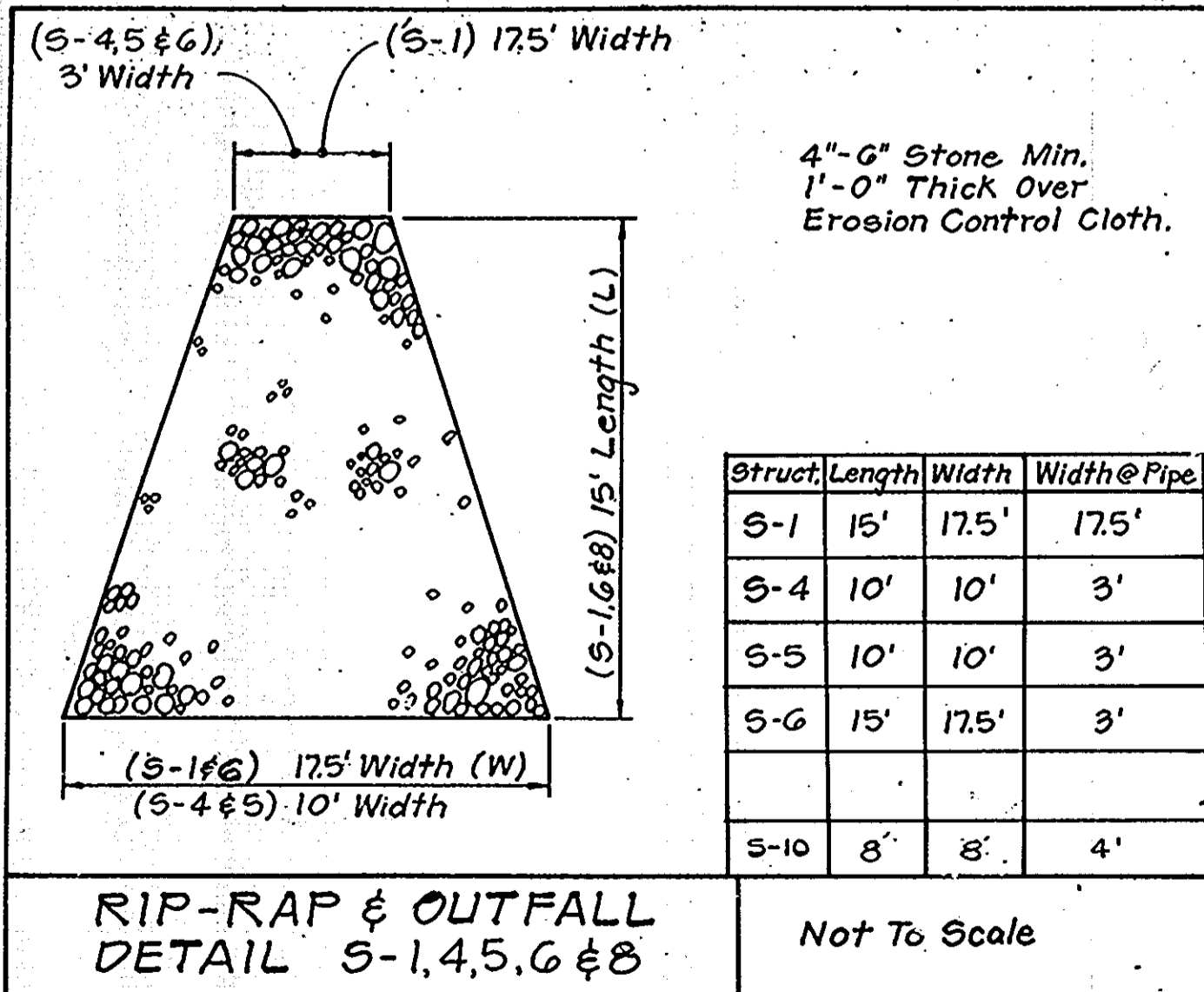
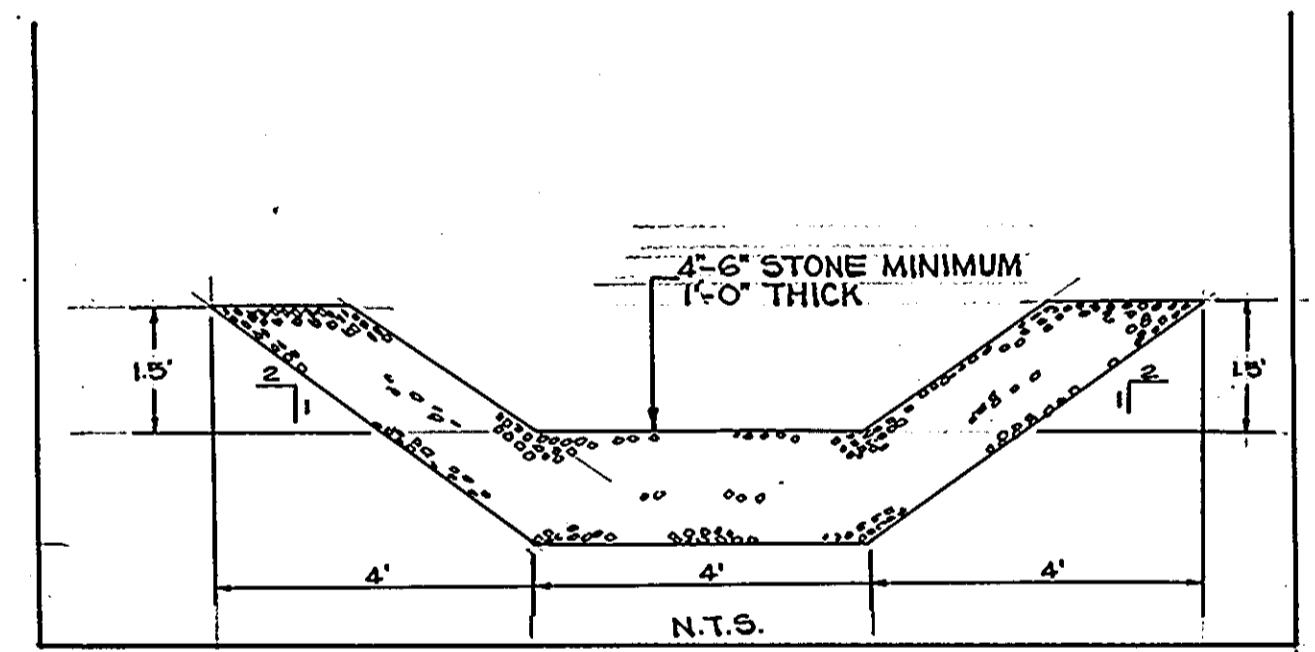


PUBLIC DRAINAGE STRUCTURE SCHEDULE

| No. | Type | Inv. In | Inv. Out | Top El. Upper Lower | Location | Remarks |
|------|--------------|---------|----------|-----------------------------|-------------|-----------------|
| I-3 | A-10 | --- | 416.23 | 420.62 RD | 1+48.57R* | SD 4.02 |
| I-4 | A-5 | 426.08 | 426.08 | 431.95 ^{MR} 431.86 | 4+15 FR | SD 4.01 W/DEF. |
| I-5 | A-5 | 427.29 | 426.79 | 431.95 ^{MR} 431.86 | 4+15 FR | SD 4.01 W/DEF. |
| I-6 | A-5 | 431.49 | 431.49 | 434.99 ^{MR} 434.88 | 2+05 FR | SD 4.01 W/DEF. |
| I-9 | A-5 | 433.5 | 432.5 | 438.47 ^{MR} 438.31 | 0+55.17 FR | SD 4.01 W/DEF. |
| I-10 | A-10 | 434.5 | 434.0 | 438.59 ^{MR} 438.31 | 0+57.67 FR | SD 4.02 W/DEF. |
| I-11 | A-5 | 436.0 | 435.5 | 441.22 ^{MR} 440.84 | 14+42.33 MR | SD 4.01 W/DEF. |
| I-12 | A-5 | 444.00 | 443.75 | 448.72 ^{MR} 448.34 | 13+28.5 MR | SD 4.01 W/DEF. |
| I-13 | A-5 | 455.75 | 455.75 | 459.58 ^{MR} 459.38 | 10+48.5 MR | SD 4.01 W/DEF. |
| I-15 | A-5 | --- | --- | 440.98 ^{MR} 440.42 | 14+49.33 MR | SD 4.01 W/DEF. |
| I-22 | A-10 | 454.58 | 454.48 | 460.3 ^{MR} | 4+50 MR | SD 4.02 |
| I-23 | A-10 | 455.8 | 455.3 | --- | --- | SD 4.02 |
| S-1 | A-8 HEADWALL | 408.0 | 408.0 | --- | --- | SD 5.11 |
| S-2 | A-8 RISER | --- | --- | --- | --- | See SWM DETAILS |
| S-4 | MES | 426.0 | 426.0 | --- | --- | SD 5.61 |
| S-5 | EW | 424.0 | 424.0 | --- | --- | SD 5.21 |
| S-6 | MES | 430.0 | 430.0 | --- | --- | SD 5.61 |
| S-7 | RISER | --- | --- | --- | --- | See SWM DETAILS |
| S-8 | MES | --- | --- | --- | --- | SD 5.61 |
| S-10 | MES | 442.0 | 442.0 | --- | --- | SD 5.61 |
| S-11 | EW | 457.22 | 457.22 | --- | --- | SD 5.21 |
| Z-21 | A-5 | 446.0 | 444.1 | 452.32 | 4+25 MR | SD 4.01 |

NOTE:
 FR = FALLS RUN
 MR = MONTGOMERY RUN
 * = FALLS RUN CUL-DE-SAC
 L.F. STATION

CROSS-SECTION OF RIP-RAP CHANNEL LEADING FROM PROPOSED S-6 TO SWM POND NUMBER 1



| Struct. | Length | Width | Width @ Pipe |
|---------|--------|-------|--------------|
| S-1 | 15' | 17.5' | 17.5' |
| S-4 | 10' | 10' | 3' |
| S-5 | 10' | 10' | 3' |
| S-6 | 15' | 17.5' | 3' |
| S-10 | 8' | 8' | 4' |

By the Developer:
 "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 Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."
 Signature of Developer: [Signature] Date: 12/21/86
 Print name below signature

By the Engineer:
 "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 Soil Conservation District."
 Signature of Engineer: [Signature] Date: 4/21/87
 Print name below signature

Reviewed for HOWARD S.C.D. and meets Technical Requirements
 [Signature] Date: 4/27/87
 U.S. Soil Conservation Service

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
 [Signature] Date: 4/27/87
 Howard S.C.D.

OWNER:
 NENMIS LTD. PARTNERSHIP
 6615 Reisterstown Road
 Suite 205
 Baltimore, MD 21215
 (301) 358-4934

DEVELOPER:
 MACKS & MACK'S
 6615 Reisterstown Rd.
 Suite 205
 Baltimore, Md. 21215
 (301) 358-4934

APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] Date: 4-22-87
 CHIEF, BUREAU OF ENGINEERING

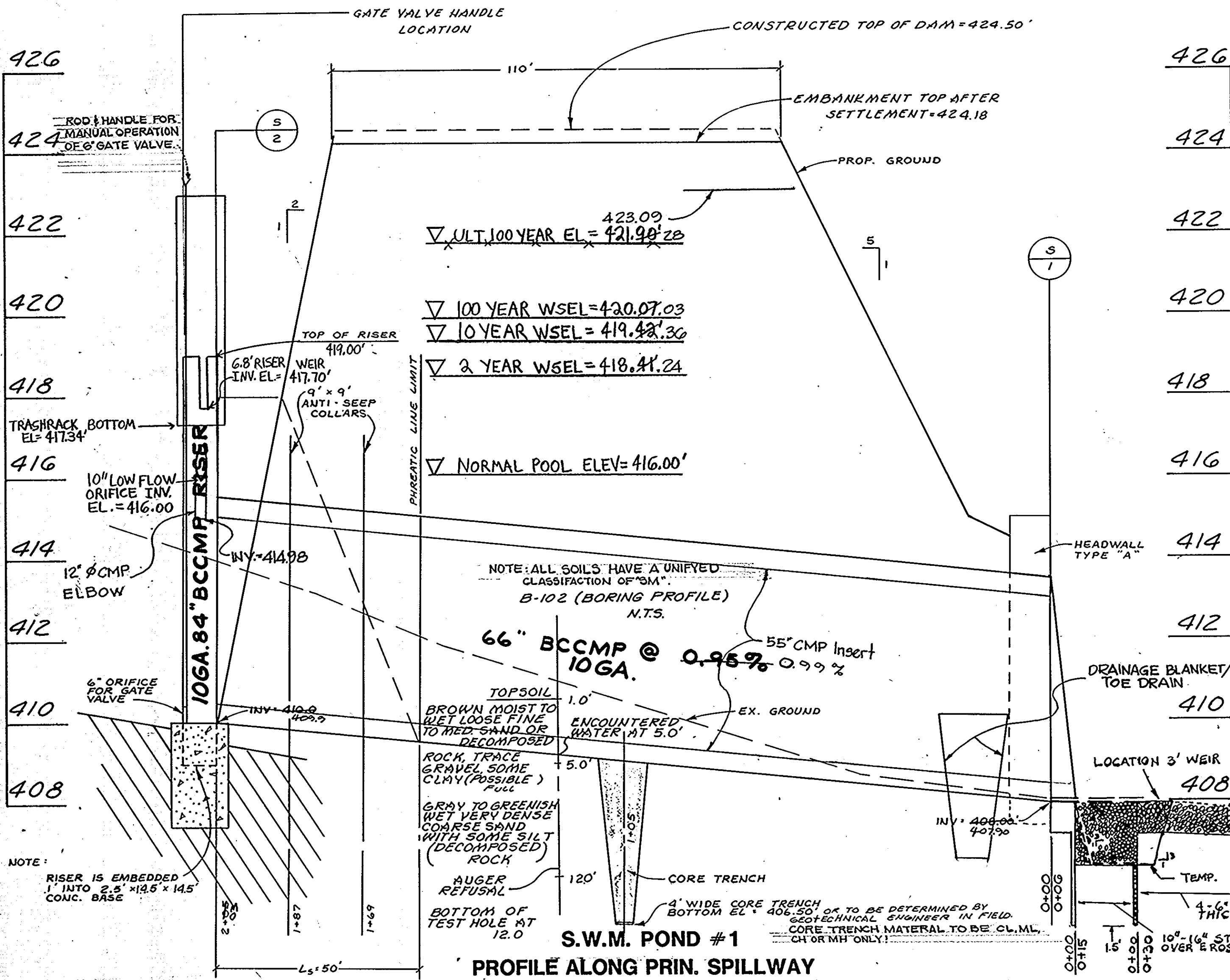
APPROVED: OFFICE OF PLANNING AND ZONING
 [Signature] Date: 4-27-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

ROAD PLAN & PROFILE
 DETAIL SHEET
 FOR
 VILLAGE OF MONTGOMERY RUN
 TAX MAPS 31 & 37 PARCELS 108 & 285
 1ST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

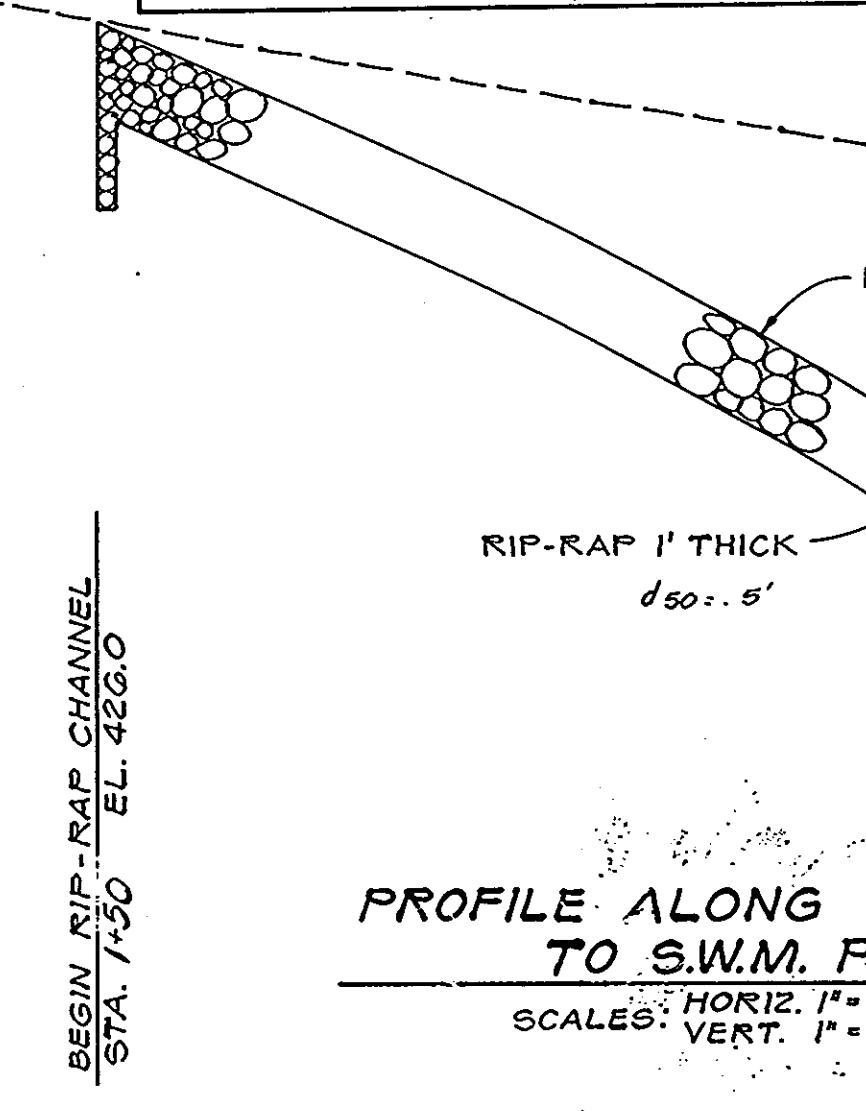
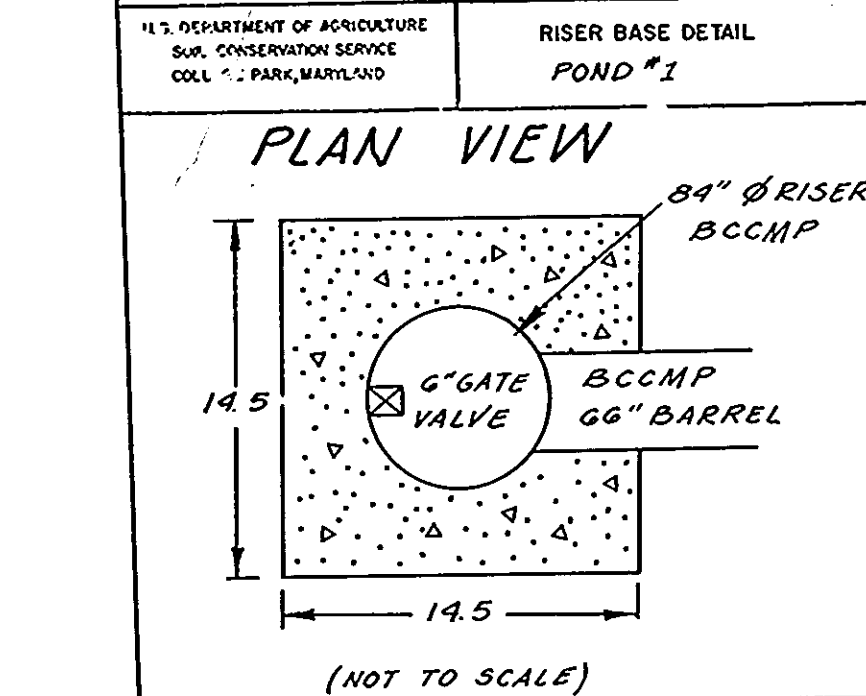
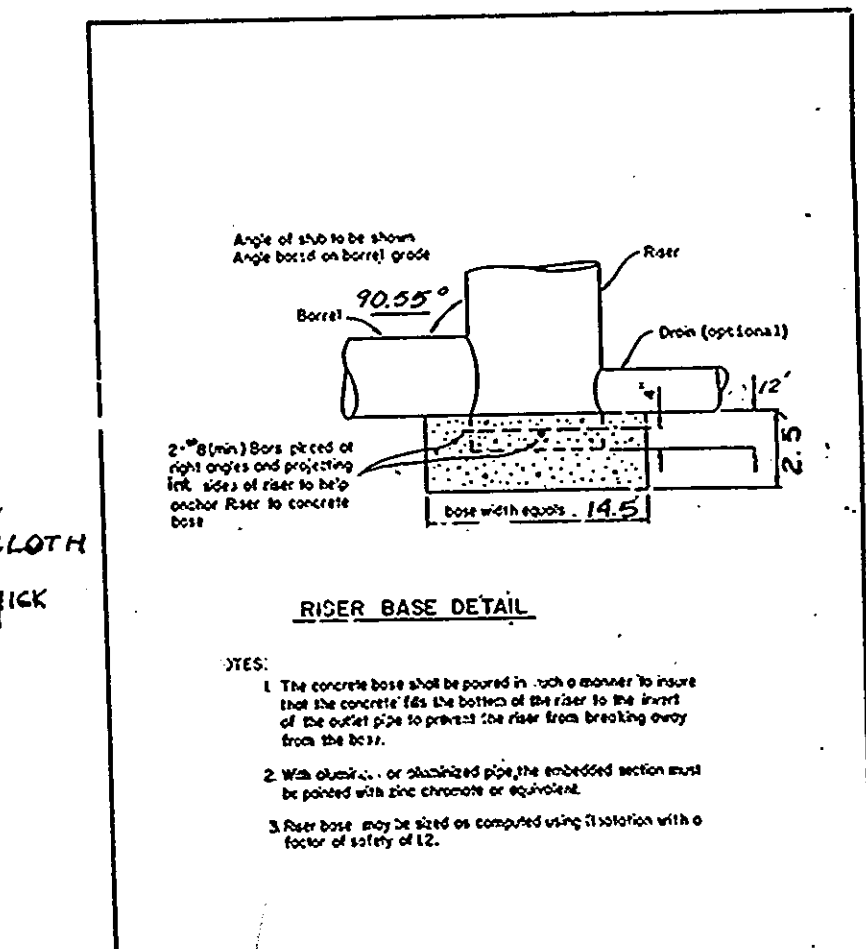
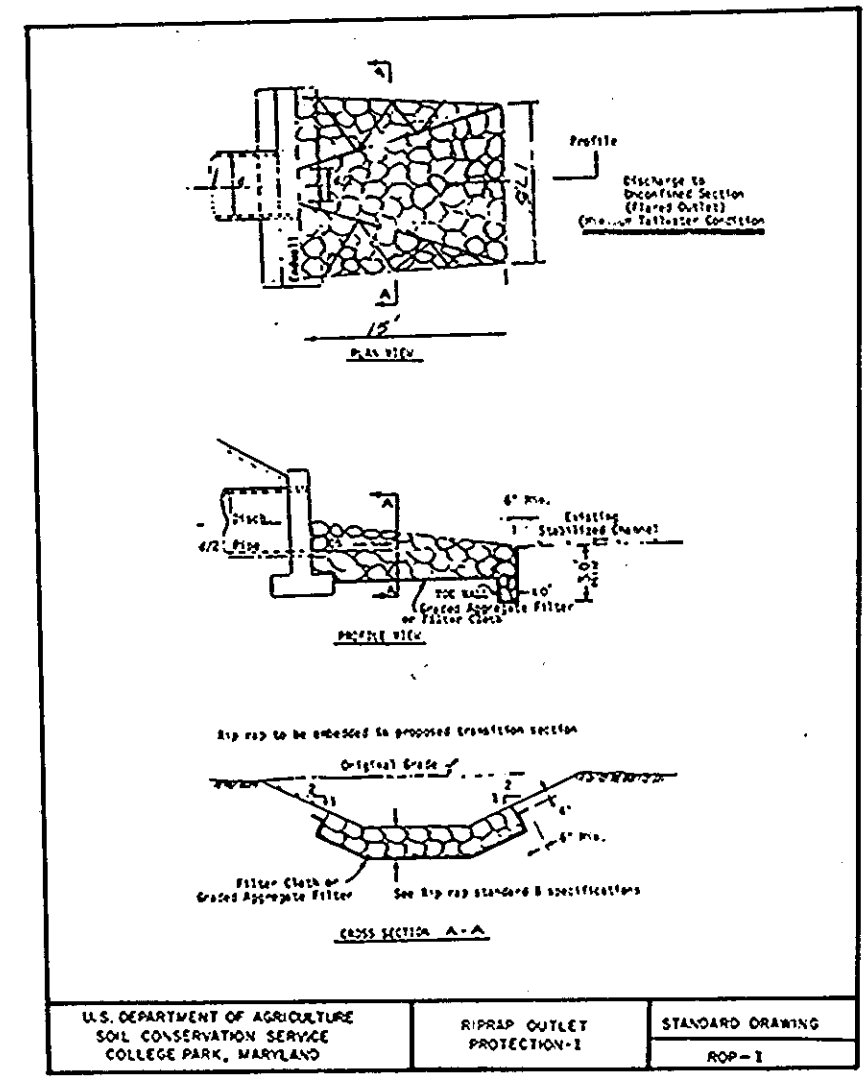
KIDDE CONSULTANTS, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
 (Wash.) (301) 953-1821 / 792-8088 (Ball.)

DATE: 12/21/86
 REVISION: REVISED PROFILE
 BY: KLS
 SURVEYED BY: [Signature]
 COMPUTED BY: [Signature]
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]

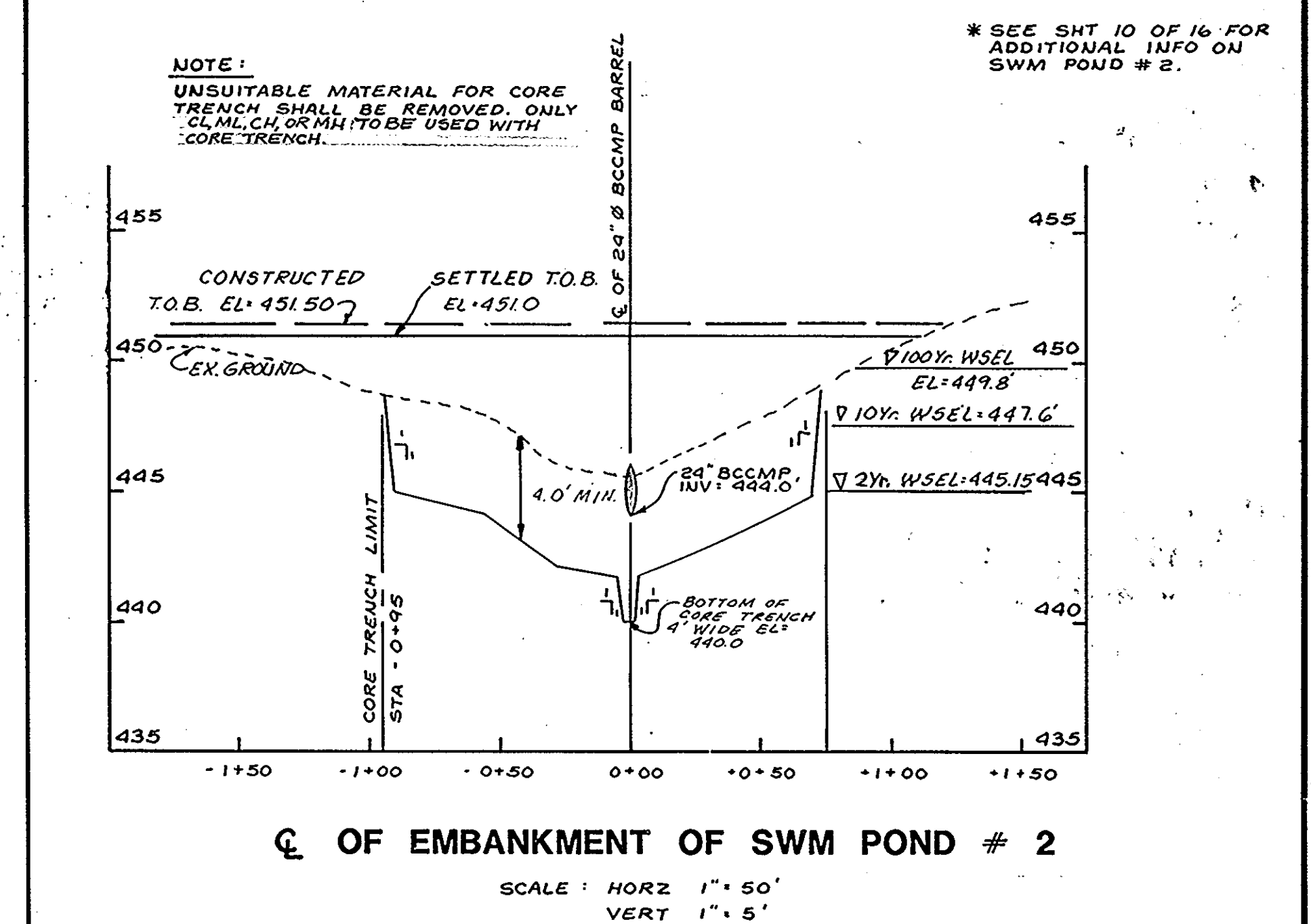
SHEET 11 of 14.
 DATE DEC. 1986 SCALE AS SHOWN



**S.W.M. POND #1
PROFILE ALONG PRIN. SPILLWAY**
SCALE: VERTICAL 1" = 2'
HORIZONTAL 1" = 20'

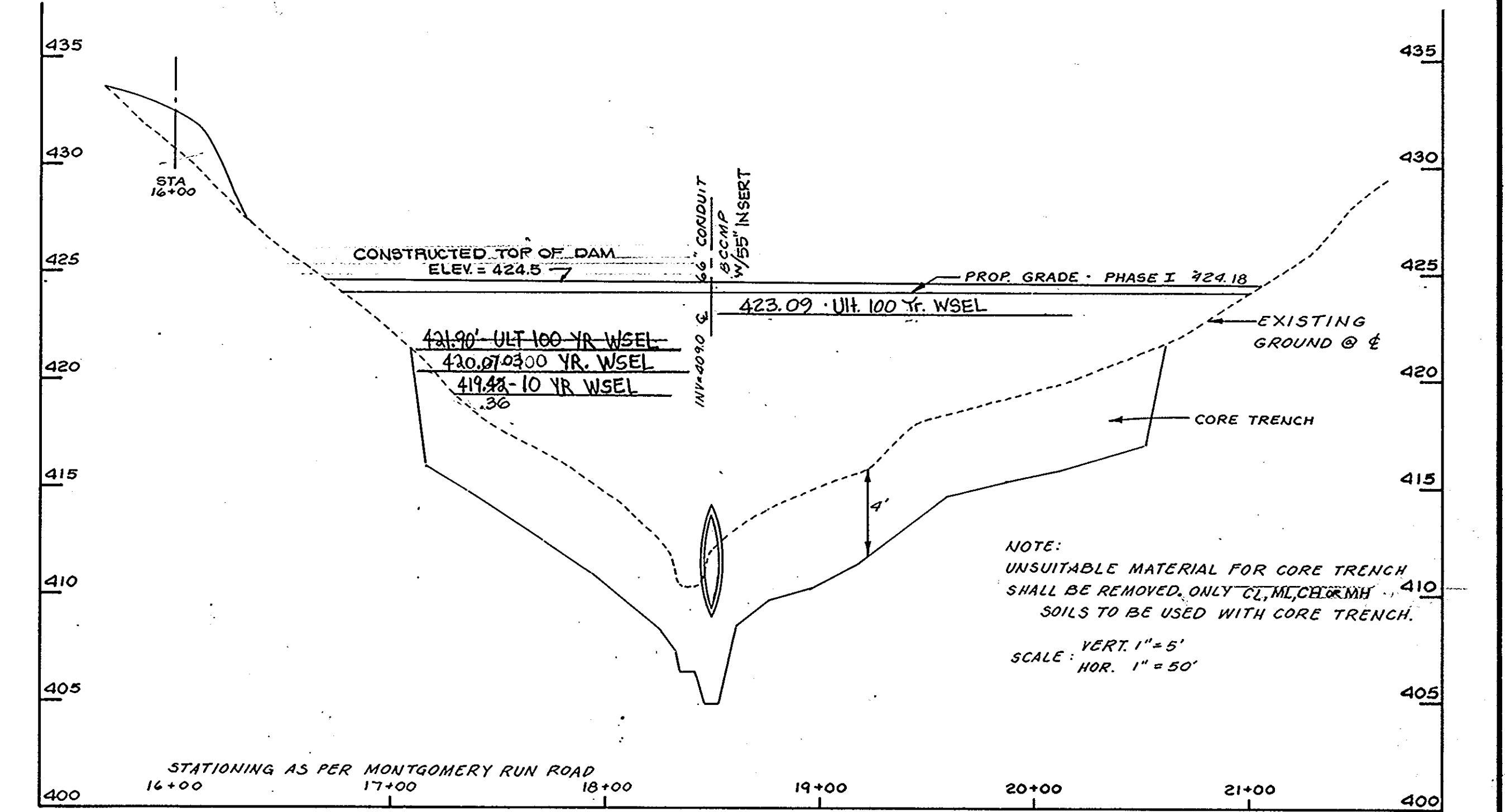


**PROFILE ALONG CHANNEL
TO S.W.M. POND**
SCALE: HORIZ. 1" = 20'
VERT. 1" = 2'

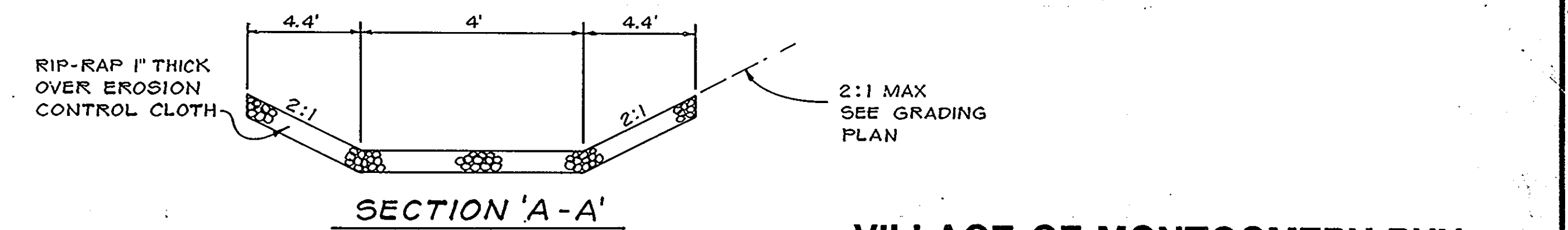


**SECTION 1/1
S.W.M. DETAIL SHEET
FOR POND #1 &
CHANNEL #2**

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



PROFILE ALONG CENTERLINE OF EMBANKMENT S.W.M. POND #1



SECTION 'A-A'
N.T.S.

VILLAGE OF MONTGOMERY RUN

**SECTION 1/1
S.W.M. DETAIL SHEET
FOR POND #1 &
CHANNEL #2**

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
(Wash.) (301) 953-1821 / 792-8088 (Balt.)

| DATE | REVISION | BY |
|----------|--------------------------|------|
| 10-20-89 | CHANGED PROFILE W.S.E.L. | P.C. |

DATE DEC., 1986 SCALE AS SHOWN

OWNER:
NEWISS LTD. PARTNERSHIP
6615 Reisterstown Road
Suite 205
Baltimore, MD 21215
(301) 358-4934

DEVELOPER:
MACKS & MACKS
6615 Reisterstown Rd.
Suite 205
Baltimore, Md. 21215
(301) 358-4934

SEDIMENT CONTROL & POND CONSTRUCTION

I, the Developer:
Lawrence N. Macks

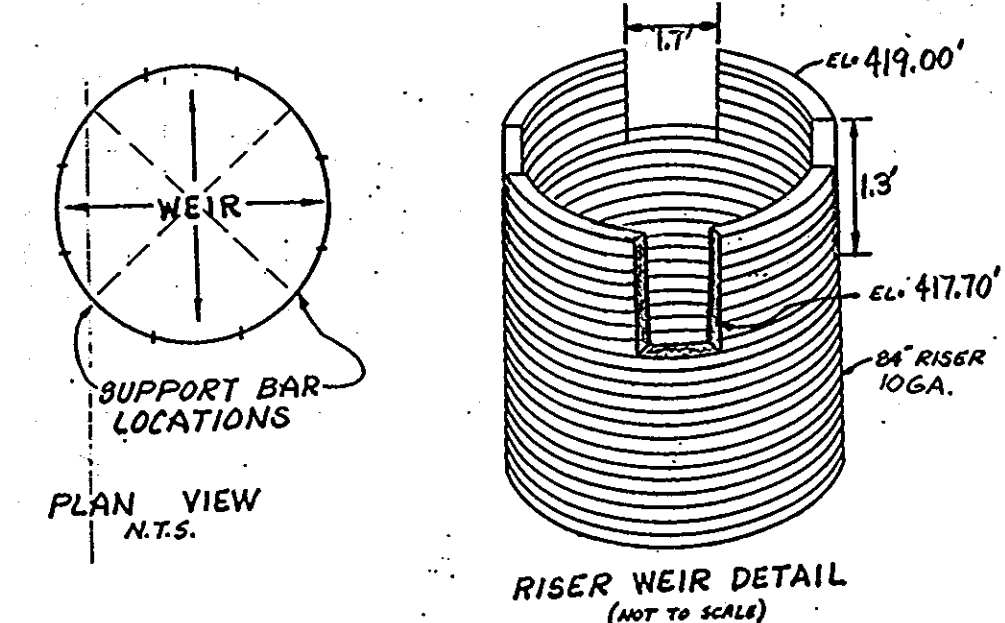
I certify that all development and/or construction shall be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will 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.

Signature of Developer: Lawrence N. Macks
Date: 12/24/86

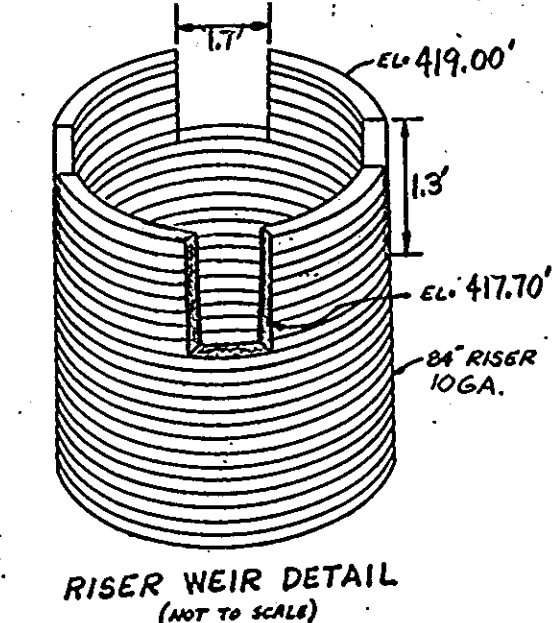
I, the Engineer:
Louis J. Danne

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 must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

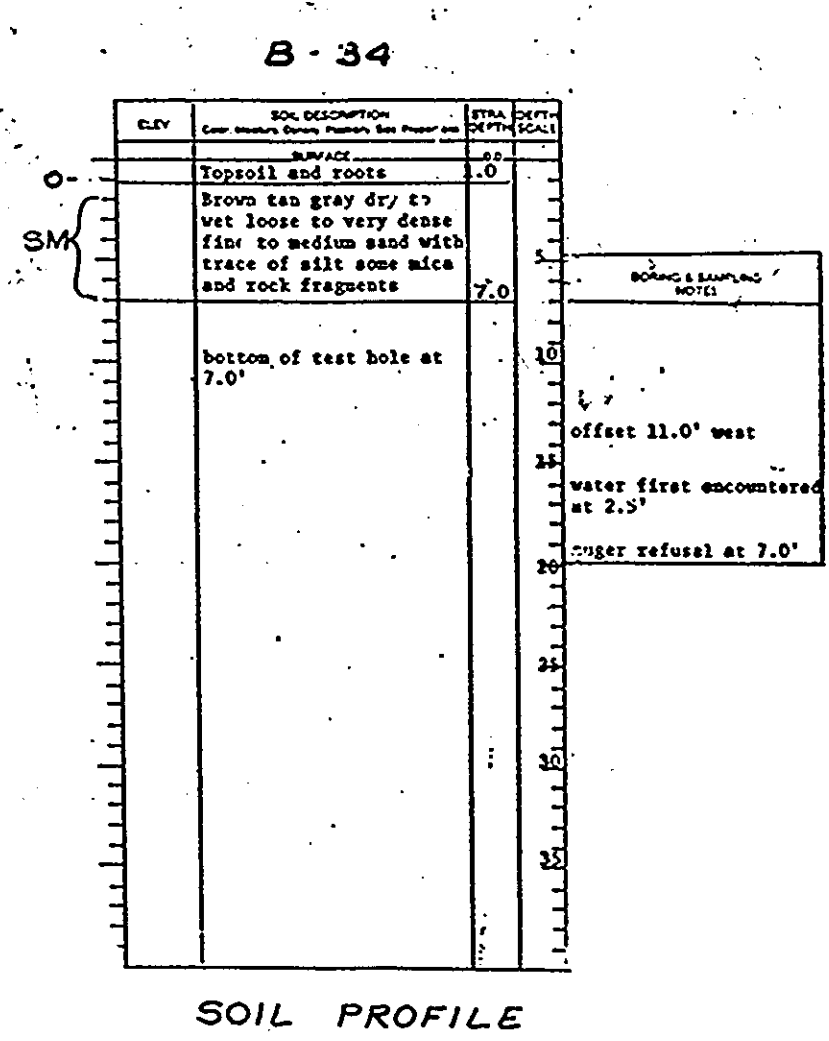
Signature of Engineer: Louis J. Danne
Date: 4/27/87



**PLAN VIEW
N.T.S.**



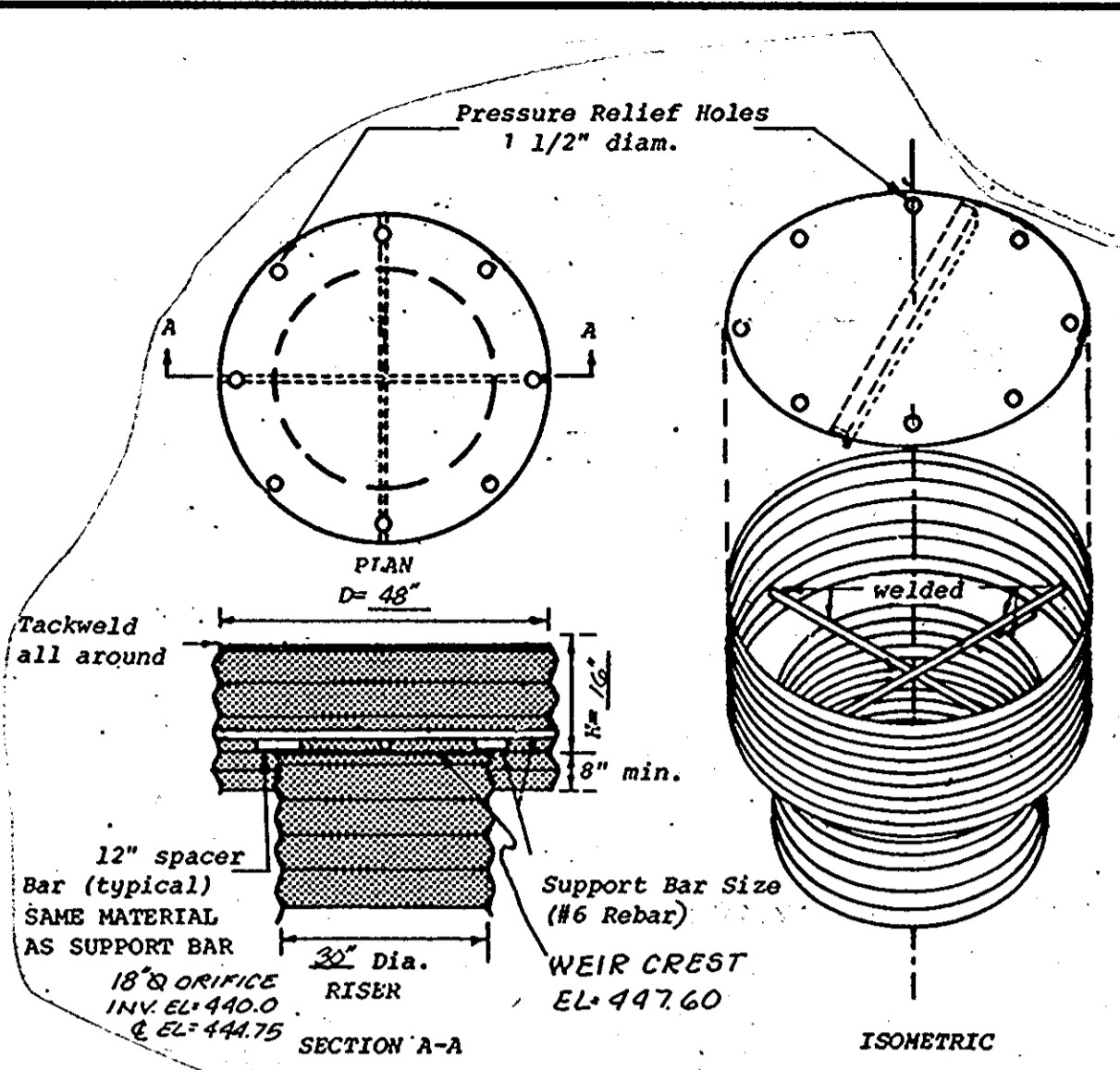
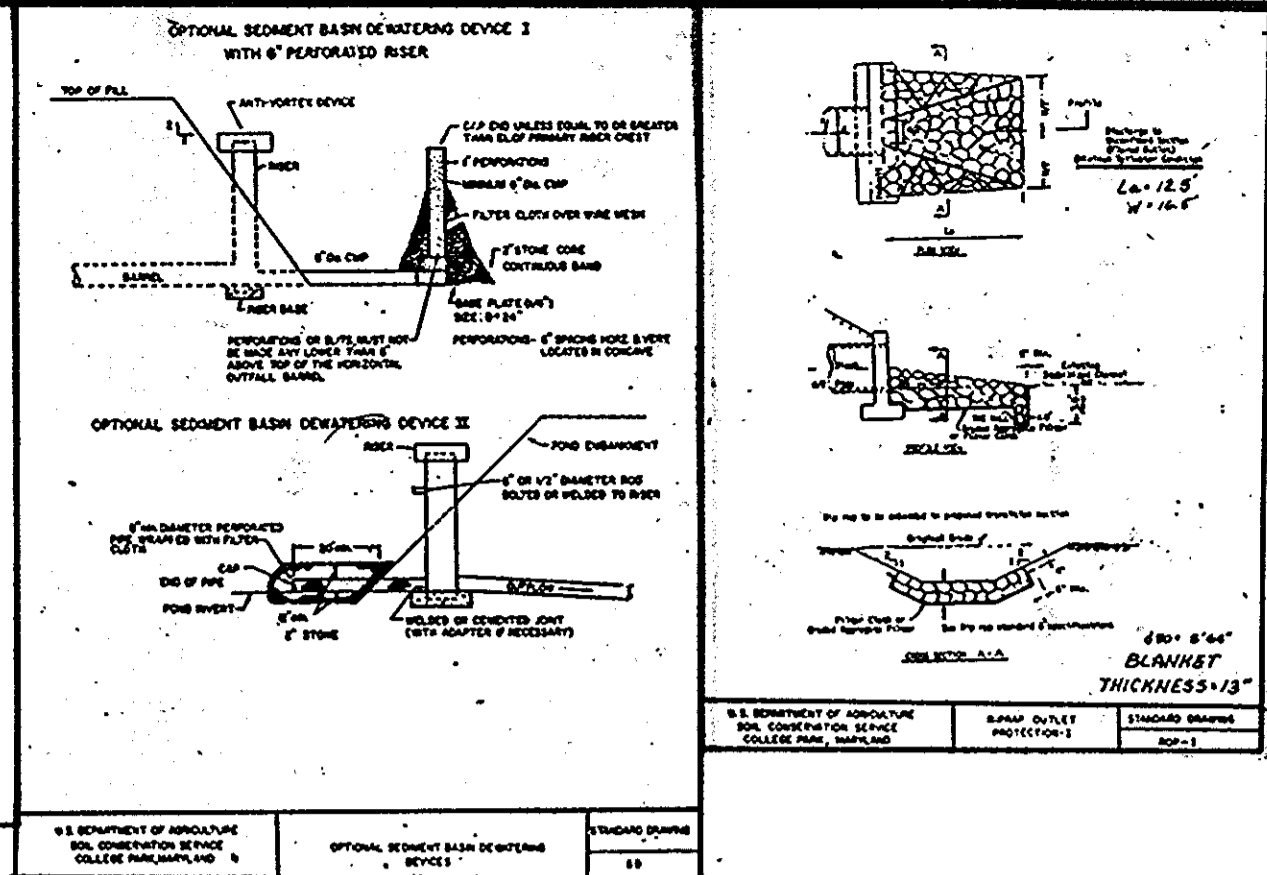
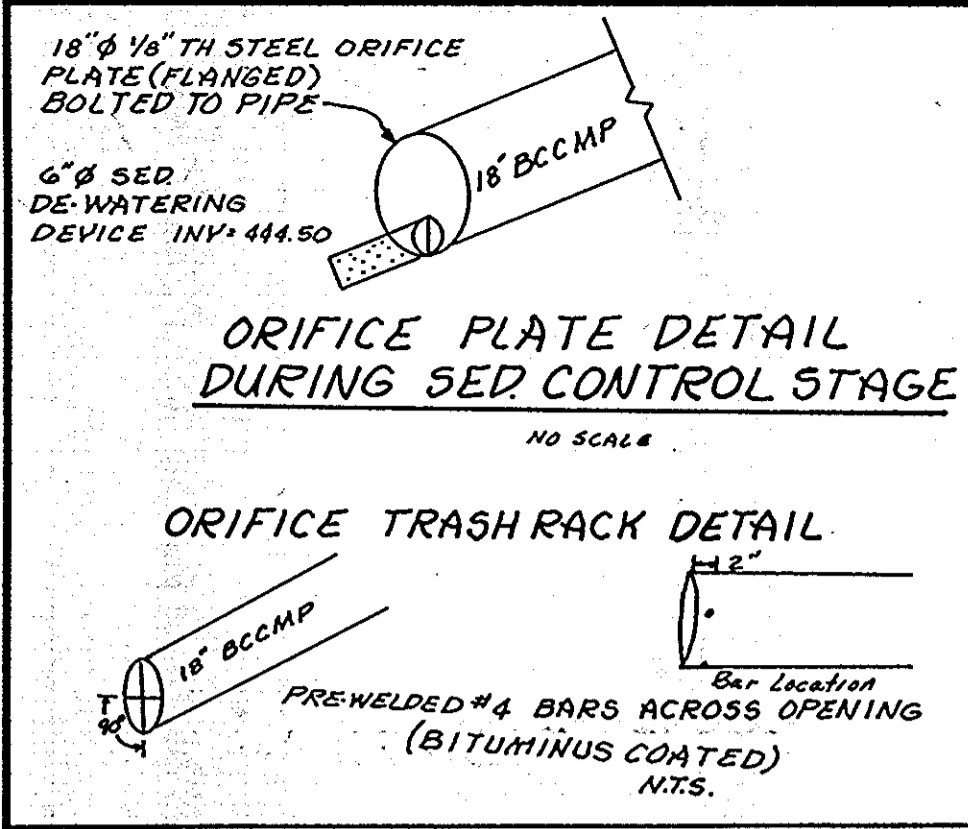
**RISER WEIR DETAIL
(NOT TO SCALE)**



SOIL PROFILE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Signature: [Signature]
Date: 4-29-87

APPROVED: OFFICE OF PLANNING AND ZONING
Signature: Louis J. Danne
Date: 4-27-87



Top is 1/4 gage corrugated metal or 1/8\"/>

Cylinder is 1/4 gage corrugated metal pipe or fabricated from 1/8\"/>

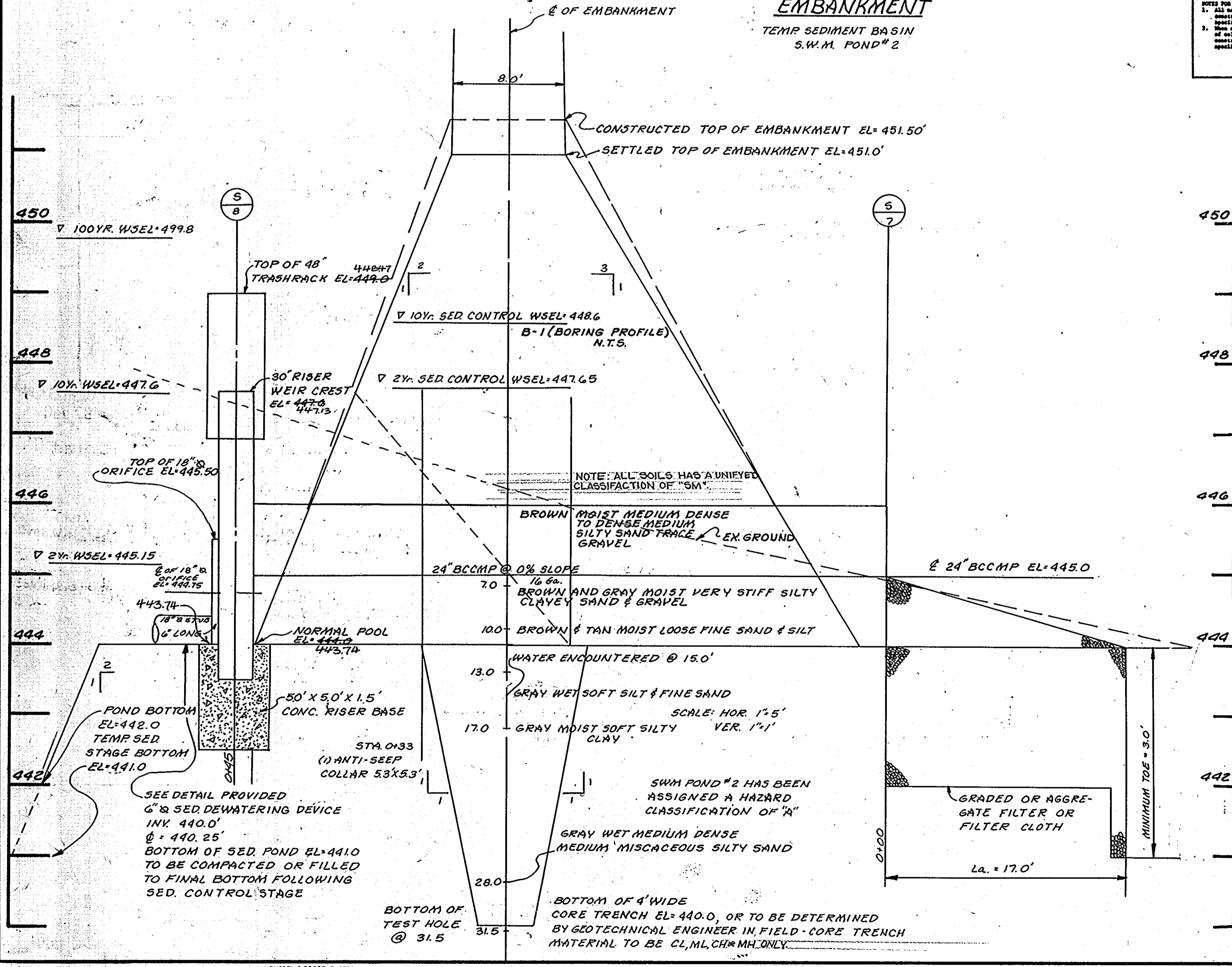
Notes:
 1) The cylinder must be firmly fastened to the top of the riser.
 2) Support bars are welded to the top of the riser or attached by straps bolted to top of riser.

ENGINEERS CERTIFICATE

"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 must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

John E.C. Patmore
 JOHN E.C. PATMORE
 Registered Professional Engineer # 8978
 Date 4/21/87

PROFILE THROUGH THE EMBANKMENT



CONSTRUCTION SPECIFICATIONS

I. SITE PREPARATION
 Areas under the embankment and structural works shall be cleared, grubbed and the topsoil stripped to remove all trees, vegetation, roots or other objectionable material. To facilitate clean out and restoration, it is recommended that the permanent pool area be cleared of all brush and trees.

II. EARTH FILL
Material
 The fill material shall be taken from approved designated borrow area or areas. It shall be free from roots, stumps, wood, rubbish, oversize stones, frozen or other objectionable materials. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased at least 10 percent above the design elevation (including freeboard) unless otherwise shown on the plans.

Placement
 Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of 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 sheepfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture so that it can be formed into a ball without crumbling. If water can be squeezed out of the ball, it is too wet to compact properly.

Core Trench
 Where specified, a core trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. 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 or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill material for the core trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

III. STRUCTURAL BACKFILL
 Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a concrete structure or pipe unless there is a compacted fill of twenty-four inches or greater over the structure or pipe.

IV. PIPE CONDUITS

A. CORRUGATED METAL PIPE

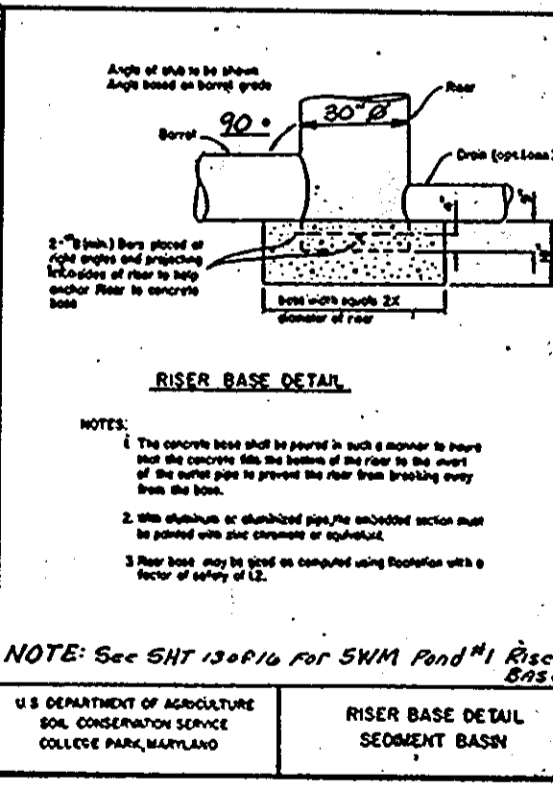
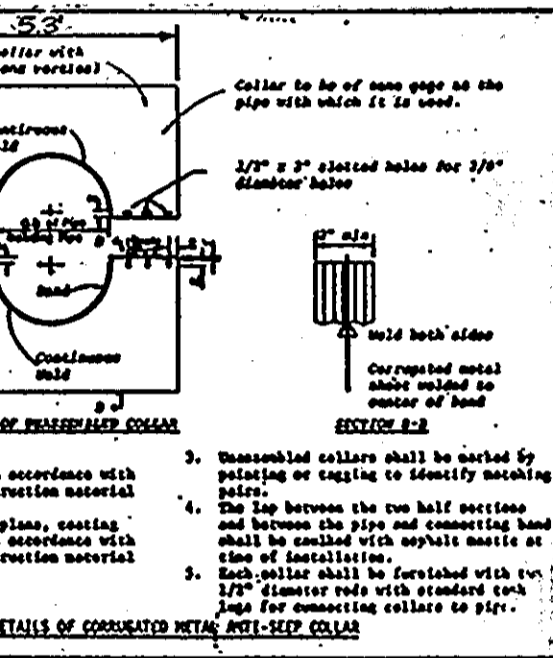
1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands. Coupling bands, anti-seep collars, end sections, etc. must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be less than 9 and greater than 4.

Helically corrugated pipe in addition to the requirements above shall have either continuously welded seams or have lock seams which are caulked with a neoprene bead.

2. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to 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. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.

5. Backfilling shall conform to structural backfill as shown above.

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

REINFORCED CONCRETE PIPE

1. Materials - Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-361. Approved equivalents are AWWA Specification C-300, 301, and 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 slump concrete placed under the pipe and up the sides of the pipe at least 10% of its diameter with a minimum thickness of 3\"/>

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed on the entire line, the bedding shall 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.

4. Backfilling shall conform to structural backfill as shown above.

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

CONCRETE

Concrete shall meet minimum requirements set forth in Maryland State Highway Administration Specifications for Materials, Highways, Bridges, and Incidental Structures, Article 20.07 (Portland Cement Concrete Mixtures), Class A-1, or P-1.

VI. STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway and borrow areas shall be stabilized by seeding and applying straw mulch in accordance with standards and specifications for Soil Erosion and Sediment Control in Urbanizing Areas immediately after finish grading.

C. Acceptable Construction Criteria

The following items should be considered in reviewing As-Built plans to determine if it is acceptable:

- The pipe and riser diameter, materials, and elevation must be correct.
- The number, size and location of the anti-seep collars must be correct.
- The top of fill elevation must be no less than the design elevation plus the allowance for settlement.
- The top width and side slopes must be equal to or flatter than the design.
- There must be the proper relation between the elevations of the principal spillway crest, the emergency spillway crest, and the top of dam. All of these elevations should be greater than or equal to the design elevations.
- The structure must have an acceptable outlet as provided in the plan.

DEVELOPER:
 MACKS & MACKS
 6615 Reisterstown Rd.
 Suite 205
 Baltimore, Md. 21215
 (301) 358-4934

OWNER:
 NEWMINS LTD. PARTNERSHIP
 6615 Reisterstown Road
 Suite 201 Balto, Md. 21215
 301-358-4934

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING

James F. ... 4-27-87
 CHIEF DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

... 4-29-87
 CHIEF BUREAU OF ENGINEERING

S.W.M. POND NO. 2 TEMP. SEDIMENT BASIN CONSTRUCTION STANDARDS & SPECIFICATIONS

VILLAGE OF MONTGOMERY RUN

TAX MAP 31 & 37 PARCEL 108 & 285
 1st ELECTION DISTRICT HOWARD COUNTY MD.

KIDDE CONSULTANTS, INC.

ENGINEERS • PLANNERS • SURVEYORS
 1100 WEST STREET / SUITE 100 / LAUREL MD 20707
 (Wash.) (301) 953-1821 / 792-9086 (Balt.)

SHEET 13 OF 14
 DATE JAN 87 SCALE AS SHOWN

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

J. Helms 4/27/87
 U.S. Soil Conservation Service

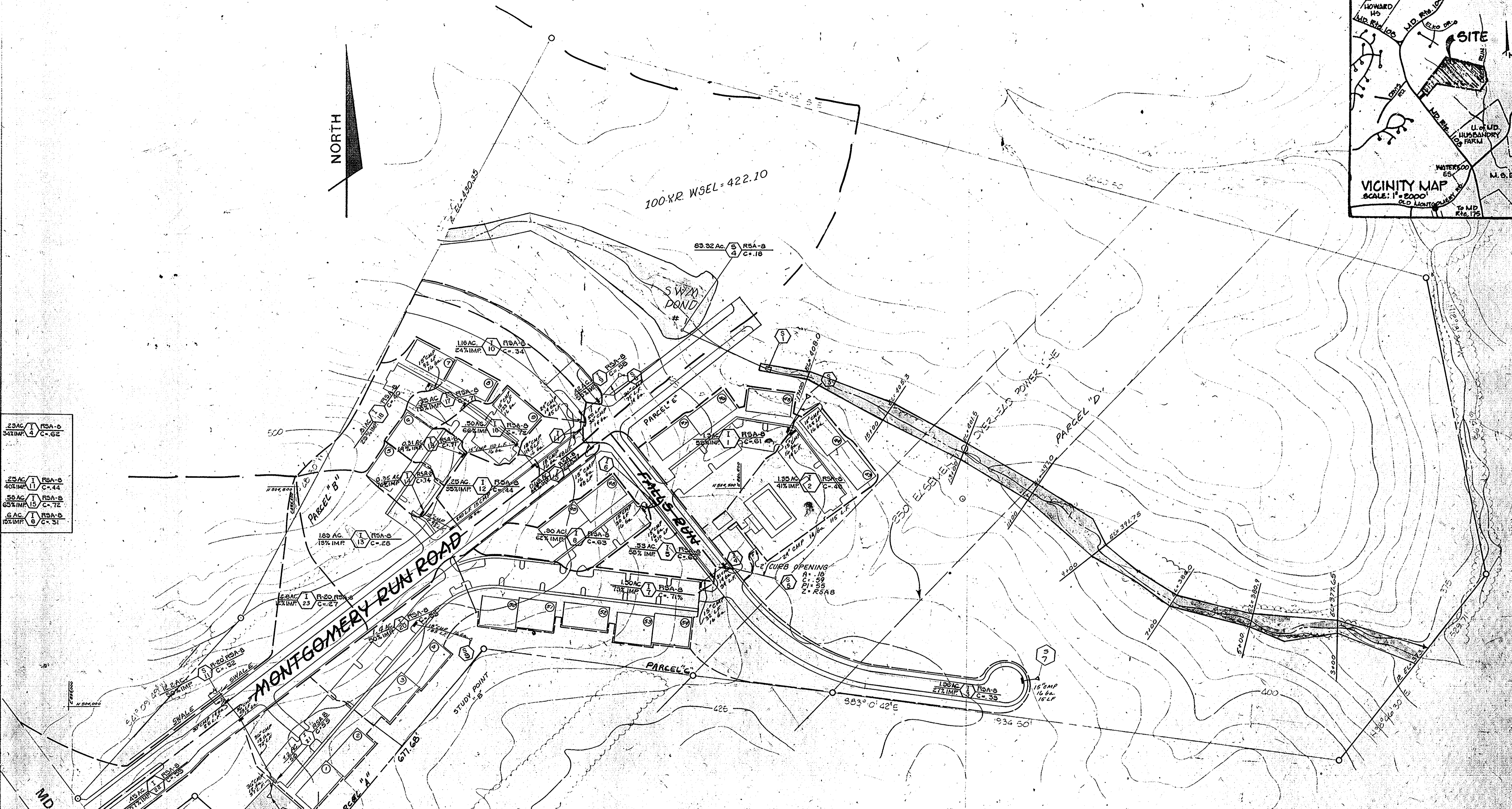
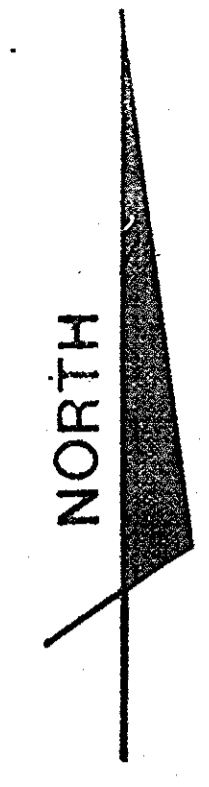
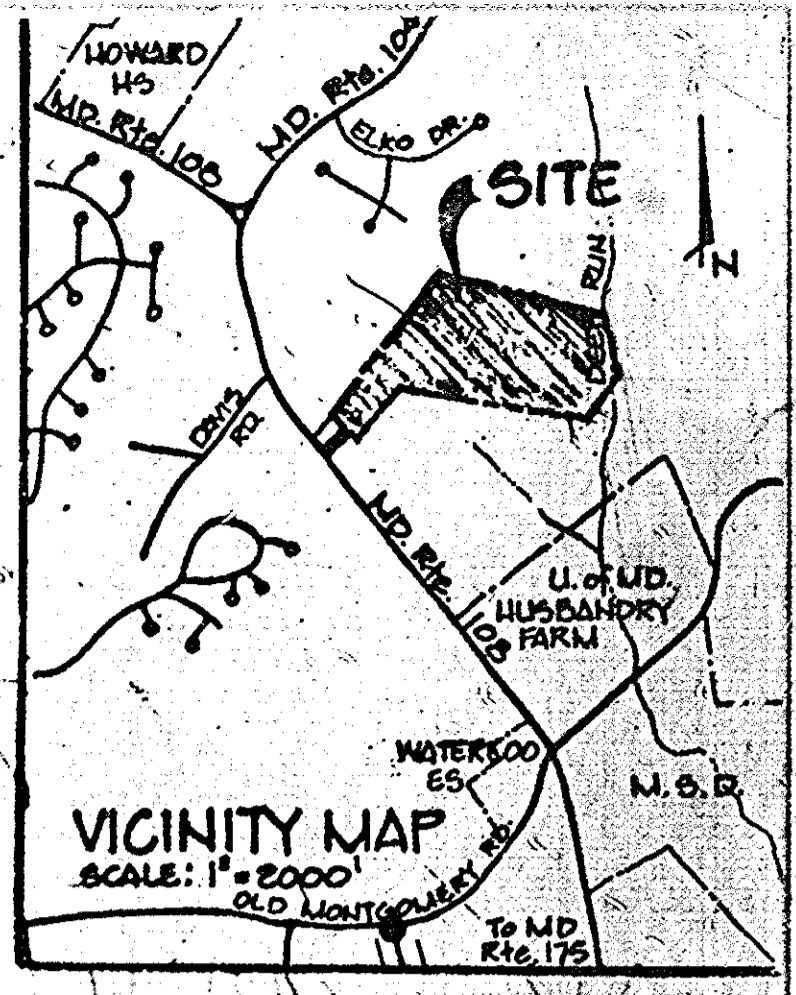
These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Robert ... 4/27/87
 Howard Soil Conservation District

By the Developer:

"I/we certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion before beginning the project. I will 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."

... 4/27/87
 Signature of Developer Date



| | | |
|---------|----|-------|
| 25 AC | 1 | RSA-B |
| 34% IMP | 4 | C-62 |
| 25 AC | 1 | RSA-B |
| 40% IMP | 11 | C-44 |
| 58 AC | 1 | RSA-B |
| 65% IMP | 15 | C-72 |
| 6 AC | 1 | RSA-B |
| 18% IMP | 6 | C-51 |

APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 4-29-87
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: OFFICE OF PLANNING AND ZONING
[Signature] 4-29-87
 CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

| SURVEYED BY | DATE | REVISION | BY |
|-------------|------|----------|----|
| K.C.T. | | | |
| C.C.Z. | | | |
| V.A.L. | | | |

VILLAGE OF MONTGOMERY RUN
 TAX MAP 31 & 37
 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND



OWNER
 HEWITT'S LTD. PARTNERSHIP
 6615 Reisterstown Road
 Suite 201 Balt. Md. 21215
 301-358-4934

DEVELOPER
 MACKS & MACKS INC.
 6615 REISTERSTOWN RD.
 BALTIMORE, MD 21215

KIDDE CONSULTANTS, INC.
 ENGINEERS • PLANNERS • SURVEYORS
 1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
 (Wash.) (301) 953-1821 / 792-8086 (Balt.)

SECTION 1
ON SITE DRAINAGE AREA MAP

JOB NO. 1684136
 SCALE: 1" = 100'
 DATE: DEC. 1986

SHEET 14 OF 14

AS-BUILT DATE: 10/16/92 F-87-103

1262